

STATE DEVELOPMENT PORTFOLIO RESPONSE
TO THE
STATE SUSTAINABILITY STRATEGY
CONSULTATION PAPER

State Development Portfolio Policy Unit
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CONTENTS

1	Introduction	2
2	Sectoral Analysis and Industry Development Opportunities	3
3	Key Issues for the State Development Portfolio	8
	Appendix 1: The State Development Portfolio – A Structured and Provisional Approach to Progressing Sustainability	13

1 INTRODUCTION

This submission, in response to the State Sustainability Strategy Consultation Paper, represents the views of the agencies comprising the State Development Portfolio, namely:

- Department of Industry and Technology (DoIT)
- Department of Mineral and Petroleum Resources (MPR)
- Western Australian Tourism Commission (WATC)
- Small Business Development Corporation (SBDC)
- Rottnest Island Authority (RIA)

Activity in the portfolio is primarily focussed on promoting the economic development of Western Australia to maintain and enhance high standards of living.

In this regard economic development represents a means to an end, rather than an activity that should be undertaken for its own sake. Economic activity provides jobs, income, goods and services. It underpins social development (for example, royalties from mining help fund health and education systems) and contributes to improvements in the way society interacts with the natural environment (eg. technological innovations are helping a move away from a reliance on polluting fossil fuels towards clean, renewable sources of energy).

As the concept of sustainability recognises, society's economic, social and environmental objectives are inter-dependent. To focus on a single dimension without considering the others is unlikely to result in a sustainable outcome. While the emphasis of activity in the State Development portfolio is focussed on achievement of economic outcomes, it is recognised that this must be conducted within a sustainability framework that ensures that these outcomes are consistent with community social and environmental objectives, and do not compromise opportunities for future generations. The State Sustainability Strategy provides an opportunity for the Government to develop and implement such a framework.

The Consultation Paper for the State Sustainability Strategy defines sustainability as "the simultaneous achievement of environmental, economic and social goals".

If this is the definition to be adopted for the State Sustainability Strategy, then it will be important to clarify what the environmental, economic and social goals will be. This will require significant community consultation and validation and should be considered as part of the development of the State Strategic Plan. The alternative is to have a broader definition incorporating such goals.

A suggested set of goals is as follows:

Economic: To foster the development of innovative, nationally and internationally competitive industries providing quality employment opportunities and generating wealth for Western Australians.

Social: To provide fair and equitable opportunities for all Western Australians to share in our wealth, access quality community services and to participate in decision – making processes.

Environmental: To preserve and enhance the ecological and cultural integrity of Western Australia.

2 **SECTORAL ANALYSIS AND INDUSTRY DEVELOPMENT OPPORTUNITIES**

As a multi-dimensional issue, it is important to assess sustainability from different perspectives.

This section examines sustainability in three industry sectors:

- The resources sector
- The tourism sector
- The manufacturing, services and small business sectors

This sectoral perspective is developed for each of the three sectors in three segments:

- Their economic importance
- Key considerations of the sectors that are important when considering sustainability
- New industry development opportunities

The Resources Sector

Economic importance

The mineral and petroleum resources sector makes a considerable contribution to the State's economy. It accounts for approximately 25 per cent of Western Australia's Gross State Product, 49 per cent of the State's investment, 71 per cent of exports and 17 per cent of the State's direct and indirect employment.

The State's resources sector plays a significant role in national economic development, accounting for 50 per cent of Australia's mineral resources production and 47 per cent of national mining investment.

Key considerations

Some key considerations for the mineral, petroleum and resource processing sectors are:

- The resources sector is – and will continue to be for the foreseeable future – an indispensable part of the State's growth economy.
- Economic growth is needed to finance the technological progress which is necessary to develop a sustainable economy and environment.
- Stocks of mineral commodities will not exhaust until well into the far future – in some cases thousands of years.
- Many mined products are recyclable. Further progress in recycling technology will decrease the demand for extraction.
- The world class expertise of the Australian mining sector in exploration, development, processing and rehabilitation is being exported to numerous countries through exports of mining and petroleum services – estimated to be worth over \$1 billion to the national economy. Western Australia accounts for an estimated 60 per cent of those exports.
- Responsibility for over consumption of natural resources in frivolous or wastefully manufactured ways – the 'consumer society' – is a 'whole-of-society' and consumption issue rather than a mining industry issue.

While the mining and petroleum sector is frequently characterised as contributing only to the economic component of the Triple Bottom Line, it actively contributes to the environmental and social components too, as demonstrated in the following table:

	Economic	Environmental	Social
<ul style="list-style-type: none"> R&D 	<ul style="list-style-type: none"> Improve resources use efficiency (recovery, energy intensity) Substitution technology (inter-generational equity) 	<ul style="list-style-type: none"> Reduce emissions & pollutants 	<ul style="list-style-type: none"> Utilises & develops human capital – education & knowledge
<ul style="list-style-type: none"> Exploration 	<ul style="list-style-type: none"> Maintain industrial/economic viability Add to growth potential 	<ul style="list-style-type: none"> Geological information can add to knowledge of the environment 	<ul style="list-style-type: none"> Contribute to inter-generational equity through replenishment of stocks
<ul style="list-style-type: none"> Primary mining 	<ul style="list-style-type: none"> Feedstocks for industry & consumption New materials (production efficiency) Contributes to growth Revenues to fund R&D in sustainability areas 	<ul style="list-style-type: none"> Low land-use footprints New materials (resource use, energy intensity & efficiency) 	<ul style="list-style-type: none"> Regional employment, high & low skill jobs Regional diversification from agricultural base Infrastructure development Royalties pay for social services
<ul style="list-style-type: none"> Value adding & processing 	<ul style="list-style-type: none"> Maintains employment & revenue levels in industry Lower cost feedstocks to other industries Contributes to growth 	<ul style="list-style-type: none"> Improving energy efficiency & recovery rates Less transportation resulting in environmental benefits Synergy & use of other industries wastes 	<ul style="list-style-type: none"> High skill jobs Taxes pay for social services
<ul style="list-style-type: none"> Rehabilitation 	<ul style="list-style-type: none"> Land use benefits Tourism benefits Carbon sinks 	<ul style="list-style-type: none"> Improvements to environment Maintains (or even enhances) natural capital & biodiversity 	<ul style="list-style-type: none"> Low skill jobs Recreation, social well being

