



Final Summary Report

Sustainable land use and economic development opportunities in the Western Australian Rangelands

Prepared for
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Date: **15 March 2013**
Reference: 42908069/S0270/3
Status: Final

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Summary Report and Recommendations

1.1 Executive summary

A new era is commencing in Western Australia's rangelands, one that involves managing 87 per cent of the State's land area for multiple values, uses and users. The Pastoral Landholding Business Community and its enterprises, supported by coordinated and determined government action has the opportunity to break from existing economic and regulatory paradigms and develop a future that widens the range of land uses, brings in new people and new money, and provides new solutions to old problems.

Government should use the opportunity presented by the Rangelands Reform Program and the lease roll-over in 2015 to send a clear signal to lessees, businesses and the rangeland community that a new era in rangeland use and development has arrived. While some of this shift can be reflected in statute and regulation, it will also require State Government leadership in clearly articulating a future vision for WA's rangelands, 'talking up' the future, acting decisively to address long-standing land management issues, and investing to develop priority regional opportunities.

The evaluation of opportunities in the rangelands (and in particular the Pastoral Leasehold Estate) has been guided by the following set of principles developed by the consultant team. These are all equally important.

- Encouragement and support for sustainable occupation of the rangelands.
- Improvement of natural resources.
- Optimisation of economic opportunities across all uses and users.
- Attraction of new skills and experience and new capital into the rangelands.
- Recognition of biodiversity and landscape values and their preservation.
- Preservation of heritage, cultural values and practices.
- Provision of rational, effective and collaborative services.

1.1.1 Where are we now?

The WA rangelands are coming to the end of an era dominated by a pastoral leasehold governance system and an economy, outside of mining, dominated by grazing. This system is no longer able to satisfy the aspirations of a more diverse rangeland community, the State Government's objectives in regional economic development, or the requirements of external parties interested in investing in rangeland development. Finally, the need for landscape rehabilitation across an estimated 19 per cent¹ of the State's land area is not being achieved under current governance arrangements.

1.1.2 What can be done?

This report shows that opportunities exist in the rangelands to expand the economic activities available to current and future landholders and businesses. Some of these opportunities will flow from improvements to existing land uses, such as the cattle and tourism industries, where these are founded on a solid resource base and can be made more competitive with additional investment in market development, skills and infrastructure.

Other opportunities will involve development of proven water resources located in specific areas in the rangelands for precinct-scale horticultural and agricultural developments. These will require whole-of-government intervention to ensure that land and water resources, and required advice is available to

¹ Determined as the area of land in the Pastoral Leasehold Estate in poor and fair range condition

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attract and support new investment and new operators. New crops and products that show promise in the rangelands need commitment to long-term research and development, and support for implementation.

Indigenous people are building their rightful place in the rangelands through the development of multiple use landholdings and partnerships with government and non-government organisations (NGOs) in managing for environmental and economic outcomes. Their stake will surely increase with growth in Indigenous tourism, fire management in the Kimberley, Pilbara and Unallocated Crown Land (UCL) areas in central WA, multiple enterprises on Indigenous landholdings, and management of cultural heritage throughout the landscape.

Recovering the ecological functioning of large areas of the rangelands will increase their attractiveness for the growing number of people seeking 'wilderness experiences' and will ensure that if these areas are needed for food production in future years, they can deliver sustainably. Recovery can be achieved – through marketing products such as carbon – and by providing incentives to rangeland people to deliver the desired outcomes on the community's behalf through stewardship arrangements for specified management actions beyond normal requirements. This can extend to contracting local people to manage some of the State Government's commitments on UCL and the Conservation Estate, and developing further the concept of landscape management as illustrated in the Great Western Woodlands and the Kimberley Science and Conservation Strategies.

Philanthropy from those living outside the rangelands will not only support the people committed to rangeland recovery and multiple use on country, but will build a valuable link between the people within and outside the Rangelands.

1.1.3 Delivering on the opportunity

New mechanisms, new thinking, expanded opportunities, and new money are needed to sustain the rangeland community, build resilience and encourage new people into the area.

The Rangelands Reform Program, supported by investment through the Royalties for Regions Program will assist the development of new opportunities, and will provide existing users more freedom to innovate, expand and consolidate. The legislative and regulatory reforms provide the 'template' upon which new opportunities and existing uses will be developed.

The reform process needs to be taken further. To achieve development on the scale desired, means that rangeland governance needs to embrace the whole of the 'Rangeland Estate' – not just the Pastoral Leasehold Estate – and use a wider array of instruments and mechanisms, or to put it simply, 'a bigger and better toolkit'. The frustration and abandonment felt by many people in the rangeland community to a significant degree results from government not being able to provide realistic and acceptable options and solutions to their difficulties. If government is to build a more diverse and resilient future, it needs a wider array of 'tools' to do the job.

However, one size will not fit all. Policy and administration needs to recognise regional differences in environmental and economic opportunities and constraints, and determine priorities for government intervention and support based on an assessment of a region's potential. For example, the priorities for government action in the Kimberley, with its comparative advantages in grazing, agriculture and tourism require a very different approach to addressing long-standing difficulties across large areas of the Southern Rangelands.

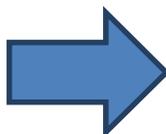
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Finally, the data and information to guide government decision-making needs improving, so that the benefits and costs of current and proposed government service delivery and specific programs can be assessed in a manner that provides confidence that cost-effective outcomes are being delivered.

1.1.4 Transitioning to the future

The figure below summarises the content and recommendations presented in this report.

The Present	The Future
Lack of clarity about the rangeland future	A vision for the rangelands endorsed by community and governments
Managing a Pastoral Leasehold estate	Managing a Rangeland Estate
Portfolio-specific considerations in decisions	Whole of government decision-making based on regional priorities considering all opportunities
Limited data and information to inform government decisions	Decisions informed by adequate and transparent data and information
Capital and skill-limited businesses	Opportunities attract new people and new money
Limited markets and profitability in the cattle industry	More market options and improved production systems for the cattle industry
Rehabilitating land uses that cannot deliver economic benefits	Supporting transition to new land uses that deliver economic and environmental benefits
Struggling grazing businesses on Pastoral Leases	Multiple uses and users with resilient businesses on Rangeland Leases
Minor diversification activities on Pastoral Leases	Major agricultural precincts and tourism nodes based on adequate resources and timely government land acquisition
Degraded and degrading lands unable to support viable grazing businesses	Clear commitment to rangeland recovery through stewardship programs
Inefficient service delivery in remote areas	Shared responsibilities for service delivery generating cost-efficiencies



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1.2 The rangelands and their opportunities

This Final Summary Report describes **Sustainable land use and economic development opportunities in the Western Australian Rangelands**. URS was commissioned to undertake Project by the Department of Agriculture and Food (DAFWA), with the Statement of Requirements set out in the (RFQ) AGR2012045A, and presented in **Appendix A**.

This Summary Report includes:

- a profile of the environmental, economic and social situation in the Pastoral Landholding Business Community in 2012;
- opportunities for development that may be facilitated by the Government's Rangelands Reform Agenda; and
- recommendations for policy development to enable these and other opportunities to be achieved.

This Final Summary Report and Recommendations provides an assessment of the current situation and trends at a 'whole of rangelands' scale, encompassing all uses, industries, regions and stakeholders, and the interactions between them. This Summary Report is a condensation of a larger Report entitled *Sustainable land uses and economic development opportunities in the Western Australian Rangelands* prepared by URS (dated 15 March 2013).

1.2.1 Methodology

Definitions

The rangelands

For the purposes of this project, WA's 'Rangeland Estate' or alternatively the 'Rangelands' are defined as that area held as Pastoral Leases including pastoral leasehold land acquired by the Department of Environment and Conservation (DEC). It includes other Crown Land tenures (including Unallocated Crown Land (UCL)), areas held by the Conservation Commission of WA as part of the conservation estate, local government land, and Indigenous land located within the general boundary of the pastoral areas. It does not include freehold land, or UCL to the east of the pastoral leasehold areas, or the Central Aboriginal Reserve which adjoins the Northern Territory and South Australian Borders.

Landholding types

- A 'Pastoral Lease' is a discrete parcel of land as defined in the *Land Administration Act 1997*, meaning a lease which is a Pastoral Lease of Crown land granted under section 101 or continued under section 143.
- A 'Pastoral Station' (or just a 'Station') consists of one or more Pastoral Leases, and comprises an area of land that can be transferred between lessees in the market place, subject to the approval of the Minister for Lands. In the case where a Station comprises more than one Pastoral Lease, the individual Pastoral Leases cannot be transferred separately.
- A 'Pastoral Business' (or just a 'Business') consists of one or more Pastoral Stations held by the same lessee, with the total area of land run as one business entity. Where the Business comprises more than one Pastoral Station, the individual Pastoral Stations can be transferred separately.
- The 'Pastoral Leasehold Estate' – the total area of Crown Land held as Pastoral Leases in the rangelands (i.e. excluding those leases in the South West).

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Data and information sources

URS obtained data and information from the following sources.

- Pastoral Lease data provided by the Pastoral Lands Board (PLB) and the Department of Agriculture and Food, Western Australia (DAFWA).
- Reports, reviews, annual reports, strategies and plans prepared by government and non-government organisations.
- Outback Ecology was commissioned by URS to deliver the component of the scope that related to the opportunities and risks of the Carbon Farming Initiative (CFI) in the WA rangelands.
- Interviews with 86 people representing 33 organisations or groups of interested people.
- Advice from the Economic Development Working Group, with representation from the Departments of Water (DOW), Indigenous Affairs (DIA), The Premier and Cabinet (DPC), Regional Development and Lands (DRDL), and Mines and Petroleum (DMP); and Tourism Western Australia.

1.2.2 The Rangeland community and economy

Based on information contained in regional profiles produced by the DRDL, the people and economies in the rangelands are summarised in Table 1-1.

Table 1-1 The people and economy in the rangelands

Item	Gascoyne**	Goldfields-Esperance*	Mid-West*	Pilbara	Kimberley**
Population	9,865	58,727	54,984	47,528	35,000
Indigenous share of population %	17.2%	10.7%	10.6%	16.9%	47.5%
Value of industry activities	\$0.64 bn	\$11.67 bn	\$4.94 bn	\$62.98 bn	\$2.16 bn
Gross Regional Product	\$0.651 bn	\$8.1 bn	\$4.5 bn	\$9.2 bn	\$2.2 bn
Value of mining/ petroleum*	\$118 m	\$8,669 m	\$2,537 m	\$62,665 m	\$1,159 m
Value of tourism	\$197 m	\$222 m	\$229 m	\$249	\$275 m
Value of agriculture	\$78 m	\$587 m	\$855 m	\$67 m	\$187 m
Labour force	5,535	32,954	28,309	25,419	16,746

Source: Regional Profiles 2011 except for * which are taken from DMP (2011) p. 36.

* The Goldfields and Mid-West Regions include significant populations and economic activities outside the rangelands, especially in agriculture. ** includes pastoral and horticulture in Gascoyne and Kimberley

1.2.3 Profile of the Pastoral Landholding Business Community

Governance of the Rangelands Estate

Legislation

Approximately 87 per cent of Western Australia is considered as rangeland - area outside of the south west agricultural zone. About half of this area is held as Pastoral Leases.

The legislation of special importance in managing the Pastoral Leasehold Estate is presented below. The most important instrument in the administration of the Pastoral Leasehold Estate is Part 7 of the *Land Administration Act 1997*, which provides specifically for the granting of leases, setting of conditions and collection of rents.

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- *Land Administration Act 1997.*
- *Agriculture and Related Resources Protection Act 1976².*
- *Soil and Land Conservation Act 1945.*
- *Aboriginal Heritage Act 1972.*
- *Conservation and Land Management Act 1984.*
- *Mining Act 1978.*
- *Petroleum and Geothermal Resources Act 1967.*
- *Native Title Act 1993 (Cwth).*

Pastoral Lease rents and administration costs

The total rental value of the Pastoral Leasehold Estate is \$4.5 million. Rental arrears in February 2012 were \$1.8 million. The direct cost to Government for administering the Pastoral Leasehold Estate is estimated at \$17.2 million.

Pastoral Lease number, size and distribution

The provided data indicate that at August 2012 there were 507 Pastoral and ex-Pastoral Leases, of which 440 are still held as 'Pastoral Stations'. These Stations are aggregated into 333 Pastoral Businesses. The 440 Pastoral Stations cover 87,250,000 hectares which represents about 34 per cent of the State's area. The Pastoral Leasehold Estate and the potential carrying capacity (PCC), as measured by dry sheep equivalents (DSE) are shown by region in Table 1-2. The Kimberley has 24 per cent of the Pastoral Lease area and 50 per cent of the potential carrying capacity.

Table 1-2 Pastoral Leasehold Estate and potential carrying capacity

Region	Leases	Stations	Station Businesses	Pastoral Lease Area ('000 ha)	% of Pastoral Area	Total PCC (DSE)	% of PCC
Agricultural	19	14	14	987	1%	64,557	1%
Gascoyne	86	67	51	10,001	11%	1,046,273	9%
Goldfields	75	63	50	12,791	15%	761,736	7%
Kimberley	94	90	62	21,090	24%	5,777,212	50%
Meekatharra	58	54	40	13,045	15%	813,874	7%
Murchison	88	70	64	9,236	11%	684,018	6%
Nullarbor	20	20	11	6,080	7%	407,592	4%
Pilbara	67	62	41	14,020	16%	1,775,181	15%
Total	507	440	333	87,250	100%	11,534,424	100%

Source: information provided by DAFWA 2012

Pastoral Lease ownership

About 65 per cent of Pastoral Leases are privately owned and operated as a family business, and thirteen per cent are owned by indigenous organisations or businesses. Corporate pastoral ownership is highest in the Kimberley and Nullarbor, and Corporate Mining ownership is highest in the Goldfields and Meekatharra regions with near to a quarter of leases in the Goldfields owned by mining companies. Over 30 per cent of leases are Indigenous owned in the Kimberley, and 15 per cent in the

² This Act needs to be read in conjunction with the more recent *Biosecurity and Agriculture Management Act 2007*.