New Industry Development Opportunities in The Resources Sector

In addition to being the key driver for the State's economic growth, investment and exports, the resources sector presents numerous opportunities through initiatives to promote sustainability. These include:

- Development of the State's LNG export industry to assist countries to switch to less carbon intensive and greenhouse emitting fuels.
- Development of more environmentally friendly fuels such as methanol – and the ability to develop world leading technology.
- Sustainability can act as a driver to promote world class environmental standards in existing resource industries – and new jobs in scientific and professional areas.

- New R&D opportunities in private companies and academic institutions that focus on the development of improvements in processes and the development of new goods and services.

The Tourism Sector

Economic importance

The tourism sector is a major industry for Western Australia, with an estimated worth of \$4.2 billion. The sector accounts for around 4 per cent of the State's Gross State Product. In 1999-2000 over 590,000 international visitors came to Western Australia, injecting an estimated \$1.049 billion into the State's economy. In the same period there were 6.21 million domestic visitors generating \$3.114 billion.

Key considerations

From a sustainability perspective, some key considerations in relation to tourism are:

- It makes a considerable contribution to the economic component of the Triple Bottom Line
- It is an employment-intensive sector, generating thousands of jobs
- Tourism is one of the greatest contributors to regional development and regional employment growth
- The sector provides a great stimulus for the provision of infrastructure – building roads through the State that link communities and the development of new and expansion of existing airports and ports.
- There are a range of accreditation programs that provide a means of ensuring that businesses can achieve sustainability both in terms of their business practices and care of the environment. The three programs that are being supported by the Western Australian Tourism Commission are: The National Tourism Accreditation Program (NTAP) from the Tourism Council Western Australia (TCWA); The Nature and Ecotourism Accreditation Program (NEAP) from the Ecotourism Association of Australia (EAA); and Green Globe 21.
- Recognition needs to be given to the fact that the vast majority of tourism businesses are in the small to medium enterprise category and, as such, are faced with severe market entry barriers when attempting to secure domestic and international markets.
- The State has potential to grow tourism professionalism and quality through increased involvement in national and international accreditation systems.
- In promoting the State's unique environment, the tourism sector seeks to build on initiatives that support biodiversity and the preservation and protection of flora and fauna as a natural asset.
- Rottnest Island is being developed as a world class example of sustainability through major initiatives. Some initiatives include:
 - Rottnest Island Authority (RIA) is committed to the Greenhouse Challenge Program and the establishment of greenhouse emission targets;
 - RIA is exploring commitment to Green Globe 21 accreditation (a global authentication standard for sustainable management for tourism and travel destinations);
 - RIA is committed to the National Strategy on Biological Diversity through implementation of a 20 year reforestation program; rehabilitation of Lighthouse Swamp to re-establish declining frog populations; active weed management programs; fauna surveys; and progressing the expansion of marine sanctuaries.

New Industry Development Opportunities in The Tourism Sector

In addition to being a high growth, employment generating sector in Western Australia, tourism development opportunities can benefit from policies that promote sustainability. Some opportunities include:

- Western Australia's tourism potential is relatively untapped and provides the State with the potential to develop a world class sustainable tourism destination.
- There is an opportunity to design and construct innovative, low impact tourism facilities in a range of locations throughout the State, positioning Western Australia as a world leader in low impact tourism development.
- WA's unique and diverse natural environment makes it perfectly positioned to benefit from the growth in demand for natural experiences.
- Developing Rottnest Island as a world class example of sustainability through initiatives such as committing to the Greenhouse Challenge Program, possible Green Globe 21 accreditation and committing to the National Strategy on Biodiversity through a range of initiatives.

The Manufacturing, Services and Small Business Sector

Economic importance

The manufacturing and services sectors account for over 70 per cent of Western Australia's Gross State Product and an even higher proportion of employment. The contribution of these sectors to the economic component of the Triple Bottom Line is substantial.

Small businesses are a major feature of the manufacturing, services and other sectors in the economy (including agriculture and mining). The Small Business Development Corporation estimates that small business contribute between 25-33 per cent of State GSP in any year, that it accounts for 96.7 per cent of all private sector businesses and that it provides over half of all jobs in the State. It is therefore important that a State Sustainability Strategy take into account the special needs of small business – minimal regulatory burdens, low compliance costs, low business input costs such as energy and water and low business taxation.

Key considerations

The manufacturing and services sectors play an important role in sustainability and in many respects are the key to progressing to a more Triple Bottom Line oriented economy:

- Manufacturing and services make a major contribution to the State's economy and consequently are an integral component of the Triple Bottom Line, providing employment and wealth generation that contribute to high living standards;
- Promoting small business plays an important role in enterprise development and innovation which are central to employment creation, competitiveness and the development of new goods and services;
- Innovation and R&D are critical for providing solutions to the challenges of sustainable development;
- Encouraging eco-efficiency in industry is important in meeting environmental challenges (such as greenhouse emissions), contributing to maximising the efficiency

of resources (through recycling technologies and minimising water and energy use), and in developing new business processes that enhance competitiveness;

- Government procurement has an important role in contributing to sustainability through efficient and effective government purchasing based on whole-of-life cost considerations and by aligning purchasing strategies with the adoption of sustainable technologies and solutions.

New Industry Development Opportunities in The Manufacturing, Services and Small Business Sector

In addition to being a major source of employment creation, investment and innovation, the manufacturing, services and small business sector is well placed to be both a driver of sustainability and a beneficiary of the re-structuring of the State's economy to a more sustainable path. Some opportunities include:

- Developing Western Australia as a centre for greenhouse friendly goods, services and technology development
- Creating new alternative energy industries based on bio-mass, solar energy and other forms of renewable energy
- Developing new export-focused opportunities from greenhouse based on taking advantage of Emissions Trading, Clean Development Mechanisms and Joint Implementation programs being developed through international climate agreements (if Australia ratifies the Kyoto Protocol).
- Development of new business in regional Western Australia based on tree plantations for carbon sinks and renewable energy projects such as the development of oil mallee projects that generate oils, activated carbon and alternative energy.

KEY ISSUES FOR THE STATE DEVELOPMENT PORTFOLIO

While sustainable development presents many 'issues' for government, business and the community, the State Development portfolio in Western Australia believes it is critical that the economic component of the Triple Bottom Line is clearly incorporated into sustainability.

The portfolio is actively engaged in many sustainability issues, but a number of key issues stand out for special consideration which should be clearly taken into account in developing a State Sustainability Strategy.

- **Reducing greenhouse gas emissions is a major consideration for Western Australia's energy-intensive economy and a major challenge to continued success in achieving economic growth and job creation**

The State Sustainability Strategy needs to recognise and make a realistic assessment of the challenges for Western Australia in reducing greenhouse gas emissions. The State Greenhouse Strategy will contain numerous initiatives towards reducing greenhouse emissions and focus on transitional strategies towards a less carbon intensive economy. It is important that, consistent with the Triple Bottom Line approach to sustainability, the economic costs and benefits of proposed measures are fully assessed, along with the relevant social and environmental factors.

It is important to recognise the role that industrial development in Western Australia can contribute to reducing global greenhouse emissions, even where this involves an increase in local emissions. For example, production and export of LNG may result in net reductions in global emissions where it is used as a substitute for oil and coal. Similarly, establishment of gas based processing industries in Western Australia is likely to result in lower levels of greenhouse gas emissions than if the same products were to be produced in other countries, using more highly polluting fuels.

Western Australia's commitment to meeting greenhouse gas reduction targets should therefore be managed in a way that results in improved global environmental outcomes (such as an overall decrease in emissions). Failure to do so would compromise the State's economic competitiveness.

- **Decision making processes which integrate economic, environmental and social considerations are essential for sustainability.**

Sustainability is dependent on the integration of economic, social and environmental considerations in the development process. At present, these aspects are often addressed independently of one another within government. This can, at best, be an inefficient process and, at worst, lead to sub-optimal and unsustainable outcomes.

The State Sustainability Strategy needs to identify and evaluate possible decision making frameworks that enable a balanced and integrated consideration of all aspects of an issue. Objectivity and transparency should be key components of such a framework.

This may also involve some form of cost-benefit analysis framework to assess decisions to proceed – or not to proceed – with actions or projects.

When assessing decision making processes for sustainability the following four considerations are crucial:

- An improved, integrated government decision-making framework needs to be developed to assist in assessing priorities and ensuring sustainable outcomes.
 - A more consultative and strategically oriented project approvals process should be a key component of such a framework.
 - Significant capacity building needs to be undertaken to enable more effective participation by community groups, small business, etc in decision making processes.
 - A comprehensive suite of indicators needs to be developed to measure progress in sustainability with practical measures to test whether sectors of the State's economy are currently sustainable.
- **Developing the right approvals processes for economic development projects so that there is a high degree of consensus on development issues.**

The development of major projects such as mineral processing plants near towns or the development of tourism projects in environmentally attractive areas have often proved controversial.

From an economic perspective, in cases where projects do go ahead, developers are faced with high up-front costs to develop projects, long time delays and sometimes uncertainty in future operational security. In cases where projects do not proceed, Western Australia misses out on the 'opportunity cost' of not proceeding with projects – jobs that could have been created fail to eventuate and exports that could have assisted the State's economy are not realised.

Securing a generally accepted framework for approvals process that is well coordinated and integrated, that provides clear and unambiguous guidelines for assessment of projects, and that is balanced between community and developer needs is a major consideration in maximising state economic development in a Triple Bottom Line fashion.

The recommendations of the Keating Review of Approvals Processes signal a major shift in emphasis towards a more consultative and strategic process that will reduce duplication and increase efficiency that will be conducive to sustainability.

- **Providing comprehensive balanced information on development is necessary so that the community is informed and consensus on economic development can be more easily achieved.**

Sustainability is a complex and contentious issue. However, conflicting opinions are often exacerbated because of lack of information or, in some cases, misinformation.

Promoting sustainability – and consensus – is therefore much more likely to be achieved in a climate in which information on all aspects of development can be considered.