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Pilbara. Some 92 per cent of the area of pre-1980 Pastoral Leases are still held as Pastoral Leases. Eight per cent of the Pastoral Leasehold Estate has been purchased by DEC or abandoned.

Condition and trends of the rangeland resource base

About 20 per cent (195,000 km²) of the Pastoral Leasehold Estate is in poor range condition, with over 7,000 km² severely degraded and eroded. Since systematic reporting of range trend commenced in the 1990s, there has been no evidence of a sustained improvement in the resource condition across the estate, with some indication that downward trends are occurring on many leases. Reported management practices suggest that high stocking levels are the principal cause of further deterioration, with businesses unable to implement specific recommended management practices.

Although the WA Government and pastoral lessees are obligated under the *Land Administration Act 1997* to maintain and improve range condition it is evident that these objectives are not being achieved. The issues involved are considered in the recommendations.

Pastoral Lease value and turnover rate

There has been low sales turnover in recent years and a drop in the value of sheep properties, but seemingly only back to long term levels. Low turnover rates have continued into 2012 and values have declined further on those indicated for 2010-11.

Assessment of Station viability based on biophysical assessment

DAFWA has recently undertaken a desktop assessment of the capacity of Pastoral Stations to support a viable grazing enterprise. This assessment of carrying capacity was based on the nature and condition of the rangeland resources on each Station. Land below certain productivity thresholds was removed from carrying capacity assessments. In the Kimberley and Pilbara, Category A viability was defined as a Pastoral Station with a capacity to graze 4,000 large stock units (LSU). In the Southern Rangelands, Category A viability was defined as a Pastoral Station with a capacity to graze 10,000 dry sheep equivalents (DSEs)³.

Of the current 440 Stations:

- 23 per cent are classed as viable (38% of the total area);
- 4 per cent viable if land condition improves (4% of total area); and
- 60 per cent are classed as non-viable (58% total area).

Of the 87.2 million hectares classified and currently held as Pastoral Leases, 33 million hectares comprise Pastoral Stations that are considered to be viable on the basis of biophysical criteria, with more than half of that area being in the Kimberley. In terms of Station numbers, 117 of 440 (26%) were assessed as being able to support viable businesses as a stand-alone Station.

These data need to be interpreted with caution. By focusing on viability at 'stand-alone Station', the assessment overlooks all situations where adjacent leases are held by the same leaseholder and run as one Business. Leaving aside these assumptions, the analysis shows that only 26 per cent of Stations, covering about 42 per cent of the current Pastoral leasehold Estate are capable of supporting a viable grazing Business on a stand-alone basis. The implication for government is that allowing the other 74 per cent of Pastoral Stations to be transferred between lessees (subject to

³ A large stock unit is an adult steer, and a dry sheep equivalent is an adult wether. 1 LSU is equivalent to 7.5 DSEs

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ministerial approval), amounts to implicit acceptance that these leases can, on their own, support viable grazing enterprises.

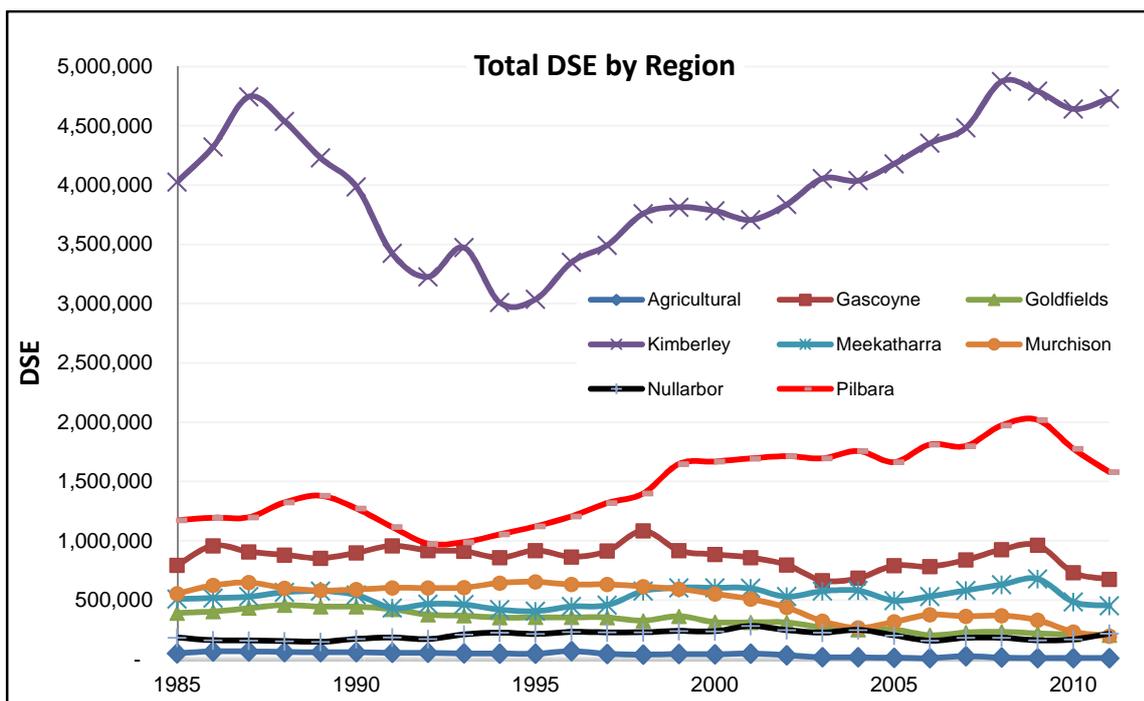
Trends in livestock numbers

Pastoral Lease stock records have been aggregated on a regional basis to track livestock numbers from 1985 to 2011. Small stock and cattle numbers are presented as dry sheep equivalents (DSE). The total livestock numbers are presented as total DSE in Figure 1-1.

These data show the dominance in total DSE in the Kimberley, and the recent return of stock in the Kimberley to levels attained in 1987. There has been a steady increase since 1994 after the adjustment presumably following the brucellosis and tuberculosis eradication campaign. Numbers in the Pilbara have also been rising since the early 1990s, but with a modest drop over the past two years. Each of the other regions displays a decline in DSEs over the last two years of available data.

In aggregate, total DSEs have increased since the late 1980's from some six million DSE to a peak of 8.5 million DSE in 2008 and 2009. This is an increase of over 40 per cent.

Figure 1-1 Stock in the Rangelands - Total DSE by Region (1985 – 2011)



Source: Information provided by DRDL 2012

Data show that 87 per cent of Pastoral Businesses in the Goldfields are stocked at less than 50 per cent of their PCC. In the Murchison it is 57 per cent of businesses and on the Nullarbor 54 per cent of leases are stocked at less than 50 per cent of their potential carrying capacity (PCC). These results suggest, for these areas especially, it is unlikely that the owners are deriving sufficient income to meet their needs from their grazing Businesses. It is expected that many are involved in other economic activities in order to make a living. At the other end of the scale, data indicated that 20 per cent of Pilbara business units are stocked at between 150 and 250 per cent of their rated PCC.

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The grazing economy in the rangelands

Value of livestock products

ABS figures supplied by DAFWA for livestock (sheep and cattle) production from the rangelands for the three recent years are shown in Table 1-3.

Table 1-3 Value of livestock products from the rangelands (\$'000)

Item	2005-2006	2009-2010	2010-2011
Cattle Sales (Northern Rangelands)	116,550	211,779	279,600
Cattle sales (Southern Rangelands)	29,544	17,572	49,800
Sheep sales (Southern Rangelands)	9,945	9,766	11,200
Wool sales (Southern Rangelands)	15,592	11,487	9,900
Total	171,731	250,604	350,500

Source: ABS data provided by DAFWA, November 2012

The data show the steadily declining value of the wool clip from the rangelands, and the increasing value of cattle sales based on live exports. The proportion of the total value coming from the Northern Rangelands has increased from 67 to 79 per cent over these years. The 2010-11 data for cattle sales does not show any loss of income associated with the cessation of live exports during the latter half of 2011.

Pastoral Business performance

Despite the increasing value of cattle sales to 2010-11, available analyses of the financial health of Pastoral Businesses throughout the WA rangelands show that on average, poor production characteristics, low income per stock unit, low returns on assets managed, and increasing debt levels occur. Further, productivity gains have been low, and are insufficient to address declining terms of trade. It appears that relatively few businesses are returning real profits sufficient to meet commitments to maintain infrastructure, increase productivity and manage the land resource.

This analysis corresponds with the analysis of Pastoral Business size and activity, which shows that about 20 per cent of Businesses have sufficient scale to generate acceptable returns from livestock enterprises, with only 27 per cent of Pastoral Businesses now 'pastoral only' in terms of the enterprise structure.

Where these businesses occur, they are mainly in the Kimberley, with some in the Pilbara, the Gascoyne, the Nullarbor and a few others elsewhere in the Southern Rangelands.

The grazing industry in context

Although the pastoral areas support 40 per cent of the state's beef cattle numbers, livestock production from the Pastoral Leasehold Estate represents 6 per cent of the total value of WA agricultural production. In 2003, the pastoral areas contributed \$316 million representing 8 per cent of state production. In summary, there has been little growth in the livestock production from the Pastoral Leasehold Estate, and the relative value compared to state gross value of agricultural production has declined.

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Non-grazing activities undertaken by pastoral lessees

Since 1998, some 144 diversification permits have been received for agricultural-horticultural activities, and pastoral-based tourist activities (not all remain active). This suggests a demand by pastoralists to diversify their income base or to find other enterprises to allow them to continue to live on their Pastoral Lease.

- Pastoral only - Overall 27 per cent of pastoral station businesses were suggested to be 'Pastoral Only' Businesses without any external sources of income or alternative on- or off-Station enterprises.
- There are currently 83 Diversification Permits, with some leases having multiple permits. The data suggest that some 71 leases or 67 businesses have a permit. Only six of 68 businesses with a permit indicated they netted more than \$20,000 from their permitted activity. This suggests 90 per cent of permitted activities make marginal returns at best.
- Tourism, accommodation, and training activities are most common with 23 per cent of Kimberley businesses, and 28 per cent of Murchison businesses having this type of permit.
- Anecdotal evidence suggests that not all accommodation based enterprises are permitted and that informal enterprises take advantage of opportunities associated with the mining industry. These activities provide key support to mining, especially when projects are in the exploration or development stages.

Agriculture on Pastoral Stations and S-79 Excisions

Across the Kimberley, production from horticulture projects operated by the pastoral landholding business community is worth about \$36 million per year. Horticulture occurs mainly on permits on Pastoral Leases and land excised under Section 79 General Leases (under the *Land Administration Act 1997*). There are also applications for further excisions which, if approved and if the projects are implemented, may increase the value of production to some \$60 million per year (information from DAFWA 2012).

Rio Tinto Iron Ore (RTIO) is developing an irrigation project under a Diversification Permit associated with its cattle grazing operations in the Pilbara. Mining developments below the water table that occur on the RTIO Pastoral Leases require dewatering of very large volumes of fresh water, with an estimated 120 GL/ year being generated now. To enable environmentally sound management of this water, and to generate an economic benefit, RTIO will use the water to irrigate an estimated 2,300 ha of summer active perennial grasses. The forage will be used partly as 'stand and graze', and also conserved as high quality hay. The project will employ an extra eight people.

There are small scale irrigation areas operated by pastoral leaseholders (mostly licensed through Diversification Permits) in the Gascoyne and Murchison areas. The largest involves a 46 ha horticulture precinct on a freehold area held in conjunction with a Pastoral Lease.

Using ABS data for the Rangelands Regions, DAFWA estimates agricultural (horticulture and crops) production from enterprises in the Rangeland Estate to be \$89 million in 2011-12.

Tourism on Pastoral Stations

The aggregate Tourism WA data on visitor numbers for the rangelands is 5.991 million visitor nights per annum (Tourism 2012 a,b,c and d), which can be compared to data reporting 25,000 visitor nights per annum on Pastoral Stations which have a tourism diversification permit. On these figures, 0.42

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per cent of tourism visitor nights were spent at station stays, for an estimated return to the operators of Station stays of \$2.5 million (assuming income of \$100 per visitor night).

Mining on rangeland

Mining is an allowable use on all Pastoral Leases, with most of the area currently leased covered by mining tenements issued under the *Mining Act 1978*. Conversion of Pastoral Leases to Rangeland Leases will not alter present access to land and water supplies for mining exploration and development. Notwithstanding the legislative power, the mining industry has expressed some concern that the processes of approving exploration and/or mining on a Rangeland Lease held for the purpose of conservation may become more difficult.

Native Products harvesting

In 2010-11, the gross income to the Forest Products Commission (FPC) from native sandalwood (*Santalum spicatum*) harvesting was \$15.80 million, with total costs (harvest, cartage, processing, marketing and administration) of \$11.96 million (FPC 2011). The stumpage revenue collected by the FPC is about \$4 million to \$5 million per year (information provided by the FPC 2012).

Kangaroo harvesting for the pet food industry and domestic consumption occurs throughout the pastoral leasehold areas south of the Kimberley. In 2009, 432 licences to take kangaroos and 23 licences to process kangaroos were issued, 574 chiller units were registered and 13 licences to deal in skins were issued. The harvest in 2010 was 53,818 red kangaroos and 92,923 western grey kangaroos which was less than the allowable quota for both species (DEC 2011b). Assuming a 20 kg carcass worth about \$0.85/kg to the operator, and a skin value of \$2.50 for a large red kangaroo, the total 'on-farm' value of the harvest is about \$2 million (advice provided by DEC 2012).

Intangible benefits of Pastoral Lease occupancy

Many people active in the rangelands (e.g. tourists, miners, and service providers) rely to a degree on the occupancy of Pastoral Leases for communications, land access, and availability of water supplies. The intangible benefits of the pastoral landholding business community were listed in the 2003 *Pastoralism for Sustainability* Report including regional population and development, flow-on employment in small centres, biosecurity protection and the effect of occupancy in enhancing Australian security.