Further, where costs and benefits of proceeding or not proceeding with developments are known – and where costs and benefits can be assessed within an analytical framework – there is an increased likelihood of getting optimum and balanced outcomes on development issues.

- **Sending out the right market signals so that unnecessary government intervention is avoided and business operates within a market framework that is conducive to sustainability**

Governments intervene in the economy for a range of reasons – to compensate for ‘market failure’ in the economy, to re-distribute wealth, to provide greater access to services for particular groups of people or regions, to assist innovation, to facilitate the growth of ‘strategic industries’, to protect the environment and to achieve numerous other economic, social and environmental outcomes.

Governments must make interventionist decisions on the basis of the best analytical and policy advice of the day. In some cases, governments may intervene to secure economic outcomes in one area, social outcomes in another and environmental outcomes in a third – but collectively those interventions may counter act or even contradict each other, despite good intentions – for example, subsidising fossil fuel use while providing incentives to develop alternative energies.

As a general principle it is more important for governments to get the ‘fundamentals’ right by sending out consistent signals within a market oriented framework and a sound regulatory framework rather than intervene in numerous, sometimes unintentionally contradictory ways.

Some of the key market-based instruments for sustainability include:

- Taxes based on environmental impacts – the ‘polluter pays’ principle
- Using environmental pricing – incorporating into prices of goods and services the full real costs of environmental impacts ie. ‘internalising externalities’.
- Removing subsidies for activities that do not promote sustainability eg subsidies for production or consumption of fossil fuels, subsidies for logging old growth forests.
- Using tradeable permits to allocate scarce resources and reflect the real cost of goods and services eg trading in water rights, emissions trading systems.

- **Minimising regulatory and cost burdens on small business**

Small business plays an important role in the Western Australian economy through its contribution to employment generation and enterprise development.

To impose sustainability practices on small business – ‘sustainability by regulation’ – is neither practicable nor desirable. As a general principle it is preferable to get the right framework for small business – such as efficient and effective approvals processes and the right market signals in taxes and charges – and let small businesses contribute to sustainable development in the way that best suits them. As an example, small business – like all other business – should find it financially attractive to recycle wastes rather than be forced to do so.

- **Ensuring that strategies are translated into actions**

The State Sustainability Strategy will need a framework to effectively translate strategies into actions. The proposed Strategy needs to articulate, or at least present, options on the mechanisms to implement sustainability.

This requires an assessment of institutional arrangements – roles, responsibilities and reporting arrangements – to implement sustainability.

- **Developing a transitional framework to implement sustainability that prioritises short, medium and long term objectives**

From a State Development portfolio perspective there are short, medium and long term priorities which should be addressed under a State Sustainability Strategy:

Short term objectives (1-5 years):

- Establishing a world best practice approvals process for major project developments based on a Triple Bottom Line approach to projects.
- Re-evaluating land use patterns to promote increased developments in tourism and develop new industries in regional areas based on re-vegetation that tackle salinity so that commercial and environmental issues are addressed together.
- Integrating tourism and recreation usage into waterways and water catchment areas to balance the use of natural assets.
- Increasing the capacity of communities and individuals to deal with change.
- Promoting business and community knowledge of sustainability as an issue and communicate progress made in that area.
- Developing a comprehensive set of indicators of sustainability that are communicated to the community.
- Developing strategies for promoting purchasing practices that contribute to sustainability.

Medium term objectives (5-10 years):

- Significantly increasing value-added processing of the State's agricultural and mineral resources to create a more diversified economy that makes a bigger contribution to the economic component of the Triple Bottom Line.
- Reducing the energy and material intensity of the State's economy through the widespread adoption of eco-efficient practices throughout industry.
- Diversifying the structure of the South West economy and develop value adding industries based on plantation timber and tourism
- Developing a significantly greater skills base in Western Australia that positions the State to add value to its resources and make the most of the Knowledge Economy.
- Increasing the contribution of gas and LNG in the State's fuel mix to move the economy away from more greenhouse-intensive fuels such as petroleum.
- Increasing State government spending on R&D to significantly higher levels, including a focus on research that contributes to sustainability.
- Increasing the number of scientists per 1000 of the population in Western Australia so that scientific and technological solutions to the challenges of sustainability can be more easily developed.

Long term objectives (over 10 years):

- Stabilising, and if possible reducing, greenhouse gas emissions in Western Australia while continuing to grow the State's economy
- Developing Western Australia as a global centre for environment management services and greenhouse goods and services.
- Developing a world class renewable energy industry in Western Australia that results in a high proportion of energy use in the State being renewable-based and high levels of exports of renewable energy technology and services.
- Developing a high level of understanding and use of emissions trading in Western Australia so that eco-efficiency can be encouraged and new business opportunities realised.

APPENDIX 1: STATE DEVELOPMENT PORTFOLIO – A STRUCTURED AND PROVISIONAL APPROACH TO PROGRESSING SUSTAINABILITY

The State Development portfolio believes that testing subjects against a checklist of key issues is a valuable way to progress sustainability. The issues chosen are those that appear in the Consultation Paper *Focus on the Future: Opportunities for Sustainability in Western Australia*.

It is suggested that this approach could be adopted in the draft and final State Sustainability Strategy.

The matrix below focuses on 19 areas that are important to the State Development portfolio and then tests each against nine issues.

The dot points along rows are not necessarily related – the columns simply represent lists of points.

All the initiatives listed in the table below are for consideration – some may prove difficult to implement or measure, while there will be other initiatives that can be developed and added to the table.

<i>Issues</i>	<i>Goals</i>	<i>Targets/ Indicators</i>	<i>Actions</i>	<i>Policy/ management tools</i>	<i>Barriers</i>	<i>R&D priorities</i>	<i>Examples: best practice</i>	<i>Securing commitment</i>
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GREENHOUSE

<ul style="list-style-type: none"> • WAs economy is energy intensive – complying with Kyoto emissions targets is extremely difficult • Downstream processing is high-emission • Threat to WAs major investment and employment projects eg Burrup peninsula 	<ul style="list-style-type: none"> • Increase the diversification of the WA economy with less energy intensive industries • Increase % of renewable energy in WAs energy mix • Reduce emissions per unit GSP • Develop WA as a global centre for greenhouse research & technologies • Release updated EPA guidance statement on greenhouse emissions • Expand gas pipeline network & promote uptake of gas • WA industry operating at world leading greenhouse emissions benchmarks 	<ul style="list-style-type: none"> • Emissions per unit GSP • Increase in number of large companies publishing Environmental reports • Number of Government agencies issuing PERs • Number of companies exporting greenhouse goods & services • Rottneest Island Authority will establish targets for reducing emissions on the Island • Community and industry greenhouse awareness campaigns • Participate in national greenhouse initiatives • EPA greenhouse guidance statement in use 	<ul style="list-style-type: none"> • Promote alternative energy opportunities (eg bio-diesel) • Examine removal of subsidies that encourage the use of fossil fuels • Review energy pricing structures to encourage low emissions methods of energy production • Develop adaptation strategies for WA communities • Promote a carbon trading rights regime • Develop eco-efficient industry parks • Develop a Greenhouse Partnerships Program to enable business to fund emission reductions • State government to adopt energy 	<ul style="list-style-type: none"> • Support Australia's participation in development of an international emissions trading market • Develop an energy pricing regime that seeks to internalise environmental costs 	<ul style="list-style-type: none"> • Uncertainty in regard to international and national policy developments • No emissions trading framework in WA • Market dominance of Western Power/ Alinta Gas 	<ul style="list-style-type: none"> • Increase government support for R&D in greenhouse technologies • Greenhouse emission reducing technologies • Review alternative energy R&D options • Eco-efficiency • Renewable energy • Bio-diesel • Adaptation strategies • Environment management technologies 	<ul style="list-style-type: none"> • Albany wind farm • Burrup cogeneration and desalination • Bio fuel production in the SW 	<ul style="list-style-type: none"> • Implement the WA Greenhouse Strategy
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<i>Issues</i>	<i>Goals</i>	<i>Targets/ Indicators</i>	<i>Actions</i>	<i>Policy/ management tools</i>	<i>Barriers</i>	<i>R&D priorities</i>	<i>Examples: best practice</i>	<i>Securing commitment</i>
		<ul style="list-style-type: none"> Greenhouse abatement measures have economy wide adoption WA greenhouse emissions are reduced 	<ul style="list-style-type: none"> efficiency & green procurement practices that minimise greenhouse emissions Develop an 'EnviroScan' service to identify new greenhouse technologies & strategies Fund a major study into the demand for greenhouse abatement technologies and services Rottneest Island Authority to commit to int'l accreditation in Green Globe status (sustainable management for tourism & travel) Incentives for greenhouse-friendly activities eg public transport, tax relief for new industries 					

<i>Issues</i>	<i>Goals</i>	<i>Targets/ Indicators</i>	<i>Actions</i>	<i>Policy/ management tools</i>	<i>Barriers</i>	<i>R&D priorities</i>	<i>Examples: best practice</i>	<i>Securing commitment</i>
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BIODIVERSITY