Interactions between land uses and users

The interactions between land uses in the rangelands have received little serious scrutiny, and similarly nor has the relationship between the rangelands economy and the wider community. The presence and maintenance of pastoral infrastructure (tracks, artificial watering points, communications facilities) and direct assistance from pastoral lessees (advice about locations, access, terrain, occasional emergency support) makes a very useful contribution to mineral exploration across remote areas of Western Australia. Without this support, access would be more difficult, water less available and emergency facilities less available.

The contribution made by pastoral infrastructure and pastoral lessees has been estimated roughly through reference to the investment in mineral exploration across the state. If the assistance of

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Pastoral Lease infrastructure and residents saved 5 per cent of mining exploration costs, then this represents a saving to project proponents of about \$28 million per year.

Economic value of the rangeland based enterprises

1.2.4 The Pastoral Landholding Business Community in summary

Selected information from the results of the analyses undertaken by URS is shown in Table 1-4. The information shows that of 333 Pastoral Businesses, most remain as small businesses in private or family hands. Of the total number of businesses, only 27 per cent now rely on grazing enterprises alone for income, with close to half (41%) relying to a greater or lesser degree on non-grazing income. However, this level of dependence on non-grazing income is not reflected in the percentage holding Diversification Permits, suggesting that at least some activities are occurring without formal approval.

The increasing diversity of uses and increased reliance on non-grazing income is readily explained given that half of all businesses are not able to support sufficient numbers to meet even fixed costs for a grazing enterprise (see McCosker *et al.* 2010), with 20 per cent having the capacity to maintain large scale commercial enterprises.

The information summarised here suggests that in continuing to administer a 'Pastoral Leasehold Estate', government is not in step with these substantial shifts in activity and capability. While the Rangelands Reform Program is addressing aspects of the issues, government needs additional administrative tools to anticipate and lead change. Suggested mechanisms are considered in the recommendations.

Table 1-4 The Pastoral Landholding Business Community in summary

Characteristic	Number	Percentage
Pastoral Businesses*	333	100%
Ownership		
Private/ family	239	71%
Indigenous	45	14%
Corporate mining/ corporate other	28	8%
Corporate pastoral	14	4%
Private conservation	7	2%
Business Activity		
Businesses with Diversification Permits	67	20%
Businesses 'pastoral only'	90	27%
Businesses with non-grazing income	136	41%
Grazing capability		
Number of Businesses with PCC >4,000 LSU/ 30,000 DSEs	67	20%
Number of Businesses with PCC < 1,300 LSU/ 10,000 DSEs	176	53%
Businesses carrying less than 50% of PCC	146	43%

* as defined in Section 1.2.1

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1.2.5 Gross returns from activities on Pastoral Leases

Determining the gross value of the money earned by the pastoral landholding business community, or by people who are legitimately working on Pastoral Leases is difficult. An estimate based on some published data and calculations made within this report are shown in Table 1-5. The aggregate value is indicated to be some \$485 million per annum⁴. The value of horticulture produced via Diversification Permits and on S-79 excisions from Pastoral Leases is not easily quantified. Advice from DAFWA staff suggested \$36 million for Pilbara and Kimberley production. ABS data provided by DAFWA suggest a total value of \$89 million for 2010-11. The larger number is reported.

Table 1-5 Gross value of income earned on Pastoral Leases (\$m/year)

Activity	Accrues to PL holder	Consumptive use	Value (\$m/yr)	Comments
Sale of livestock and wool	yes	yes	\$350.5 m	Mainly in the Kimberley, Pilbara, Gascoyne and Nullarbor Return on assets managed is low (<2%)
Tourism on diversification permits	yes	no	\$2.5 m	Based on 25,000 visitor nights per annum @ \$100/visitor night. Mostly earned in the Kimberley and Pilbara
Tourism on excisions held by PL	yes	no	\$11 m	Dominated by a few enterprises
Horticulture, mostly on excisions held by PL	yes	yes	\$89 m	ABS estimate. Pilbara and Kimberley production valued at \$36 million. Permits applied for could increase total value by \$24 million
Sandalwood harvesting	no	yes	\$16 m	Includes live and dead wood. Up to 20 pastoralists have contracts to deliver wood to FPC
Kangaroo harvesting	no	yes	\$2 m	Declining kangaroo numbers limit harvest levels
Philanthropic conservation	yes	no	\$1 m	Two organisations currently active. Amount shown is the management cost, which is contributed by donors
Work off lease	yes	no	\$12 m	Based on 120 businesses (33% of total) earning an average of \$100,000 pa
Transfer payments (Centrelink)	yes	no	unknown	Known to be significant in parts of the leasehold estate
Total			\$484 m	

The values in Table 1-5 are all private benefits. As shown in 1.2.3, the cost of administering the Pastoral Leasehold estate exceeds the rental return four-fold. In its review of Australia-wide Pastoral leasehold tenure arrangements, and non-pastoral activities on Pastoral Leases, the Productivity Commission recommended that Governments review the flow of public benefits from the pastoral leasehold tenure system (Productivity Commission 2002).

⁴ Note – this excludes mining , petroleum extraction or prospecting

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1.2.6 Perspectives and objectives of Stakeholders

The need for Government leadership and a vision

There are a wide range of opinions about the issues in the rangelands, how they should be managed, and for what purpose. Variation in opinions occurs between rangeland users and between rangeland businesses and government agencies, and in some cases within agencies.

Within government, objectives in the rangelands continue to be pursued at a portfolio scale, with limited interaction across portfolios. For example, assessments of viability at leasehold scale prepared by one WA Government Department would seem to be at odds with research and extension projects being carried out by the same Department and investment being supported by the Commonwealth Government.

The State Government needs to provide consistency by adopting a Whole of Government policy for the rangelands that works towards a desired vision for the future use of WA's rangeland areas. That vision should guide development of rangeland policy and its implementation. A vision should provide people who are living and working in the rangelands with a new sense of direction and some reality for planning their future.

The search for solutions

In the Kimberley and to a lesser degree the Pilbara, people recognise that the cattle industry is based on a better pastoral resource. In general, those consulted presented positive scenarios, and confirm the evidence of a more robust operating environment, especially in the Kimberley. However, there are marketing and productivity challenges facing the cattle industry that are limiting profitability. In other domains, such as irrigated agriculture and silviculture, economic development opportunities were reported to be plentiful, although inability to secure land and water resources in a timely manner was seen as a barrier to new investment. Further, developing viable tourism businesses and supporting Indigenous rangeland businesses through to resilience is also a challenge.

In contrast, those consulted in the Southern Rangelands highlighted a range of problems (decline of small stock enterprises, poor condition and declining condition of the land resource, wild dogs, low sales of Pastoral Leases, declining infrastructure, declining services to the grazing industry, climate change, lack of capital, lack of labour, and dependence on Centrelink etc.). Many Pastoral Leases with opportunities for non-grazing income (i.e. off-station work, tourism, niche horticulture or accommodating mine workers in surplus accommodation) now have diversified businesses. Some of these are managing adjustment well, although they are not always operating in accordance with the property rights afforded by a Pastoral Lease. For some now mainly reliant on non-grazing income, 'pastoral viability' as a concept is irrelevant, and they will not respond to traditional adjustment incentives that focus on reliance on grazing income.

Others attempting to rely on grazing alone, especially those with small enterprises are struggling to see their future with clarity and feel abandoned and 'unloved' by government and the wider community, and they are frustrated. They are looking for government to support traditional grazing activities with subsidies, and they are not able define solutions beyond support for grazing activities as a means to sustainable occupancy.

Looking to the future, many of those consulted suggested that a return to 'mainstream grazing' on much of the land, particularly in the Southern Rangelands, is neither economically feasible nor

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environmentally desirable, but some had difficulty identifying alternative means of economic activity. Where opportunities were identified, they reflect a general shift from reliance on grazing to non-consumptive uses and management (as in the statement 'we have to stop living a lie'). The options most frequently referred to are carbon farming, Indigenous ownership and management, new agricultural products (gubinge, tropical timber species, algae) conservation management, stewardship payments, landscape restoration, 'footloose industries' (e.g., IT services), and tourism developments, although few are able to specify how these might be initiated or operate in practice.

The need to accommodate diversity

A theme running through the input from stakeholders is that any major development (horticulture or tourism) will need to occur in clusters or nodes to be cost-effective. These nodes will then be linked with modern transport corridors. Nodal development will occur where there are particular resources such as abundant water or an iconic tourist attraction. These developments will require major investment and new skills and experience, but they will also provide opportunities for service businesses nearby. The road network improves the chances that businesses may establish adjacent to these links to either service traveller needs (e.g. a tourism venture), or as a conduit to send produce to market.

The potential for partnerships

Several stakeholders see the future involving partnerships between people and organisations interested in different, but complementary outcomes on a leased area. The WA Government's *Kimberley Science and Conservation Strategy* makes explicit the Government's desire to forge partnerships with traditional owners and other land managers in identifying and managing high value assets and establishing conservation linkages between parks. A more recent example is the Yulmbu Agreement brokered by the Australian Wildlife Conservancy (AWC), which involves AWC sub-leasing Tableland Pastoral Lease from the Yulmbu Aboriginal Corporation for 45 years (dependent on renewal of the Pastoral Lease in 2015) and delivering economic and social benefits to the Indigenous people living at Yulmbu through sub-lease payments and employment opportunities. Where mining companies are holding Pastoral Leases and running grazing enterprises for no reward, non-mining stakeholders suggest the opportunity for third party involvement should be explored.

Matching opportunities with mechanisms

Sections of the pastoral community suggest that increasing pastoral leaseholder rights (in areas such as carbon, sandalwood), combined with increased direct support for the grazing industries (subsidised abattoirs etc) will build resilience. There is concern and confusion within the pastoral lease-holding community and government agencies about the legal opportunities to establish new enterprises on pastoral leasehold land, bring in third party operators, address Native Title, manage cultural heritage, become involved in carbon farming and secure licenses to abstract groundwater.

The need for new money and new people

A theme running through many of the contributions made by stakeholders was a perceived need for 'new people and new money' if government objectives for sustainable land use and economic development opportunities are to be realised. People suggested that many current leaseholders are not able to access capital (and in some cases are supporting excessive debt levels) for new ventures,

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and/or may not be able to obtain or develop the knowledge and skills for new ventures. There was a common view that capturing the opportunities that exist may need an injection of capital and skills from outside the current rangeland community.

At the same time URS was told of 'investor reluctance' to become involved in substantial horticultural and silvicultural projects in the Kimberley without sufficient security, with an acknowledgement that being able to obtain a Rangeland Lease may assist overcome the reluctance. The view expressed was that if the government objective is multiple-use and increased economic activity in the rangelands, further support and advice needs to be given to proponents of projects, with greater commitment to land use change within government agencies.

Impact of the Rangelands Reform Program

Few of the stakeholders consulted by URS have developed a view about the impact of the Rangeland Reform Agenda on the environmental, economic and social state of the rangelands. In the absence of the draft legislation, many stakeholders were unsure what the new arrangements will offer.

Private conservation organisations see value in being able to convert Pastoral Leases to Rangeland Leases with the specified use being conservation management. Indigenous owners also see value in the multiple use concept of a Rangeland Lease fitting their desire for a mix of cultural, environmental and grazing uses.

The grazing industry is concerned about conversion of land with sound grazing potential to non-grazing uses via the Rangeland Lease mechanism, which could reduce the critical mass for the grazing industry. However, the grazing industry welcomes the planned provisions which will remove the right of government to resume areas of a pastoral lease without compensation, and that will also allow for automatic roll-over of leases. These stakeholders suggested that issues (and likely cost) with negotiating ILUAs for conversion of a Pastoral Lease to either a Rangeland Lease or a Perpetual Pastoral Lease for grazing alone (in effect 'business as usual') would prevent many conversions, although there was recognition by some that in areas where the grazing industry is failing and where other options are being pursued, there could be interest in taking up a Rangeland Lease.

1.2.7 Response to pastoral viability and sustainability challenges

The performance of past government interventions

Past reviews have recommended reforms to put the Pastoral Leasehold Estate on a sustainable economic and ecologically sustainable footing. Implementation of the recommendations has not always been complete. The frequency and repetitiveness of these reports suggests that governance has not been able to address fundamental problems. This observation is supported by the evidence presented in this Report that the Pastoral Leasehold Estate is not supporting a viable grazing industry over two thirds of its area, and that trends in the condition of the rangeland resource (soils and vegetation) are not reflecting appropriate management. In short the available evidence is that previous measures aimed at rehabilitating the grazing industry, especially in the Southern Rangelands have not been successful.

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New approaches to structural adjustment

There is a need for a much greater range of options for structural adjustment than those currently on offer. Increased flexibility will be required to provide adjustment opportunities that are individually tailored to achieve specific outcomes in terms of clearly identified programs. Under the general banner of 'transitional or change management planning', these options may include:

- providing the means for a family with off-station income to remain on a property while the grazing rights to the land are transferred through sale or lease to a neighbour, or are leased back the government for a definite period;
- Government to be more prepared to accept a significant capital loss associated with taking a piece of unsuitable or badly degraded land out of production, instead of encouraging another business to incur debt through its purchase (although care will need to be taken to avoid corrupting the market);
- making it easier for one family to leave without the need to sell the business where there are multiple families on the one property; and
- developing a stewardship conservation approach that can reward businesses for managing for specified conservation outcomes, provided the management activities are in addition to landholder responsibilities.

1.2.8 Opportunities and constraints for sustainable development

The evaluation of opportunities in the rangelands (and in particular the Pastoral Leasehold Estate) has been guided by the following set of principles developed by the consultant team. These are all equally important.

- Encouragement and support for sustainable occupation of the rangelands.
- Improvement of natural resources.
- Recognition of biodiversity and landscape values and their preservation.
- Preservation of heritage, cultural values and practices.
- Optimisation of economic opportunities across all uses and users.
- Attraction of new skills and experience and new capital into the rangelands.
- Provision of rational, effective and collaborative services.

Supporting a viable grazing industry in areas of comparative advantage

Most of the cattle herd in the rangelands is in the Kimberley and the Pilbara, and improving productivity and market opportunities in these areas should continue to be the principal focus for investment in grazing industry development.