<ul style="list-style-type: none"> • As well as being valuable in its own right, reduction in species of flora & fauna impacts negatively on tourism & some bio industries 	<ul style="list-style-type: none"> • Protect, conserve & where possible restore WA's natural biodiversity • Ensure that Rottnest Island maintains its biodiversity 	<ul style="list-style-type: none"> • Changes & improvements in the comprehensiveness, adequacy & representativeness of the conservation reserve system • The rate of increase in our knowledge of WA biota • Increase in number of comprehensive & represented vegetation associations/ types in the conservation reserve system • Rate of increase of area of private & other off reserve lands managed for biodiversity conservation in partnership with CALM & others • Rate of recovery of threatened species & ecological communities covered by recovery plans compared with predicted rates • Number of the State's 	<ul style="list-style-type: none"> • Establish clear guidance for biodiversity conservation actions in partnership with the community • Initiate strategies to reduce land clearing & improve community awareness of effects of land clearing on biodiversity • Promote off-reserve conservation that complements the reserve system. Develop & implement programs & partnerships for off reserve biodiversity conservation with community groups, landholders, industry & agencies • MPR will encourage management of mining company owned pastoral stations to 	<ul style="list-style-type: none"> • Establish improved biodiversity conservation legislation for achieving biodiversity conservation outcomes • Expand & improve marine & terrestrial conservation system to achieve best practice standards • Prepare management plans for all CALM managed lands & waters • Implement integrated management strategies to control dieback & other pests & diseases that threaten ecosystems <p>MPR will:</p> <ul style="list-style-type: none"> • Apply & develop in conjunction with CALM special biodiversity protection conditions where access is agreed • Identify & protect threatened 	<ul style="list-style-type: none"> • Clearing of private land in the south west will continue to be a major pressure on biodiversity. Actions need to be taken to require contributions to biodiversity protection initiatives to offset such pressures 	<ul style="list-style-type: none"> • The location & requirements for the continuation of stygofauna and other invertebrates are poorly understood & research is needed to ensure that resource development can plan & implement appropriate management practices during construction & operational activities to ensure conservation of species 	<ul style="list-style-type: none"> • MPR has established special dieback protection conditions for use on tenements in susceptible areas of private land 	<ul style="list-style-type: none"> • A combination of legislation, awareness education and incentives will be needed to sustain WA's significant biodiversity into the future
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<i>Issues</i>	<i>Goals</i>	<i>Targets/ Indicators</i>	<i>Actions</i>	<i>Policy/ management tools</i>	<i>Barriers</i>	<i>R&D priorities</i>	<i>Examples: best practice</i>	<i>Securing commitment</i>
		<p>threatened wildlife that are specifically protected as 'threatened flora & fauna' compared to previous years</p> <ul style="list-style-type: none"> • Changes in the conservation status of species subject to Salinity Strategy & Western Shield operations • Completion of Biodiversity Conservation Strategy & implementation of Biodiversity Conservation Act 	<p>complement minesite biodiversity management initiatives</p> <p>At Rottnest Island:</p> <ul style="list-style-type: none"> • Rehabilitate lighthouse swamp to re-establish declining frog populations • Conduct an active weed management program • Conduct twice yearly fauna surveys • Rehabilitation of eroding coastal areas • Generate local coastal vegetation propagules through hothouse facilities 	<p>species & ecological communities with recovery plans prepared & implemented for the most threatened species</p> <ul style="list-style-type: none"> • Advise resources companies of the presence of threatened species & the need to contact CALM • Apply special conditions to areas with recognised biodiversity value • Review its approach to approving vegetation clearing • Ensure that project reviews take account biodiversity protection from development through to eventual closure • Review, with EPA, arrangements for project referrals to ensure that appropriate initiatives are assessed by the EPA 				

<i>Issues</i>	<i>Goals</i>	<i>Targets/ Indicators</i>	<i>Actions</i>	<i>Policy/ management tools</i>	<i>Barriers</i>	<i>R&D priorities</i>	<i>Examples: best practice</i>	<i>Securing commitment</i>
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PASTORALISM

<ul style="list-style-type: none"> • The current management of pastoral lands is not compatible with and excludes tourism activities • Significant environmental degradation associated with much pastoral activity 	<ul style="list-style-type: none"> • Re-evaluation of land use patterns to permit greater tourism usage 		<ul style="list-style-type: none"> • Restructure Pastoral Lands Board 	<ul style="list-style-type: none"> • Broader use of statutory planning instruments • Lease resumption by state 	<ul style="list-style-type: none"> • Current leasehold arrangement • Lack of financial resources 		<ul style="list-style-type: none"> • El Questro Wilderness Park • Savannah Way • Purchase & management of pastoral leases surrounding mining activity by industry/ CALM 	<ul style="list-style-type: none"> • DOLA requires additional research
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PARKS & TOURISM

<ul style="list-style-type: none"> • Availability of land in coastal areas for tourism development • Land tenure in national parks • Availability of infrastructure in remote and fragile regions • Cost of developing tourism facilities using low impact, sustainable technologies 	<ul style="list-style-type: none"> • Increase visitation levels to WA • Promote Rottnest as a sustainable tourism destination • Increase uptake of accreditation programs (NTAP, NEAP, Green Globe 21) • Develop expertise in low impact tourism facility design & construction • Build on our natural advantage as a prime nature based destination 	<ul style="list-style-type: none"> • Increase visitation to WA • Establishment of a number of low impact tourism developments • Increase in the number of accredited tour operators 	<ul style="list-style-type: none"> • Promote WA as a sustainable nature based destination • Increase extent of protected areas • Develop partnerships with the conservation agencies to establish low impact facilities in conservation reserves • Encourage the establishment of World Heritage Areas • Promote the benefits of accreditation programs 	<ul style="list-style-type: none"> • In partnership with other agencies seek amendment to land tenure conditions in National Parks • Increased emphasis on accreditation in marketing opportunities with WATC & licencing of tour operators • Providing incentives to industry to be accredited 	<ul style="list-style-type: none"> • Lack of financial resources • High establishment costs for tourism in remote areas • Fragile environment • Land tenure • Availability of basic infrastructure in remote areas • Fragile environment requiring special consideration in the development of tourism facilities 	<ul style="list-style-type: none"> • CRC for Sustainable Tourism to be advised of new R&D initiatives 	<ul style="list-style-type: none"> • Shark Bay WHP • Tree Top Walk (Valley of the Giants) • Purnululu 	<ul style="list-style-type: none"> • Implement the findings of the Industry Consultation Forum hosted by WATC
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<i>Issues</i>	<i>Goals</i>	<i>Targets/ Indicators</i>	<i>Actions</i>	<i>Policy/ management tools</i>	<i>Barriers</i>	<i>R&D priorities</i>	<i>Examples: best practice</i>	<i>Securing commitment</i>
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RIVERS & CATCHMENTS

<ul style="list-style-type: none"> Managing conflicts re coastal & water use tourism, resorts, housing Decline in water quality of rivers & catchment areas may adversely affect tourism 	<ul style="list-style-type: none"> Integration of tourism/ recreation usage into waterways & catchments considerations 		<ul style="list-style-type: none"> Recreational objectives to be better integrated into the legislation Wellington Dam – ensure recreation amenity is maintained 		<ul style="list-style-type: none"> Lack of detailed knowledge of impacts WRC requires additional resources to conduct measures to promote sustainability 	<ul style="list-style-type: none"> Investigate impact of recreational activities on waterways 		
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FORESTS

<ul style="list-style-type: none"> Job losses in timber industry – and its multiplier effect Lack of alternative employment Low and narrow skills base Conflict caused by different values & understanding of sustainable forest management 	<ul style="list-style-type: none"> Diversify regional economy Re-structure the remaining timber industry towards greater utilisation and value adding of a scarce resource Provide security of resource to remaining timber operators Increase capacity of communities and individuals to deal with change Increase skills base in the region Increase tourism to the region Increase average income per capita 	<ul style="list-style-type: none"> Number of jobs in region Level of diversity in the economy Gross Regional Product of the region Retention of school leavers % of people with tertiary education Expenditure on regional economic re-structuring Increase average wage to State average Tourist nights stayed per annum Regional population growth Number of new business start-ups 	<ul style="list-style-type: none"> Investment attraction in new projects Wine industry initiatives New tourism strategy Use the Bibblemum track as a focus of economic development Support the plantation industry to develop new businesses Strengthen existing businesses through business planning and development Relocation of existing business and industry to the region 	<ul style="list-style-type: none"> Maintain old growth forest areas Co-locate the Forest Policy Implementation Office with DoIT team & other relevant government teams to create stronger coordination and delivery of industry restructure activities Forest Management Plan (Conservation Commission) 	<ul style="list-style-type: none"> Capital availability for new investment projects Across government coordination issues Lack of skills in local economy Timber harvesting issues currently dominate 	<ul style="list-style-type: none"> CRC for Sustainable Tourism could assess R&D needs 		<ul style="list-style-type: none"> Implement the State Sustainability Strategy
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<i>Issues</i>	<i>Goals</i>	<i>Targets/ Indicators</i>	<i>Actions</i>	<i>Policy/ management tools</i>	<i>Barriers</i>	<i>R&D priorities</i>	<i>Examples: best practice</i>	<i>Securing commitment</i>
	<ul style="list-style-type: none"> Ensure adequate supply of tourism development land in forest areas zoned suitably for a variety of market segments 		<ul style="list-style-type: none"> Explore potential for horticulture 					

MINING AND REHABILITATION

<ul style="list-style-type: none"> Mining is perceived as not sustainable Recycling contributes positively to extending resource supply 	<ul style="list-style-type: none"> Ensure that assessments & approvals are made on sustainability principles <p>Proponents of mining plans should:</p> <ul style="list-style-type: none"> Minimise & manage impacts on the environment & community Consider options that provide positive outcomes to stakeholders Understand stakeholder needs before completing the planning process Investigate potential synergies with other industries & operations to maximise the 	<ul style="list-style-type: none"> Implement open & transparent mining approval processes Establish guidelines for the State's expectations of mining proposals/ applications 	<ul style="list-style-type: none"> Public and sectoral education Development of ground rules for mining assessments 	<ul style="list-style-type: none"> EPA Guidance Documents Advice from key government agencies involved in environmental issues eg DEWCP, CALM 	<ul style="list-style-type: none"> Conservative elements within industry that may be resistant to changing technologies/ practices Limited research in these areas Lack of regulatory power to implement requirements 	<ul style="list-style-type: none"> Mining rehabilitation techniques Efficient mine production/ extraction techniques Waste minimisation strategies in mining Community education/ consultation/ involvement strategies Strategies to facilitate effective community input/ comments on development projects 	<ul style="list-style-type: none"> Placer Dome – Granny Smith Mine – use of open consultation process in responding to environmental assessment procedures Delta Gold – Kanowna Bell project – involvement of the community and employees in project management decision Homestake Australia – use of inclusive management practices in dealing with proposed developments and community consultation 	<ul style="list-style-type: none"> Government to take lead role in management of mining approvals/ assessment procedures & establish groundrules for expectations for development expectations Provision of information/ education to industry and community on these groundrules
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<i>Issues</i>	<i>Goals</i>	<i>Targets/ Indicators</i>	<i>Actions</i>	<i>Policy/ management tools</i>	<i>Barriers</i>	<i>R&D priorities</i>	<i>Examples: best practice</i>	<i>Securing commitment</i>
	use of materials & minimise wastes							

FISHERIES & COASTS

<ul style="list-style-type: none"> • Reduction in marine qualities may adversely impact tourism • Availability of coastal land for economic development eg tourism projects and industrial areas • Conflicts between different activities eg fishing & tourism 	<ul style="list-style-type: none"> • Increase land availability for tourism projects in coastal areas • Industry access to coast permitted 		<ul style="list-style-type: none"> • Will need to be reflected in town planning schemes • Extend Rottnest Island's two marine sanctuaries • Develop a master plan for coast development taking in all users needs • Coral Bay/ Mauds Landing project approval 	<ul style="list-style-type: none"> • Incorporate Coastal Planning Policy into town planning schemes • Coastal Zone Council 				
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TRANSPORT & LAND USE