Improving market options

The current economics of the cattle industry are not sound. In respect of markets, it is predicted that the criteria for live export animals delivered into Indonesia will be further restricted as Indonesia develops its domestic cattle breeding industry. With the absence of abattoir facilities anywhere in north Western Australia, this highlights the limited market options for cattle in that area.

A recent ABARES report (Gleeson *et al.* 2012) referred to the need for more abattoir facilities in northern Australia, and recognised that for an abattoir to succeed, grazing businesses need to be able to supply cattle for slaughter year-round. This will require irrigation developments to enable fodder production to hold cattle in sufficient condition for slaughter during the late dry season and during the wet season.

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Initiatives being pursued by Rio Tinto and through DAFWA's *Growing the North* project, the investigation of the potential for 'mosaic land use' (a network of irrigated feed-on facilities located within pastoral areas) by CSIRO and the R&D being undertaken by CSIRO and the Queensland Government into logistics infrastructure are aligned with this requirement which can be enabled in part by tenure reforms through the Rangelands Reform Program.

Government and industry need to work together in developing an integrated approach to development of a mosaic land use with efficient transport links for cattle movements, via a Strategic Plan as recommended by Hyder Consulting *et al.* (2011). There is a need for a careful and considered approach to these developments, especially in respect of an abattoir in northern WA.

Improving the productivity of rangeland herds

Beyond market, processing and supply chain logistics, recent investigations by McCosker *et al.* (2010), Holmes *et al.* (2010) and to a lesser extent Gleeson *et al.* (2012) reveal a northern cattle industry performing well below its potential on KPIs for herd productivity, return per breeder, cost per breeder, and return on assets managed, and burdened with high debt levels. The technologies to improve productivity are well known and able to be applied, such as improved water distribution, remote management technology, conservative stocking rates, improved heifer management, consistent weaning, supplementary feeding, increasing female sales and reducing cow deaths (see publications on www.mla.com.au).

The degree to which northern cattle businesses can address low productivity and high indebtedness will occur independently of the WA Rangelands Reform Program. However, failing to address these issues is likely to result in a further reduction in the number of Pastoral Businesses able to generate adequate returns from their grazing enterprises and, for those struggling, increase the risk that the base resource will not be well managed.

Irrigated agriculture and silviculture

Increased knowledge about available groundwater reserves in the rangelands, as shown in the table below, and improved agricultural technologies are opening up opportunities for targeted developments in horticulture, intensification of grazing and silviculture.

In areas where water is more abundant, there is the opportunity to develop irrigated agricultural precincts (based around horticulture as well as fodder production). The availability of ground water resources in the La Grange Area, the West Canning Basin, in the mining areas in the Pilbara and to a lesser extent in the West Gascoyne suggest these should be the target for active Government intervention in securing land and providing infrastructure so that the opportunities are attractive and ready for investment.

New crops and products showing promise include algae production on the Pilbara coast, expansion of the already robust Indian sandalwood irrigated plantings, and the development of native plant cultivation (e.g. gubinge).

Government should support adequately resourced research and development work on promising species. Government and those interested in these alternate crops need to recognise that developing a viable option(s) may be a 20 year journey, and hence a long-term strategy is required.

Current information about water use for irrigation the rangelands, and available divertible supplies in those general areas is presented in Table 1-6.

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Table 1-6 Major divertible water supplies for irrigation in the rangelands

Region	Water source	Current use (GL/yr)	Potential use (GL/yr)	Comments
Kimberley	Ord River	350	515	Includes water available in the Weaber Plain and Mantinea areas Allocated to Ord Stage 2 Not on PLs
	La Grange N	4.09	35	Already supporting irrigated agriculture
	La Grange S	2.62	15	Already supporting irrigated agriculture
Pilbara	Mine dewater	40	200	Large scale (845 ha) irrigation commencing on PL Assumes development of further below water-table mines Development of irrigation enterprises needs to recognise typical 30 year mine life
	Western Canning Basin	30	100	Small scale use in agriculture already occurring Will support expansion of Port Hedland, but can also supply irrigated agriculture
Gascoyne	Carnarvon Artesian Basin	10	30	Low quality water, trial work done, production risks involved. Better water on Meedo PL
	Mt Augustus	minimal	1	Some exploratory work done. Remote from markets
	Wooramel River	1.4	4	Currently used to support 46 ha of horticultural production

Sources: DOW (2007); DOW (2010a, b and c); Dust Up Projects (undated), advice from DOW 2012.

Developing a carbon economy in the rangelands

URS is aware that the law relating to access to carbon on land is currently being discussed by the WA and Commonwealth Governments. Under the *WA Carbon Rights Act 2003* the Crown holds the rights to carbon on Crown land (including Pastoral Leases). In practice, under the *WA Carbon Rights Act 2003* a carbon right does not exist over Crown Land (including Pastoral Leases) until a carbon right is registered with the Registrar of Titles in an approved form and including the written consent of all parties that hold a registered interest in the relevant land; including the Minister for Lands. Similarly the written consent of the Minister for Lands is required to transfer a carbon right in Crown Land from one proprietor to another. This situation does not apply on freehold land, exclusive possession native title land or other categories of land as specified in the *Carbon Credits (Carbon Farming Initiative) Act 2011* (CFI Act) and related legislation (advice from DAFWA 2012).

Although the returns from sequestering carbon appear attractive, the earnings at whole of lease scale may be modest when considered over a 100 year time frame (as per the requirements of the carbon farming initiative). It is therefore likely that carbon sequestration activities will be targeted at specific land systems where the sequestration rates are highest, the stability of the stored carbon over time higher, and the means of measurement and verification most cost-efficient. Addressing the spatial and temporal variability in carbon fluxes which results in a lack of precision in measurements will only be addressed by a lengthy period of research.

An alternative to entering into a long-term arrangement for sequestering carbon is abatement of greenhouse gas emissions through the management of fire in the northern savannah woodlands. This is an allowable activity under the CFI subject to approval of the methodology, and is being implemented in the West Arnhem Land Fire Management Agreement (WAFMA) by ConocoPhillips in

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partnership with Traditional Owners in West Arnhem Land (28,282 km²), the Northern Land Council and the Northern Territory Government. This voluntary scheme is being implemented as an abatement and not a sequestration project, given that ownership of the soil and vegetative carbon is yet to be determined in the Northern Territory. The Traditional Owners receive \$1.3 million per year from the Company for the services provided (Jeremy Russell Smith *pers. com.*).

Given the considerable technical and legal uncertainties around carbon farming involving carbon sequestration, Government should for now retain the carbon rights and support 'pilot' projects in their application for carbon rights on leasehold land by issuing carbon rights and special leases that will allow carbon sequestration to occur and progress resolution of the legal issues associated with carbon ownership in the rangelands.

Current options for emissions abatement in the WA rangelands will be limited to areas in the far north-west Kimberley, where active fire management is already occurring. Major resource projects looking for carbon offsets could emulate the WAFMA arrangement established by ConocoPhillips and its partners and establish collaborative arrangements with pastoral leaseholders in that area.

Native products harvesting – sandalwood

An analysis of the native sandalwood industry presented in this report shows that of an estimated \$15.8 million gross value of product, about \$6.5 million is paid to contractors for the harvest, about \$4 million to \$5 million returns to FPC as stumpage revenue, with the remainder (\$5.3m) consumed in cartage, marketing and administration. Pastoral lessees hold about half of the contracts. The industry employs about 120 people who undertake the harvest in the Crown lands, mainly on Pastoral Leases. There is a high level of illegal harvest, believed by FPC to be equivalent to the legal harvest, which is resulting in depletion of the resource. The FPC recognises the need to develop and implement a rigorous 'chain of custody' process for the industry.

If pastoral lessees were able to exploit sandalwood reserves on their own leases, with the existing total harvest set at the current limits, based on the above returns, pastoral lessees could potentially gross about \$10.5 million, being the aggregate of the payment on contracts, plus the stumpage revenue currently being received by FPC. This would deliver some benefit to those pastoral lessees keen to participate in the industry.

The rights to revenue from timber on Crown land are held by the FPC, as described in the *Forest Products Act 2000*. Transferring all or part of these rights to be attached to Pastoral Leases would (i) require change to legislation, (ii) result in existing pastoral lessees receiving a new property right, with the public surrendering a revenue stream, and (iii) could trigger action under the *Native Title Act 1993*. Further, it would 'shift' employment of an estimated 120 people involved in the harvest now to pastoral lessees or their employees. Further, the native sandalwood harvesting industry on Crown land is seen as a 'sunset industry'. The resource is finite, and the FPC is looking to rely in the future on its 9,000 ha estate of plantation sandalwood in the agricultural areas of WA.

It is URS's view that a transfer of the rights to the sandalwood resource from FPC to pastoral leaseholders will have relatively few advantages and significant disadvantages. The disadvantages lie mainly in the risk of loss of control of the marketing of the total sandalwood harvest, which is likely to result in the market accepting only high grade (i.e. high oil content) wood, which in turn would result in wasted product, and hence low returns to the producer – in this case the pastoral leaseholders.

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Tourism development

Major expansion of tourism in the rangelands is likely to be based on developments adjacent to key attractions. Greater economies can be developed around a hub and spoke concept of development that allows numerous smaller enterprises to grow off key infrastructure and attractions. It is anticipated that the WA market might be able to develop half a dozen of these hubs. Generally they will be associated with the coast and existing transport links.

There may be opportunity for developments that focus on inland attractions such as Mt Augustus, but to develop these properly they will need to be integrated with transport infrastructure and to be better interconnected and serviced. Taking a regional approach and using a hub and spoke concept is seen as critical. Developments will need to link along corridors (roads or 4WD routes), and may even take the form of “air highways”. It was suggested that rangeland tourism needs to be part of each Regional Development Commission’s Regional Development Plan and be used to focus government agency efforts to a common and agreed strategy.

Indigenous tourism businesses like the low key tourism enterprises on Pastoral Leases generally complement other income sources. They are important in providing visitor activities, especially for international visitors. An experience involving indigenous culture is an important component for these tourists. A key for these businesses is to be adaptable and adjust for the seasonality of tourism in rangeland areas. The Indigenous Tourism Development Strategy (Tourism WA and WAITOC 2011) addressed these requirements and others in the Strategic Plan.

Key factors to develop the tourism industry include:

- developing and resourcing regional plans that facilitate the supply of integrated and complementary services targeted towards any identified significant regional assets, or icons;
- improvement and accreditation of accommodation and service providers; and
- better explaining or presenting the tenure and permit options available to pastoral leaseholders and third parties – if the mechanisms are available then the market needs to know how to access and use them. They also need to understand the reality of likely timelines.

Regional landscape management

The need to manage environmental values at a large landscape scale has led to several such strategic programs across Australia. Examples include the landscape-scale management of the Cape York Peninsula in Queensland, the Lake Eyre Basin in the Northern Territory, Queensland, NSW and South Australia, and the Macquarie Marshes in NSW. In WA, one example – the *Great Western Woodlands* – has received official recognition, and the *Kimberley Science and Conservation Strategy* emphasises the potential for partnerships between all land holding interests in implementing landscape-scale management of assets and threats, and facilitating economic development through nature-based tourism.

In the area roughly bounded by the agricultural areas to the west, the Mullewa-Mount Magnet Road to the north, and the Great Northern Highway between Wubin and Mt Magnet to the south east is an area which is now largely held for non-pastoral purposes. Of a total area of 1.6 million hectares, 56 per cent is already managed specifically for conservation objectives, with a further 15 per cent held by Mining Companies who have identified conservation and heritage objectives for the leases. Only 29 per cent of the land is currently supporting livestock, and with the exception of one lease, few stock are being carried.

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Following from the example of the Great Western Woodlands, URS suggests there is the opportunity for this total area to be designated as a distinct multiple use precinct termed the Great Mulga Woodland, in recognition of the dominance of the tree species mulga (*Acacia aneura*) over most of the area. Recognition of this Precinct should be followed by development of a Strategy for the whole area, with involvement of all parties.

Biodiversity conservation

Suggested opportunities for improving biodiversity conservation efforts in the rangeland areas include a number of activities that might be undertaken with government support or facilitated by agencies and undertaken by leaseholders. Fundamental improvement in building conservation values will be achieved in the implementation of better rangeland management and rangeland rehabilitation. This links with a number of other opportunities and policy demands, and is aligned with the intent of the Statement of Requirements for this Project. However, a principle is that one form of land use should not lessen the value of another. Multiple values need to be recognised and maintained.

Where high value habitats or ecosystem types are known to occur on Pastoral Leases it was suggested that management plans should be developed to assist the leaseholder to manage, and a reporting process put in place to monitor the management and condition of the area of value. URS supports the suggestion if applied to areas of recognised and important natural values (e.g. Ramsar wetlands, Declared Rare Flora, Threatened Ecological Communities etc), where the pastoral lessee may be required to implement a specific management regime that is outside the normal responsibilities of a pastoral lessee. Where such 'additional management' is required, government can negotiate a stewardship payment for the lessee in return for specified actions to ensure sound management of those values. This would assist in adding to the concept of maintaining multiple use values across the rangelands.

Consultation with DEC suggested that they achieve significant economies of scale when the areas they manage are contiguous and of a minimum area. The costs associated with managing for non-conservation outcomes can also be lessened by reducing the length of neighbouring boundaries with grazing operations requiring wild dog control. Efficiencies will be gained with capacity to add to the DEC managed areas (subject to them having required environmental values) to achieve economies of scale. Management agreements may be created to use people currently living in these areas to assist with management of parks and reserves. The Kimberley Ranger Program is an example that might be followed and expanded.

The use of environmental offsets by mining companies is another option to provide for rangeland rehabilitation. The opportunity for offsets is being actively considered by State and Federal Governments and mining companies (advice from the EPA 2012). It was suggested that significant monies are required to be spent on mine site rehabilitation, for minimal value in some cases. This money might generate greater environmental benefit if applied more broadly to rangeland regeneration across much greater areas. Data describing the money mining companies spend on mine site rehabilitation versus the area rehabilitated, and the area of rangeland that might be rehabilitated may provide good background for this policy.

An enormous amount of disconnected, disjointed data is being collected for mining companies on species distribution, habitat, etc. and is simply being filed away. Opportunities exist for collating or at least establishing common standards for data collection and the shared use of that data.

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Environmental stewardship

Environmental stewardship arrangements might be adapted and targeted to regional environmental priorities across the WA rangelands. The stewardship concept might also be expanded and applied to other works that provide desired public good outcomes. An important principle is that the tasks for which stewardship payments are provided must be additional to those responsibilities of a landholder that are mandated by government.

The merit of the concept is that it enables agencies to use people currently living and available in isolated areas to cost effectively undertake required tasks or management. The benefit to people currently living on a Pastoral Lease or more generally in the rangeland area is that it might provide another complementary source of income for their support. Stewardship payments can facilitate the multiple-value and multiple-use concept of Rangeland Leases, but can also be applied for existing Pastoral Leases.

URS considers an important element to the application of stewardship payments is the determination of agreed objectives for each region. The Given the variability in land uses and economic activity existing now, land use objectives and values are likely to differ significantly across rangeland areas according to grazing values and other opportunities. These variances should be taken into account as part of developing agreed regional plans in consultation with grazing and other stakeholders. When land use objectives are determined then stewardship payments may provide one useful means to achieve the required outcomes.

Recent amendments (2011) to the *Conservation and Land Management Act 1984* and the *Wildlife Conservation Act 1950* allow for joint management of conservation assets on land not held by the Conservation Commission. The important change is that these joint management arrangements can be enforced, which protects the government's position. Joint management agreements to manage assets on Pastoral Leases would seem to be ideally suited to environmental stewardship arrangements.

Conserving heritage

As well as Aboriginal cultural heritage, the rangelands are also rich in European heritage dating from earlier times of mining and grazing activities. Shires in the rangelands maintain Municipal Heritage Lists, with pastoral and mining heritage featuring. However, these same shires have difficulty in resourcing the protection and management of these assets, which have tourism value. The operational and scientific heritage created by the pastoral industry in the rangelands is significant and is at risk of being lost, especially in the Southern Rangelands. Government could support the maintenance of historical research sites.

Services to other industries

There are a large number of pastoral lessees working 'off the station', in occupations such as services to mining, local councils, or sandalwood harvesting. DAFWA has researched the advantages and disadvantages of operators of agricultural enterprises working away from the agricultural business to generate additional income, and determined that off-farm work during a drought does not pay off farm debt but it can alleviate some of the mental fatigue growers' encounter during seasons with negative production potential. Despite this, most growers feel off-farm work does not fit their business plan. The finding that off-farm work does not align well with maintaining quality farm business management,

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has resulted in Departmental advice that farmers considering off-farm work to address financial imperatives need to make a careful and considered decision.

Although this work was done in an agricultural and not a pastoral setting, the findings and advice have relevance, in that pastoral leaseholders who choose to focus on working off-property, or away-from-property are likely to find it difficult to optimise returns from the grazing enterprise or meet their obligations as a pastoral lessee.

The implication is that being able offer a pastoral lessee who draws nearly all earnings 'off station' with a Rangeland Lease unencumbered with the need to look after stock could well be attractive.

Current tenure options in the rangeland and their constraints

Issues encountered with the current tenure options on Pastoral Leases have included:

- The pastoral landholding business community profile and the consultation undertaken for this project suggests people have already voted with their feet in terms of the diverse set of activities they undertake in order to continue to live on their Pastoral Lease. Many of these activities are being undertaken without appropriate permits, and the true financial value is not in the public domain.
- The Pastoral Leasehold Estate is no longer able to support a viable grazing industry over large areas. Responsible agencies and the grazing industry have not yet factored this economic reality into the decisions made about land use, particularly given the poor and sometimes deteriorating condition of the rangeland resource. The State is approving the transfer of Pastoral Leases with grazing property rights in the knowledge that these leases cannot support a viable grazing business.
- An additional mechanism might be to be able to separate the rights of a Pastoral Lease into grazing rights and the right of access to the land and homestead infrastructure to provide an additional mechanism to control where grazing may or may not occur, while supporting sustainable occupancy.
- Policy and administration is not recognising regional differences in environmental and economic opportunities and constraints, and the current set of tools is limited in their capacity to facilitate a larger and more resilient rangeland economy as envisaged by the Rangeland Reform Program.
- Reliance on the Permit options available under Part 7 of the *Land Administration Act 1997* will not deliver the desired development. In areas where significant nodal developments in irrigated agriculture and tourism are planned, Government needs to use other instruments to acquire land and ensure that major investors can make timely decisions with confidence.
- Knowledge is not always effectively shared from one agency to the next and consequently government expenditure from one agency contradicts the findings of another. Not having a whole of Government policy and response to changes in the use and values across the rangeland areas is resulting in inefficient and wasteful government expenditure.
- Although the state and trends in the condition of the rangeland resource are sufficiently known and reported, equivalent valid and reliable information for social and economic metrics in the fast changing environment are more difficult to obtain, and are sometimes not in existence. Where information is available, it is usually presented at portfolio-scale, and often derived from different geographical boundaries. In a specific example, it is anomalous that the Pastoral Lands Board is not required to account to Parliament via an Annual Report. This is at odds with the requirements placed on other statutory Boards, Authorities and Positions with government.

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- This lack of sound information limits the ability for government and industries to make ‘evidence-based’ decisions at the right scale, and instead increases the risk that decisions will be made in response to past practice, anecdotal information and/or excessive lobbying. The issue is addressed in the recommendations.

The role of the Rangelands Reform Program

Most interest in converting to a Rangeland Lease is likely to come from Indigenous owned Pastoral Leases and leases owned by private conservation groups. It is not anticipated that this will necessarily result in any increases in economic activity but the new leases will better align with the owner’s objectives and values. The rents to be paid on the new lease types will be dependent on the permitted uses and will be set by the Minister on the advice of the Valuer-General (DRDL 2011).

The objective of the tenure reform process in the Program to provide a form of tenure that allows for non-grazing use of rangelands and for owners to destock will come at a cost in the form of going through Native Title negotiations. At this point we are unsure if many pastoral leaseholders will be prepared to undertake that process, and the level of benefits they perceive it might provide. Many leaseholders are now by default undertaking only limited grazing use. The extent to which a Rangeland Lease will facilitate other uses that cannot currently be achieved with Diversification Permits or General Leases is uncertain. They may be a useful mechanism for integrated tourism ventures that have attractions within the lease.

Where lessees are operating large, well-resourced and financially robust grazing enterprises, there may be interest in conversion to Perpetual Leases. In particular this option may be attractive to Corporate Pastoral Businesses, if this is seen as a means of reducing the cost of debt financing through the additional security obtained by the conversion. The lessees will make a commercial decision are weighing the benefits (e.g. reduced debt servicing, increased access to capital) and the costs (principally the requirement to negotiate an ILUA or a legal agreement with determined Native Title holders or registered claimants).

The most important benefit of the Rangeland Reform Programs might not be in the opportunity for alternative tenure options but in the way it will redefine the possible use of rangeland areas. They will no longer be perceived as just pastoral (grazing) areas but areas with multiple values.

The other potential use of a Rangeland Lease might be to secure access to carbon rights over a 100 year time frame, which a Rangeland Lease will allow. This could occur if the rights to carbon were transferred (through sale) by the Crown to a pastoral leaseholder who in turn could convert their Pastoral Lease into a Rangeland Lease, while selling the grazing rights back to the Crown. However, policy in this area is yet to be determined, with a wide range of research and development needs, and legal aspects still to be addressed.

A Rangeland Lease may help clarify the Pastoral Lease property market by providing an alternative perspective on value. Until recently the market in the southern rangelands has been slow to reflect the productive value for grazing purposes, although more recent sales data suggests this shift has now occurred. A Rangeland Lease will provide an alternative benchmark of value, and may highlight the true value of a non-stocked lease.

Conversion of a Pastoral Lease to a Rangeland Lease with removal of grazing rights might be a mechanism the state could use to remove stock from degraded areas. This could involve the State paying for grazing rights and thus freeing up some capital for the rangelands leaseholder.

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The WA Government will need to provide resources for committed and active support for the implementation of the Rangelands Reform Program following passage of the legislation, which will in effect initiate a transition from administration of a 'Pastoral Leasehold Estate' to a 'Rangeland Estate'. This transition and support for implementation of the Program is the subject of recommendations in following sections.

1.3 Developing Recommendations

1.3.1 Addressing the Statement of Requirements

In developing recommendations for sustainable land use and economic development opportunities in the WA rangelands, URS has focused on the objectives of the WA Government's Rangelands Reform Program which are contained in the Background to the Statement of Requirements for this Report (see **Appendix A**). These are re-stated below. URS has highlighted sections of the text in bold that contain the essence of the Rangelands Reform Program, and that need to be reflected in the recommendations in this Report.

The Government of Western Australia has initiated a Rangelands Reform Program funded by the Royalties for Regions program to identify and implement measures to address issues raised by previous reviews concerning the pastoral industry and conditions in the State's rangelands. The Program reflects a shared commitment on the part of the Government, the pastoral industry and other stakeholders to effect fundamental change in the rangelands. The Program also seeks to create an enabling environment for the growth of sustainable, economically diverse rangeland communities through a combination of land tenure reform, encouragement of new investment opportunities and land uses, and the identification of measures to restore the rangeland's productive capacity and ecological values.

The Rangelands Reform Program, and the Statement of Requirements for this Report make it clear that 'business as usual' is not acceptable and that 'fundamental change' is needed to take the rangelands and its communities to a new and sustainable level of environmental, economic and social outcomes.

'Game changers' are needed if these better environmental, economic and social outcomes are to be delivered in the rangelands, and the recommendations presented in following sections need to be read in light of the comments above and the information presented in the body of the Report.

1.3.2 The need for more resources

The analysis of the current situation in the rangelands presented in this Report reveals that the rangeland regions, their industries and people are depleted in environmental resources in many areas, with grazing enterprises that, in some areas, are no longer able either to support adequate lifestyles and return on assets managed, or to mobilise the capital and/or the commitment needed to improve land condition or generate new income earning activities. In short, without external commitment, the existing Pastoral Landholding Business Community will not be able to contribute adequately to the achievement of the objectives of the Rangelands Reform Program, as stated above.

While the planned tenure changes will facilitate new opportunities at a lease-by-lease scale, further commitment to planning for land use change in target areas ('nodes') with comparative advantages for

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different uses is needed. These require commitment to policy development and implementation that will require resources additional to existing portfolio allocations.

Above all, if the WA Government and community is serious about addressing long-standing issues with loss of range condition over 19 per cent of the state's area, and evidence of continuing decline in some areas, a significant injection of support from the public purse is required if this public good is to be restored.

The Statement of Requirements does not request a detailed analysis of the resourcing implication of recommendations presented. However, some comment is required. It is evident that the cost of administering and supporting the Pastoral Leasehold Estate is about four times more than the return from rentals, with the available evidence suggesting the WA Government's objectives in the rangelands are not being met. Non-essential items in this expenditure should be re-allocated into supporting recommendations below that are aligned with the WA Government's objectives.

Secondly, as noted in the body of the Report, the Royalties for Regions Program invests in regional development, and is already active in supporting rangelands projects in water resource development and carbon farming. It is URS's view that further investment through the Program is a logical means of providing the support for implementing recommendations that have significant resourcing implications.

1.3.3 Key and supporting recommendations

The Statement of Requirements requires analysis and recommendations across a wide range of issues and topics. As a result, in the following sections, 39 recommendations are presented. These have been ranked as 13 key recommendations and 26 supporting recommendations.

The **key recommendations** describe actions required at whole-of-rangelands scale, such as determining regional priorities, options for further tenure reform (i.e. beyond that envisaged through the Rangelands Reform Program) and improving the transparency of government administration.

The **supporting recommendations** describe actions that address more specific items in the State of Requirements, such as enabling rangeland improvement, widening the economic base in the rangelands, facilitating new land uses and industries, supporting Indigenous land uses, exploring options for carbon farming and developing a better assessment of the benefits and costs of rangeland occupancy.

1.4 Key Recommendations

1.4.1 A charter for Management Action

There is a need for a whole of Government policy for rangeland management and a definition of agency responsibility to act where lease conditions are not being met. The absence of a whole of government policy and adequate responses to the changes in the use and values derived from rangeland areas is contributing to inefficient and wasteful government expenditure, and a failure to better target the allocation of resources. For example, information is not always effectively shared between agencies and responsibilities are not always clearly defined. Consequently government expenditure from one agency sometimes contradicts the judgment of another.

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Recommendation 1 – Government should develop a Charter to agree to develop a Vision for the Rangelands, develop a whole of Government policy for rangeland management, assign responsibilities across agencies, and define a requirement to act where conditions of holding a lease are not met.

1.4.2 Develop a Vision for the Rangelands

Government needs to support future uses and values for WA's rangelands. There is value in looking forward and a cost in hoping that 'business as usual' will be the future. There is a need to manage the transition to a new tradition, new approaches to administration and industry support and future uses of the rangelands.

Government needs to provide consistency with a whole of government policy and state its desired vision for the future use of rangeland areas. That vision should guide development of rangeland policy and its implementation. A vision should provide people living and working in the rangelands with a new sense of direction and some reality for planning their future.

The vision should direct the transition from a role of managing the pastoral estate to managing multiple values defined by regional priorities. It should reflect the value of alternative uses and inspire complementary use not competing use. Above all, the vision should direct the transition from governance of a 'Pastoral Leasehold Estate' to a 'Rangeland Estate'.

Recommendation 2 – Government should develop a Vision for the future use of Western Australia's rangeland areas.

1.4.3 Support for rangeland use, occupancy and recovery

Many stakeholders have advised URS that current pastoral leaseholders feel abandoned by government with no options being offered, and in some situations resources are being withdrawn, and there is confusing information about policy changes. Government needs to reassure leaseholders that they are valued, but at the same time present realistic solutions to address long-standing economic and environmental issues.

Recommendation 3 – Government needs to make a clear statement that occupancy of the rangelands is valued, provided that the use and management is meeting the occupants' and the wider community's objectives.

About 21 per cent of the Pastoral Leasehold Estate is in poor range condition (195,000 km²), with over 7,000 km² severely degraded and eroded. Since systematic reporting of range trend commenced in the 1990s, there has been no evidence of a sustained improvement in the resource condition across the whole estate, with some indication that downward trends are occurring on many leases. In some areas, under existing management (usually destocking), improvement is occurring, whereas in other areas on-going deterioration is occurring. There should be a focus on areas where trends are 'downward'. Collectively, the evidence presented in this report is that, generally speaking, current government and lessee actions to improve range condition, or in some cases to prevent further decline have been and continue to be ineffective. In summary, the rangelands are in unacceptable condition, the WA Government needs to commit to rangeland improvement as a policy, and resource it accordingly. A program of landscape-scale rangeland recovery would be an opportunity for investment through the Royalties for Regions Program's Natural Resource Management Theme.

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Recommendation 4 – Government should commit to prevention of any further degradation and implement a program of range condition recovery. Government should assign lead agency responsibility and allocate additional resources.

1.4.4 Identify regional opportunities and values

There is a wide difference in the economic opportunities, values and risks across WA's rangelands. Whereas the Kimberley now generates over half the livestock income, and has opportunities in irrigated agriculture and silviculture, and tourism, parts of the Southern Rangelands are making the transition, in some cases unwillingly, from grazing to other uses, or lessees are searching for alternatives. Government should develop regionally focussed plans and priorities that integrate grazing, conservation, tourism, agricultural and cultural values according to the regional strengths and weaknesses in these areas, and use these plans to direct administration of the lands in these regions.

For example, support for the grazing industry should be focussed to those areas with current and future capacity and comparative advantages, with support for conversion to Perpetual Leases as appropriate. In other situations, government can encourage occupancy with/ without grazing rights for undertaking public good activities, such as land stewardship, heritage protection, public safety etc. Identification of how these multiple values may co-exist at regional scale, combined with government support will facilitate the value and uptake of Rangeland Leases. In another example, locations (nodes/ precincts) with comparative advantages for tourism and agriculture can be identified and pre-feasibility studies completed as a precursor to government action in facilitating tenure change and external investor interest.

Recommendation 5 – Government should develop regionally focussed plans and priorities for the Rangeland Estate that integrate grazing, conservation, tourism agricultural and cultural values according to the regional strengths and weaknesses in these areas, and use these plans to direct administration of the lands in these regions.

1.4.5 Establish priority areas for tenure change and investment

The current approach to managing new uses on Pastoral Leases via Diversification Permits and S-79 Special Leases is satisfactory for small scale developments, although improvements are required. These mechanisms are not suited to progress priority development opportunities such as in the La Grange Horticultural Precinct, Pilbara agricultural precincts (mine dewater areas, West Canning Basin) the Carnarvon Basin artesian water resource, algae development on the Pilbara coast and major 'nodal' or 'hub' tourism attractions. In other industries, WA Government moves to establish Strategic Industrial Areas, such as at Ashburton North, where pastoral tenure has been resumed and replaced by more robust tenure, or in the case of the SKA, where an area around the site has been quarantined from mining. Areas targeted as potential precincts for horticulture or major tourism ventures should be subject to tenure change prior to arrival of potential investors. The State needs to act on advice from key stakeholders that a two to four year timeline to gain approval and negotiate native title is inhibiting possible investment.

Recommendation 6 – Government needs to identify priority areas for tenure change and investment in the rangelands and secure these areas under appropriate tenure, and at a scale that will attract sufficient investment.

Most of the growth in consumptive activities in the rangelands will rely on access to sufficient water supplies that can be diverted cost-effectively. Knowledge of water availability is improving but more

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investigation is required. The water resources on Pastoral Leases and elsewhere (surface, underground) are abundant, will increase in value, and will drive land use options.

Successful future developments will be expansions around existing nodes of agricultural development or transport, or will need to be of significant scale to allow for efficiencies in the cost of production. Government and industry need to work together in developing an integrated approach to development of a mosaic land use (irrigated areas linked with native pastures) with efficient transport links for cattle movements. This will be a necessary precursor if abattoir developments in northern WA and the Northern Territory are to succeed.

In areas where water is abundant, there is the opportunity to develop irrigated agricultural precincts (based around horticulture as well as fodder production). The availability of ground water resources in the La Grange Area, the West Canning Basin, in the mining areas in the Pilbara and to a lesser extent in the West Gascoyne suggest these should be the target for active Government intervention in securing land and providing infrastructure so that the opportunities are attractive and ready for investment.

Recommendation 7 – Government to increase investment in identifying and developing available water resources for agricultural and horticultural uses.

1.4.6 Improve current tenure options

There is a level of confusion and frustration in the market place over what Diversification Permits and Special Leases can deliver, and a dissatisfaction that the processes take too long. There appears to be some inconsistency in the interpretation of what can or can't be done. Consultations also suggested more emphasis needs to be placed up-front on a project pre-feasibility assessment of the technical and financial aspects of the proposal rather than the administrative and approval processes. There is an apparent gap between the theory of what the current options can deliver and outcomes being achieved.

Recommendation 8 – Clear advice and support services need to be available to proponents to assist them develop their proposition into a business plan and help them understand the capacity of Diversification Permits, Special Leases and new tenure options, and to determine the best tenure option for each proposal.

1.4.7 Support a shift from 'pastoral leasehold' to 'rangeland' administration

The state is currently transferring Pastoral Stations with grazing property rights in the knowledge that many of these Stations cannot support a viable grazing business. About 70 per cent of Stations may be in this category. Although information on the condition of the resource and its grazing capacity are freely available, this situation does not reflect good governance, nor does it seem to deter some investors.

In part, this is because the administration of most of the State's allocated rangeland is managed by the PLB operating through Part 7 of the *Land Administration Act 1997*. The task in implementing sustainable land use and economic development opportunities in the rangelands – which is the scope of this Project – will need a larger and wider commitment from Government than can be delivered through the provisions of the LAA and its associated regulations alone. As a follow-on for the process commenced by the Rangelands Reform Program, the WA Government should commence the move from management of a 'Pastoral Leasehold Estate' to management of a 'Rangeland Estate'.

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As part of a longer-term reform agenda, Part 7 of the LAA can be amended to remove the automatic linkage between leases and grazing, with grazing as an optional right along with other rights of occupancy and uses as envisaged in the Rangeland Reform Agenda. Under this new regime, the PLB could be renamed as the Rangelands Board.

URS appreciates the legal, native title and legislative challenges in embarking on further reform of this type, but recommends consideration by the WA Government.

Recommendation 9 – Government to explore the benefits and practicalities of taking the Rangeland Reform Agenda through to separation of the lease occupancy and grazing rights on a Pastoral Lease.

1.4.8 Changing on-site uses from grazing to multiple uses

In areas with limited options for income to be earned from grazing, the focus needs to be shifted to income earned from a wider range of consumptive and non-consumptive uses. As well as promoting multiple use within leases (to improve single business resilience) there should also be an effort to foster multiple use between leases (to improve local/ regional viability). This is particularly relevant in areas with high climate risk and low grazing capacity.

The concept of exclusive land use (one user and use for each parcel of land) can be challenged, with a suggestion that the future would see inclusive use of the land with multiple users and uses. Conversion to Rangeland Leases will facilitate this, along with the concept of separating grazing and other property rights.

Many Pastoral Leases (more than 50) in the Murchison and Goldfields are used as bases for on- and off-site uses other than grazing, such as support for the mining industry, tourism and services to local government. 'Pastoral viability' as a concept is irrelevant to these businesses, and they will not respond to traditional adjustment incentives. This provides an opportunity for land use change such as the purchase of grazing rights by Government or other (see above), and/ or replacement with stewardship arrangements, and/ or authority to manage carbon on behalf of the Crown or a third party (see below).

Recommendation 10 – Provide an opportunity for lessees to consider a 'whole of lease uses redesign'. Further, the options for multiple uses need to be made secure and attractive for third party investment and involvement.

1.4.9 Facilitating adoption of Perpetual Leases and Rangeland Leases

The introduction of Rangeland Leases and Perpetual Leases provides a number of opportunities to current and prospective lessees.

- For lessees with thorough-going and robust grazing enterprises, it may be attractive to convert to a Perpetual Lease as a means of increasing security and improving capacity to obtain finance, and lower-cost debt servicing although the transition will require an ILUA to be established. Lessees will make a commercial decision about this option. It is likely to be an option most attractive to Corporate Pastoral Businesses and others with a sound resource base and profitable enterprises.
- For lessees planning non-grazing uses, the Rangeland Lease offers the chance to develop these uses free of current restrictions on use. This option is attractive to private conservation organisations and Traditional Owners, and mining companies.

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- For lessees with unprofitable grazing enterprises, and who are deriving most of their income from non-grazing income, conversion to a Rangeland Lease will be attractive as it allows them to retain occupancy and occupation without having to maintain pastoral infrastructure or an unprofitable grazing enterprise. As noted in the Report, about one third of all Pastoral Businesses are in this category.

Recommendation 11 – Government to ensure that Pastoral Lessees have access to qualified, unbiased and supportive advice in determining the advantages and disadvantages of conversion to a Perpetual Lease or a Rangeland Lease.

1.4.10 Provide clear and transparent information

Several stakeholders including people within government suggested there needs to be greater transparency about conditions on the Pastoral Leasehold Estate and the State Government's administrative activities in pursuit of statutory and policy objectives. URS supports this view, which has been reinforced by the difficulty in locating valid and reliable data and information about the rangelands and its economic and social situation as a whole.

As noted earlier, the lack of valid and reliable data and information on economic and social trends in the Pastoral Landholding Business Community may be limiting the capacity for government and industry to make 'evidence-based' decisions about rangeland policy and programs.

This should not be so. Examples of public reporting include the Report presented to Parliament by the Commissioner for Soil and Land Conservation, annual reports by Government Departments and Statutory Authorities and reports made public by mining companies that document their environmental and social performance in areas where they operate.

The PLB should present a report to Parliament that is publicly available. The Report should include commentary on conditions in the Pastoral Leasehold Estate, activities being undertaken by the WA Government including new or altered policies, the number of lessees that are non-compliant and the PLB's response⁵.

Recommendation 12 – The PLB to present Parliament with a publicly accessible Annual Report on conditions in the rangelands, activities being undertaken by Government including new or altered policies, the number of lessees that are non-compliant and the PLB's response.

This self-reporting should be matched by occasional reviews of the operations of the Board by the Auditor-General (AG), conducted as part of routine evaluation of the performance of WA Government Departments. An ideal time for the evaluation would be in the lead up to the roll-over of leases in 2015 so that any recommendation in the AG's Report could be acted upon before the renewed leases are issued.

Recommendation 13 – The Auditor-General be requested to undertake an evaluation of the operations of the PLB before the roll-over of the Pastoral Leases in 2015.

Finally, URS supports the program that will see lessees responsible for assessing and reporting their own performance. Given that this program is being introduced in 2015, a recommendation is not required.

⁵ Information availability from other portfolios is considered in Section 1.5.10.

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1.5 Supporting Recommendations

1.5.1 Encouraging rangeland recovery

As noted in previous sections, existing mechanisms available to government to address unacceptable management have not been effective in either improving range condition, or in preventing further degradation. For example, the PLB has not developed a policy or policies 'to rehabilitate degraded rangelands and to restore their pastoral potential'. The available evidence suggests that past investment through the Gascoyne Murchison Strategy or the former Natural Heritage Trust has not delivered measurable improvement. Further, the low economic returns from grazing mean that most pastoral leaseholders lack either the financial or managerial resources to deliver improvement in range condition. If the objectives of the Rangelands Reform Program are to be achieved, government needs a better capacity to address rangeland degradation. Approaches that focus on opportunities and incentives for 'additional management' that will result in rangeland improvement across large areas of the landscape are required.

The introduction of the Rangeland Lease provides an opportunity to try new these approaches, which can include tradeable rights to graze and perhaps, in time, to farm carbon. In essence, Government needs to develop and resource an incentive scheme to compensate lessees for the temporary removal of grazing rights for a lengthy period in areas where grazing is currently financially unrewarding, and the land would benefit from a period without grazing. However, it is not intended that the land be permanently removed from grazing. There are many areas especially in the Southern Rangelands where this combination of circumstances occurs. Temporary (20 – 30 years) removal of grazing rights can be associated with conversion to a Rangeland Lease. In such a situation, a lessee can receive funds for forgone grazing rights, while holding a Rangeland Lease, and undertaking alternative uses.

The implementation of an incentives scheme may occur in three ways.

- Voluntary involvement initiated by the lessee. Lessees can tender to remove or transfer grazing rights off all or part of individual leases temporarily (20 – 30 years). The compensation for removal of grazing rights would be agreed between Government and lessee. This may be associated with assistance for conversion to a Rangeland Lease, and possibly stewardship payments, subject to lessee interest and regionally determined priority works being undertaken. A tender process will enable Government to do this at least-cost to achieve regional objectives.
- Government to target leases identified as having specific issues, but lessee involvement is voluntary. Government to offer compensation to remove or transfer grazing rights of all or part of individual leases temporarily (20 – 30 years). The compensation for removal of grazing rights would be agreed between government and lessee. This can associated with assistance for conversion to a Rangeland Lease, and possibly stewardship payments, subject to lessee interest and regionally determined priority works being undertaken.
- In situations where land degradation issues are urgent, and the lessee has not responded to the above approaches, government to implement compulsory permanent removal of grazing rights, with compensation to the market value as assessed by the Valuer General. This action can be associated with assistance for conversion to a Rangeland Lease, and possibly stewardship payments, subject to lessee interest.

The implementation of this incentive schemes will require significant resources, at least to the scale of previous investments through the Gascoyne Murchison Strategy, or in the Ord River Catchment

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Regeneration Program. The Natural Resource Management theme in the Royalties for Regions Program, represents an appropriate vehicle to resource a bold program of landscape scale rangeland recovery.

Recommendation 14 – Government to develop an incentive scheme for temporary removal of grazing rights for periods of 20 to 30 years, associated with conversion to Rangeland Leases, and possibly stewardship payments, with resourcing through the Royalties for Regions Program.

1.5.2 Improve grazing industry competitiveness

Commercial scale grazing activities are concentrated in the Kimberley, parts of the Pilbara and West Gascoyne, with isolated enterprises elsewhere. Over half the livestock and production is in the Kimberley. It is also evident that grazing enterprises are struggling to maintain competitiveness as a result of market issues and sub-optimal productivity on-Station.

Government's support for and investment in increased industry performance should focus available resources on areas with comparative advantages and where there are opportunities for productivity growth, and reduce investment in areas with limited prospects. The reports reviewed by URS show improvement in the competitiveness of the northern cattle industry will require a wider range of market options and improved productivity within the herds. The WA Government is already exploring industry development post 'farm-gate'. This needs to be matched with a mosaic of irrigated agriculture and native pasture production systems that is able to support abattoir facilities within reach of the region.

Recommendation 15 – Government and industry need to work together in developing an integrated approach to development of a mosaic land use (irrigated areas linked with native pastures) with efficient transport links for cattle movements.

The review of the Northern cattle industry undertaken by McCosker *et al.* (2010) noted that higher performing businesses were found to be related to the number of animals/ scale of the operation, individual animal productivity, skills of the manager and associated running costs. The quality of strategic and management decisions around overheads and scale was found to be paramount in determining profitability.

Recommendation 16 – The Department of Agriculture and Food continue with benchmarking enterprise productivity in the Kimberley and Pilbara as a means for individual enterprises to identify areas for improvement.

1.5.3 Support Indigenous occupancy

The demography of the rangeland communities show an Indigenous population that is young and growing fast, especially in the Kimberley and less populated areas in the Gascoyne and Murchison. Indigenous people through WA's rangelands are progressing in different ways through the native title process, and have not yet been able to engage fully with the Rangelands Reform Program. However, aspirations for access to land are high, and native title rights will be defended against any attempt to erode these rights. Indigenous occupancy of rangelands will increase, and multiple uses can be facilitated at the time of acquisition via the Rangeland Reform Program. Aboriginal communities can take responsibility for the management of particular areas within their land holdings for conservation and cultural purposes. These arrangements would see Government contributing dollars into a community for conservation management of some areas of land, while other areas (and sometimes

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the same areas) are used for subsistence hunting, 'light' pastoralism (subsistence herds) and cultural use.

Recommendation 17 – Government to work with Native Title Representative Bodies in identifying opportunities for acquisition of Rangeland Leases, or conversion of existing Pastoral Leases to Rangeland Leases via the Rangelands Reform Program.

Where land is already held by Indigenous Corporations or, on their behalf by government, these assets are not always generating economic and social benefits. In some cases, government may be financing Indigenous people into non-viable grazing operations. At the same time, Indigenous communities can take responsibility for the management of particular areas within their land holdings for conservation purposes.

Recommendation 18 – Where leases are acquired by government for traditional owners responsible agencies should ensure businesses planned on these leases are able to deliver benefits to Indigenous people.

Alternative approaches, involving partnerships between Indigenous Corporations and other organisations with complementary interests in land offer a better way of generating benefits from land occupancy. Examples include the Yulmbu Agreement in the Kimberley, possible sub-leasing of cattle grazing enterprises by a major corporate pastoral company, and providing natural resource management services on mining company held leases. The Indigenous tourism strategy contains a range of measures to support capacity building for people keen to develop Indigenous tourism ventures. Current government initiatives supporting just grazing enterprise development can be expanded (involving commitment from other agencies) to support business development across a wider range of enterprises.

Recommendation 19 – Government partners (ILC and DAFWA) in the successful ILS Program expand the agenda from support for grazing enterprise developments to support for multiple use planning and implementation on leases held by Indigenous people.

1.5.4 Facilitate tourism development

Low key tourism on individual leases can be done better and businesses may have some room for growth but essentially this type of tourism development is likely to remain modest in scale, and be a supplement to other income rather than a standalone enterprise. A need to improve standards and link approval for a Diversification Permit and tourism accreditation was suggested. There is a need for training programs to assist pastoral leaseholders improve and develop their tourism enterprise management skills.

Recommendation 20 – Link approval for Diversification Permit for low key tourism and accommodation with a need for tourism accreditation and training programs.

Expansion of tourism in the rangelands is likely to be based on substantial 'nodal or hub' developments adjacent to key attractions. Greater economies can be developed around a hub and spoke concept of development that allows numerous smaller enterprises to grow off key infrastructure and attractions. Generally they will be associated with the coast and existing transport links but there may be opportunity for developments that focus on inland attractions such as Mt Augustus, the Kennedy Ranges and the Carnarvon Ranges. To develop these properly they will need to be

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integrated with transport infrastructure and to be better interconnected and serviced. There is a linkage between this requirement and Recommendation 5 that advocates identifying regional opportunities and requirements for conversion of tenure.

Recommendation 21 – Develop and resource regional plans for rangeland tourism that facilitate the supply of integrated and complementary services targeted towards priority regional assets, or icons.

1.5.5 Native products management

Native sandalwood

URS has reviewed the operation of the native sandalwood (*Santalum spicatum*) industry in Western Australia, and the potential for the FPC rights to the sandalwood to be transferred to pastoral lessees. The advantages of such a change are considered modest. Pastoral lessees already hold over half of the 34 contracts for delivering green and dead wood, and all are able to tender for the harvest contracts. FPC's profit from sandalwood is about \$4 to \$5 million per year, which if pastoral lessees held the rights to the sandalwood, would be the maximum additional returns to pastoral lessees. The disadvantages of transferring the rights to sandalwood to pastoral lessees include the need to consider native title, the likely declining availability of the resource (which is exacerbated by illegal harvest), the difficulty in managing quality control through the supply chain, the need for pastoral lessees to arrange markets for their sandalwood, and competition from the FPC plantations in the agricultural areas as they start producing wood. Overall, it is URS's view that the disadvantages for the industry and participating businesses would outweigh any advantages of a transfer of rights to pastoral lessees.

Recommendation 22 – The current management arrangements for the native sandalwood industry be retained, with FPC encouraged to develop a 'Chain of Custody' mechanism to prevent illegal native product entering the market.

Pilbara Algae Project

The Pilbara Algae Project is promising and has strong government support and significant investor interest. If successful, it will develop a new industry into a region that is dominated by iron ore mining and oil and gas extraction. Land, labour, CO₂ and water will be required and locations along the Pilbara identified.

Recommendation 23 – In the event that a Pilbara Algae industry is planned, Government needs to facilitate access to the resources required, which may involve access to pastoral leasehold land.

Other species

The Review undertaken by URS for this Project of the native species with potential for cultivation in the rangelands is based on a very recent review published by the Rural Industries Research and Development Corporation (RIRDC). There are a number of species of interest, with Gubinge/ Kakadu pear showing the most promise and already being grown and harvested commercially. In meeting the need to identify a wider range of uses on rangeland, government should support adequately resourced research and development work on promising species. Government and those interested in these

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alternate crops need to recognise that developing a viable option(s) may be a 20 year journey, and hence a long-term strategy is required.

Recommendation 24 – Government, in partnership with other parties (universities, landholders) to commit to a long-term strategy of researching alternative species and crops that could add to the range of activities in the WA rangelands.

1.5.6 Developing opportunities for carbon farming

There are opportunities for carbon farming in the WA rangelands, although there are major technical uncertainties about the spatial and temporal variability in carbon measures and an unknown level of transaction costs associated with transferring rights and verification of carbon stores. The possible returns from carbon farming are such that priority should be directed at land systems with the highest capacity to sequester carbon. Areas with low value for grazing but with reasonable ability to sequester carbon may present good opportunities for carbon farming.

Carbon farming is the one potential economic opportunity in the rangelands that can deliver both economic and environmental benefits, and present indications suggest it will have an important place in future rangeland use. However, it is not a 'silver bullet' that will address all environmental issues, nor will participation in carbon farming suit all land users. Leaseholders will need to balance losses forgone from grazing with the potential income from carbon farming, which will also require skills in price risk management. Further, the requirement that sequestered carbon be retained for 100 years is an important factor to be considered in strategic planning at both government and lessee levels.

Currently, the rights to carbon on the WA Pastoral Leasehold Estate are held by the State under the provisions of the *Carbon Act 2003 (WA)*. It is assumed by most of those advising URS that transferring these rights would be regarded as a future act under the *Native Title Act 1993*, although there were contrary views expressed.

The options for carbon farming on the Pastoral Leasehold Estate range from the government contracting pastoral leaseholders to manage carbon on the State's behalf, through to legislating for the rights to carbon on a Pastoral Lease to be transferred to the pastoral lessee, as was implemented in Queensland in 2010.

It is URS' view that given the technical, financial and legal uncertainties associated with carbon farming, the WA Government should for now retain its rights to carbon, and instead continue to support research directed at addressing these uncertainties. In particular, URS does not favour transferring carbon rights to pastoral lessees by legislation, which could well be seen as rewarding past bad management, and may limit the return to the economy through continued inadequate management. Further, it is clear from discussion with Native Title Representative Bodies that they would recommend their clients object strongly to such a move, in part because native title claimants themselves are keen to participate in a carbon market.

Recommendation 25 – Government retain the rights to carbon on Pastoral Leases until there is more clarity around the technical, legal and financial uncertainties of carbon farming on these leases.

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Recommendation 26 – In the event that Government decides to support carbon farming on Pastoral Leases, that the rights to carbon be transferred via commercial contract, and be associated with the removal (with compensation) of grazing rights from a Pastoral Lease for a period of 20 to 30 years, and conversion of the Pastoral Lease to a Rangeland Lease.

Recommendation 27 – Government to support ‘pilot’ projects in their application for carbon rights on leasehold land by issuing carbon rights and special leases (e.g. S-79 or other suitable form of tenure) with provision of technical and legal support.

Recommendation 28 – DRDL could contract an independent, non-government organisation that has no financial or political interest in the WA Rangelands to host a forum to define legal implications for carbon trading and other alternative land uses on WA pastoral leasehold land. Such a forum would be eligible for financial support from the Royalties-for-Regions program.

Current options for emissions abatement in the WA rangelands will be limited to areas in the far north Kimberley, where active fire management is already occurring. Major resource projects looking for carbon offsets could emulate the Western Arnhem Land Fire Management Agreement (WAFMA) established by ConocoPhillips and its partners, and establish collaborative arrangements with pastoral leaseholders in that area. Progressing the opportunities for greenhouse gas emissions abatement (note not sequestration) through active fire management in the north Kimberley (i.e. the area receiving more than 1,000 mm annual rainfall) is an opportunity that that can be acted upon by the WA Government now through facilitation of partnerships between major resource projects (e.g. Browse, Wheatstone), pastoral leaseholders, Traditional Owners and conservation agencies (e.g. DEC and AWC).

Recommendation 29 – Government to facilitate a carbon abatement project in the north Kimberley involving the oil and gas industry, traditional owners, landholders and conservation agencies in the north Kimberley area.

Fire management is a major issue across the northern savannas of Queensland, the Northern Territory and Western Australia, and was an important component of the research and development work funded through the Cooperative Research Centre (CRC) for the Tropical Savannas. The WA Government was an important partner in the CRC. URS suggests that the relationships developed through the CRC be re-activated around the management of carbon in the northern Australian savannas, under the leadership of the Northern Australian Ministerial Forum.

Recommendation 30 – Government to broker collaborative relationships between stakeholders in carbon management in the northern Australia savannas.

1.5.7 Support stewardship options

Environmental stewardship programs can offer funding for land managers to provide a range of agreed management activities to change management or to protect, rehabilitate and improve particular ecological communities and sites, that exist outside the reserve system and that are currently not managed ideally. Examples could include the management of Declared Rare Flora (DRF), Priority Ecological Communities (PECs), and Threatened Ecological Communities (TECs) which are widely distributed outside the conservation reserve system. Current obligations on pastoral lessees do not specify any responsibilities in managing these assets, and hence specific management

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activities to protect/ conserve them provide a potential opportunity for stewardship payments to pastoral lessees. Under this approach lessees can be contracted to manage targeted matters on their land and can receive funding for activities for an agreed time period. The important principle is that the activities for which stewardship arrangements are made are additional to a pastoral lessee's normal obligations under the *Land Administration Act 1997*, the *Agricultural and Related Resources Protection Act 1976* and the *Biosecurity and Agriculture Management Act 2007*.

Government is also responsible for Unallocated Crown Land and Un-managed Reserves which are located throughout the Pastoral Leasehold Estate. Neighbouring Pastoral Businesses could be engaged by contract to contribute to the management of weeds, feral animals, fire and risks to the public on these areas.

The value of the concept is that it may assist agencies to use people currently living and available in isolated areas to undertake required tasks or management cost-effectively. The benefit to people currently living on a Pastoral Lease or more generally in the rangeland area is that it might provide a complementary source of income. Stewardship payments can facilitate the multiple-value and multiple-use concept of Rangeland Leases, but can also be applied for existing Pastoral Leases.

An important element to the application of stewardship payments is the determination of agreed objectives for each region. When land use objectives are determined then stewardship payments may provide one useful means to achieve the required outcomes.

Recommendation 31 – Investigate the cost effectiveness of using stewardship to deliver priority environmental outcomes and management of UCL/UMR lands.

As well as Aboriginal cultural heritage, the rangelands are also rich in European heritage dating from earlier times of mining and grazing activities. Shires in the rangelands maintain Municipal Heritage Lists, with pastoral and mining heritage featuring. However, these same shires have difficulty in resourcing the protection and management of these assets, some of which have value as tourism attractions. There are opportunities for leaseholders to prepare inventories of historical sites (homesteads, woolsheds, steam train dams, barrier fences, woodlines, and lonely graves/cemeteries) and arrangements for protection of these. In particular, the operational and scientific heritage created by the pastoral industry in the rangelands is significant and is at risk of being lost, especially in the Southern Rangelands where the infrastructure built to support a wool industry is now redundant across many Stations in the Gascoyne, Murchison and Goldfields regions.

Another aspect of rangeland heritage are the sites of previous major rangeland research projects which should be maintained in the event that future researchers are interested in revisiting these areas which have a known management history.

Recommendation 32 – Government to support stewardship arrangements for the conservation of the operational and scientific heritage created by the mining industry and the pastoral industry in the rangelands.

1.5.8 Progress strategic landscape management

The benefits from managing environmental values at a landscape scale has led to several strategic programs across Australia. The Great Western Woodlands is an example in WA, which has been recognised by the WA Government through the release of a biodiversity and conservation strategy in 2010, with funding of \$3.8 million for implementation. Following from the example of the Great

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Western Woodlands, URS suggests that a large proportion of the area south west of Mount Magnet be designated as a distinct multiple use precinct termed the Great Mulga Woodland, in recognition of the dominance of the tree species mulga (*Acacia aneura*) over most of the area. Nearly all of this area is now held by private and public conservation interests and mining companies for non-pastoral purposes.

Recommendation 33 – Government to recognise the Great Mulga Woodland as a multiple use precinct and with collaboration of all parties, develop and resource a Strategy for the whole area.

Another example of strategic landscape management occurs in the Kimberley where a partnership between the Australian Wildlife Conservancy, the WA Government, Indigenous landholders and private pastoral leaseholders is implementing landscape scale conservation management. Through the Ecofire Project, AWC is working with DEC in best practice fire management on 4 million ha in the Kimberley, which includes the AWC leased and sub-leased land, and land held by 10 other Pastoral Businesses.

Recommendation 34 – Government to engage other parties in identifying further opportunities for partnerships in landscape scale management on the Pastoral Leasehold and Conservation Estates.

1.5.9 Enhance biodiversity conservation

Fundamental improvement in building conservation values will be achieved in the implementation of better rangeland management and rangeland rehabilitation. This is addressed by other recommendations. A key principle is that one form of land use should not lessen the value of another. Multiple values need to be recognised and maintained.

There is need for better identification and recognition of key biodiversity assets across regions and for existing knowledge to be shared across agencies. Where high value habitats or ecosystem types are known to occur on Pastoral Leases, management plans should be developed to assist the leaseholder to manage the assets, and a reporting process put in place to monitor the management and condition of the area of value. If the asset is of sufficient value then the planning and management should be supported through an environmental stewardship mechanism (see above).

Recommendation 35 – Investigate the merit of using environmental management plans linked to stewardship payments to encourage pastoral leaseholders to care for and manage priority value biodiversity assets.

The State and Commonwealth Governments are developing an interest in environmental offsets and in the assessment of cumulative impacts in major mining provinces (such as the Central Pilbara and the Goldfields). Mining companies operating Pastoral Leases in these areas hold them principally for resource security. In some cases the leases are grazed for little or negative returns, or they are destocked with the approval of the PLB. It would seem a good match for biodiversity assets on these leases to be used as offsets against mining activity.

This approach could be extended to encouraging mining companies without Pastoral Leases that are seeking biodiversity offsets to link with Pastoral Leaseholders who may be able to provide the offsets required. This will provide a landscape-scale benefit in terms of environmental outcomes and an alternative source of income for pastoral lessees.

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Investment by mining companies in the rehabilitation of closed mines and related disturbed lands runs into millions of dollars annually – and it is spent on small areas of land. Government could also direct some the mining industry's expensive mining rehabilitation investment into landscape-scale rehabilitation on these leases. Data describing the money mining companies spend on mine site rehabilitation versus the area rehabilitated, and the area of rangeland that might be rehabilitated may provide good background for this policy.

Recommendation 36 – Government should negotiate biodiversity offsets where feasible on Pastoral Leases held by mining companies and other parties.

There is a large amount of disconnected data being collected for separate mining companies on land and vegetation types, species distribution, habitat, and land units being collected using varying methodologies, which are not contributing to the public knowledge base. Opportunities for establishing common standards for data collection should be encouraged by Government. Collation of the large data sets on environmental resources held by individual mining companies would also be useful in adding to the publicly available knowledge base about the rangelands

Recommendation 37 – Government to work with mining companies in developing common methodologies for environmental data acquisition and storage, and develop a publicly accessible portal for non-commercially sensitive data.

1.5.10 Improve the efficiency in supporting people living in the rangelands

This study has recognised the intangible benefits provided by people living in rangelands, which provide needed services that would be expensive to provide otherwise. However, the total cost of supporting families on remote Pastoral Leases and isolated small settlements compared with supporting urban families (i.e services in health, education, policing, transport, communications, power etc) has not been considered. This would be a worthwhile study in that it would provide a better baseline for determining how best sustainable occupation can be supported in the rangelands. There will almost certainly be opportunities for efficiency gains in service provision if all costs and benefits are considered collectively.

Recommendation 38 - Extend work to investigate the total costs and benefits of maintaining people on Pastoral Leases in the rangelands.

This has been the first study of which URS is aware that has tried to consider all uses and all users of the rangelands. The assessment is incomplete, in part because of incomplete data. However, there are many sector-specific strategies, plans, and programs for developments and service delivery in the rangelands. They are not coordinated and are sometimes in conflict. This can lead to inefficiencies in service delivery, and in URS's case to difficulties in portraying the whole picture.

Recommendation 39 - Review relevant national (and state) strategies – planning, conservation, tourism, transport, Indigenous peoples, defence, and look for synergies and conflicted objectives, and efficiencies in service delivery.

Acknowledgements and References

2.1 Acknowledgements

URS acknowledges with gratitude the assistance and advice provided by many people from the organisations listed in **Appendix B**.

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Appendix A Statement of Requirements

DAFWA requires an experienced consultant to investigate and report on sustainable land use and economic development opportunities in the Western Australian rangelands. The findings and recommendations of this consultancy will contribute to the articulation of a Government vision for the rangelands which is shared by rangeland communities.

SPECIFICATION

Background

The Government of Western Australia has initiated a Rangelands Reform Program funded by the Royalties for Regions program to identify and implement measures to address issues raised by previous reviews concerning the pastoral industry and conditions in the State's rangelands. The Program reflects a shared commitment on the part of the Government, the pastoral industry and other stakeholders to effect fundamental change in the rangelands. The Program also seeks to create an enabling environment for the growth of sustainable, economically diverse rangeland communities through a combination of land tenure reform, encouragement of new investment opportunities and land uses, and the identification of measures to restore the rangeland's productive capacity and ecological values.

Specific objectives of the Rangelands Reform Program include to:

- develop proposals for new forms of land tenure, including the options of perpetual pastoral leasehold and 'rangeland leases' to supplement existing pastoral leasehold tenure and to provide current and future landholders with greater flexibility, security and incentive to invest;
- facilitate use of the rangelands for conservation purposes, including the management of current and future leases for conservation or mixed land uses consistent with positive conservation outcomes;
- streamline government processes and procedures that affect new business development in the rangelands, including the development of a 'one stop shop' facility for pastoral lease diversification applications and approvals;
- identify region-specific economic development opportunities or adjustment responses to arrest the losses associated with the degradation of formerly productive land and water assets and/or the failure of businesses that are not well adapted to contemporary market conditions;
- reduce regulatory impediments to rangelands economic development initiatives.

It is expected draft legislation to deliver new and amended forms of land tenure will be released for public comment in early 2012.

A small team, located within the Department of Regional Development and Lands (RDL) and DAFWA, has been created to support the implementation of the Rangelands Reform Program.

There is an extensive body of knowledge and data pertaining to the Western Australian pastoral industry and the condition of the pastoral rangelands. In identifying the economic development opportunities, and in formulating recommendations and policy options, this consultancy is to be informed by and build upon this existing body of knowledge. The consultancy is also to be informed by direct consultation with stakeholders.

Consultancy Outcome

The outcome of this consultancy is the identification of sustainable economic development opportunities in the rangelands, and recommendation of policy options that will complement and reinforce the objectives of the Rangelands Reform Program. The consultant's recommendations will inform the development of a comprehensive vision statement which will articulate the Government's commitment to sustainable social and economic development outcomes.

Appendix A - Statement of Requirements

Analysis, commentary and any recommendations produced as part of this consultancy should reflect any substantial differences that are identified between particular sub-regions or economically significant localities within the rangelands.

The consultancy should specifically address any changes to economic prospects that might flow from the proposed land tenure changes and associated regulatory arrangements.

This consultancy is also intended to consider inherent limitations affecting the sustainability of pastoralism in parts of the rangelands, and to assist the development of appropriate responses to the challenges faced by the Government and the rangelands community.

Consultancy Output

The successful Respondent will provide a comprehensive report that discusses and elaborates upon identified economic development opportunities and provides recommendations and policy options in terms of the objectives of the Rangelands Reform Program. In preparing this report and in formulating the recommendations and policy options, the consultant must give particular consideration to:

- Major trends and drivers of economic activity in Western Australia's rangelands:
 - an analysis of the current situation and trends in economic activity including synergies and dependencies between industry sectors;
 - a profile of the rangelands land holding community that identifies characteristics and trends in income of the pastoral land-holding business community, including income derived from market-oriented livestock production activities and the relationship between income from livestock production activities and income from all other sources;
 - perspectives and priorities of stakeholders including the pastoral, tourism and mining sectors, in regard to sustainable development of the rangelands.
- Response to pastoral viability and sustainability challenges.
 - advice on appropriate responses to the current state of pastoral landholdings in the rangelands. This should include analysis of the opportunities and risks associated with conventional structural adjustment responses such as lease amalgamations and alternative approaches based on new economic opportunities and/or government-supported measures to replace or supplement pastoral incomes. Such government supported measures may include, but not necessarily be limited to payments or concessions in return for stewardship and resource management services;
 - recommendations should be framed by the land-holder profile and analysis of current situation and trends.
- Opportunities and constraints for sustainable development. Within the framework provided by the analysis of the current situation and trends, the consultant should provide comment and recommendations that specifically relate to:
 - the outcomes of consultation with stakeholders (including pastoral, conservation, tourism, traditional owners and mining sectors) on a rangelands vision, including sectoral perspective and priorities;
 - the future economic development and diversity outcomes that could flow from the current land tenure and land administration reforms;
 - the principal opportunities and constraints associated with infrastructure, market access, regulation and government policy;
 - the impact, opportunities and risks associated with the Australian Government's Carbon Farming Initiative as currently assessed by DAFWA ; and
 - opportunities for the exploitation of native vegetation, especially sandalwood.

Appendix B Organisations consulted

The organisations, companies, groups and individuals shown in Table Appendix B-1 were consulted as part of the methodology for this Report. Their interest in the rangelands is also shown.

Table Appendix B-1 Organisations consulted for the Rangelands Opportunities Project

Organisation	Principal interest in the Rangelands
Australian Wildlife Conservancy	Conservation of Australian animal species and habitats through establishment and management of sanctuaries
Bush Heritage Australia (BHA)	Conservation of rangelands through acquisition and management of land
Chamber of Minerals and Energy (CME)	Representing interests involved in exploration and mining development in the rangelands. Representing companies that hold pastoral leases
Consultants	Involved in delivering grazing management, fire management, and environmental management services to clients with interests in the rangelands
Department of Agriculture and Food (DAFWA)	Research, Development, Extension and Regulation for the pastoral and horticultural industries
Department of Environment and Conservation (DEC)	Management of the conservation estate, joint venture management of conservation values on pastoral leases and the conservation estate. Regulation of timber products harvesting in the rangelands
Department of Indigenous Affairs (DIA)	Management of 29 mha of land on behalf of the Aboriginal Lands Trust including 6 PLs. Aboriginal heritage management on pastoral leasehold land
Department of Mines and Petroleum (DMP)	Regulation of mineral and petroleum exploration and development in the rangelands. Encouragement of exploration and discovery of mineral and energy resources through the provision of geo-scientific information and informed land use planning
Department of Regional Development and Lands (RDL)	Administration of the Pastoral Leasehold Estate. Management of the Rangelands Reform Program. Regional development in the rangelands
Department of Water (DOW)	Water availability and licensing for irrigation projects on pastoral leases
Environs Kimberley	Conduct of environmental management projects in the rangelands
Environmental Protection Authority (EPA)	Assessment of major projects in the rangelands, and development of environmental policies for rangelands.
Forest Products Commission (FPC)	Operation of the native sandalwood harvesting industry on Crown land
Gascoyne Development Commission (GDC)	Economic and social development in the Gascoyne Region
Goldfields Esperance Development Commission (GEDC)	Economic and social development in the Goldfields and Nullarbor Regions
Goldfields Land and Sea Corporation	Assisting native title claimant with registration and determination of claims. Negotiation of future acts with other landholders. Support for Indigenous access to land
Hon Wendy Duncan MLC	Parliamentary leadership of the Rangelands Reform Program
Indigenous Land Corporation (ILC)	Management of pastoral leases held by ILC. Investment in training and employment of Indigenous people in the pastoral industry. Investment in Indigenous-held pastoral leases.
Kimberley Development Commission (KDC)	Economic and social development in the Kimberley Region
Kimberley Land Council (KLC)	Assisting native title claimant with registration and determination of claims. Negotiation of future acts with other landholders. Land use

Appendix B - Organisations consulted

	and management on Indigenous land in the Kimberley
Pastoral Lands Board	The Pastoral Lands Board is a statutory authority established under Section 94 of the Land Administration Act 1997 (WA), charged with administering Western Australian pastoral leases in accordance with Part 7 of this Act.
Pastoral leaseholders	Holders and managers of pastoral leasehold land for private gain. Compliance with requirements in the <i>Land Administration Act 1997</i>
Pastoralists and Graziers Association (PGA)	Representing Pastoral Businesses and the pastoral industry to government and other stakeholders. Support for individual pastoralists in negotiations with third parties
Rangelands NRM	Community-based environmental management throughout the rangelands
Royal Flying Doctor Service (RFDS)	Medical services to remote centres and households on pastoral leases in WA
Regional Development Trust	Advises the Minister for Regional Development and Lands on the <i>Royalties for Regions</i> Program
The Concerned Rangeland Group	Rangeland condition and trend on pastoral leases, especially in the Southern Pastoral Region
Tourism WA	Supporting development of tourism industry and opportunities in the rangelands
Valuer-General's Office (VGO)	Collation of Permit data, establishment of Permit rents
Western Australian Indigenous Tourism Operators Council (WAITOC)	Represents Indigenous tourism operators in WA and encourages industry development
Yamatji Marlpa Aboriginal Corporation (YMAC)	Assisting native title claimant with registration and determination of claims. Negotiation of future acts with other landholders



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