<ul style="list-style-type: none"> • City congestion, pollution and poor urban design have the potential to reduce tourism to the State and detract from investment in 'lifestyle' services industries 	<ul style="list-style-type: none"> • Improve access networks to destinations (air, land, sea) • Development of Learmonth as a gateway in conjunction with infrastructure to develop the NW Cape 		<ul style="list-style-type: none"> • Involves State/ Commonwealth relations • Continue to maintain Rottnest as a 'bicycle only' area • Base settlement design at Rottnest on close proximity to services • Increase international capacity at Broome airport 		<ul style="list-style-type: none"> • Requires strong government financial commitment 		<ul style="list-style-type: none"> • Cairns Port Authority 	
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<i>Issues</i>	<i>Goals</i>	<i>Targets/ Indicators</i>	<i>Actions</i>	<i>Policy/ management tools</i>	<i>Barriers</i>	<i>R&D priorities</i>	<i>Examples: best practice</i>	<i>Securing commitment</i>
			<ul style="list-style-type: none"> Develop Learmonth airport as international gateways to NW Cape and Mauds Landing 					

SOLID WASTE, WATER & ELECTRICITY

<ul style="list-style-type: none"> The cost of disposal of solid waste increases business costs 	<ul style="list-style-type: none"> Develop of viable systems for remote areas 	<ul style="list-style-type: none"> Promote Rottnest as an example of 'minimal water usage' based on desalination plants and water catchment practices 	<ul style="list-style-type: none"> Integration between agencies & assistance programs Recycle all organic wastes at Rottnest Move towards a policy of 'no plastic bags at Rottnest' Recycle grey water at Rottnest Use biosolids for compost at Rottnest 	<ul style="list-style-type: none"> Integrated approach to government subsidy/ grant schemes to maximise benefits to developers rather than agency by agency approach Policy changes to introduce a one-stop-shop approach to providing assistance 		<ul style="list-style-type: none"> Small scale systems evaluation required 	<ul style="list-style-type: none"> Eco Beach (Broome) 	
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RENEWABLE ENERGY

<ul style="list-style-type: none"> High cost of renewable energy Subsidies to fossil fuels (eg diesel) 	<ul style="list-style-type: none"> Increase % of renewable energy in WAs energy mix Develop WA as a centre of renewable energy technologies & services 	<ul style="list-style-type: none"> % of energy consumed in WA from renewable sources Number of WA Government agencies sourcing 10%+ of energy from renewable sources Develop a suite 	<ul style="list-style-type: none"> Promote alternative energy opportunities (eg bio-diesel) Increase R&D funding in renewable energy Examine and reduce subsidies that encourage the use of fossil 	<ul style="list-style-type: none"> Develop a comprehensive renewable energy strategy Develop an energy pricing regime that internalises full environmental costs – a level playing field in 	<ul style="list-style-type: none"> Market dominance of Western Power/ Alinta Gas Entry costs for renewable projects may be high Market acceptance about reliability of 	<ul style="list-style-type: none"> Review alternative energy R&D options Bio-diesel technology 	<ul style="list-style-type: none"> Albany wind farm Kalbarri Photovoltaic system 	<ul style="list-style-type: none"> Implement WA Industry Policy, including renewable energy strategies & targets Develop & implement a Renewable Energy Strategy
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<i>Issues</i>	<i>Goals</i>	<i>Targets/ Indicators</i>	<i>Actions</i>	<i>Policy/ management tools</i>	<i>Barriers</i>	<i>R&D priorities</i>	<i>Examples: best practice</i>	<i>Securing commitment</i>
		of eco-efficiency style indicators	fuels <ul style="list-style-type: none"> • Continue to recycle waste car oil to power generators at Rottnest • Continue to use hybrid gas systems to reduce diesel at Rottnest • Establish a wind turbine at Rottnest • Replace some petrol/ diesel vehicles at Rottnest with electrical powered transport • Extend support for 'green power' at Rottnest • Investigate the use of bio diesel at Rottnest 	energy	renewables			

CONSTRUCTION & BUILDINGS

<ul style="list-style-type: none"> • Poorly designed buildings increase the cost of business • Existing by laws may hamper the achievement of innovative design 	<ul style="list-style-type: none"> • Encourage innovative approaches to building & design • Develop more innovative designs for fragile environments 		<ul style="list-style-type: none"> • Review of building codes to ensure adaptation to the needs of tourism 	<ul style="list-style-type: none"> • Local government may need to be more flexible 	<ul style="list-style-type: none"> • High initial costs compared to alternative • Rottnest Island Authority has high costs in protecting heritage buildings 	<ul style="list-style-type: none"> • Research ways of achieving innovative design at affordable cost 	<ul style="list-style-type: none"> • Maho Bay Camps (US Virgin Islands) 	<ul style="list-style-type: none"> • Incentives to industry may be required
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<i>Issues</i>	<i>Goals</i>	<i>Targets/ Indicators</i>	<i>Actions</i>	<i>Policy/ management tools</i>	<i>Barriers</i>	<i>R&D priorities</i>	<i>Examples: best practice</i>	<i>Securing commitment</i>
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URBAN DESIGN & SUSTAINABLE COMMUNITIES

<ul style="list-style-type: none"> Lack of integrated land use may make for higher business costs 	<ul style="list-style-type: none"> Destinational master planning approach to tourism planning 			<ul style="list-style-type: none"> Ensure tourism outcomes are incorporated into town planning 	<ul style="list-style-type: none"> Local government planning policies may need to be more adaptive 			
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ECO EFFICIENCY AND CLEANER PRODUCTION

<ul style="list-style-type: none"> WA needs to become more eco-efficient ie do more with less resources Eco-efficiency promotes innovation and competitiveness 	<ul style="list-style-type: none"> To improve the eco-efficiency of the WA economy 	<ul style="list-style-type: none"> Set eco-efficiency targets when a new set of indicators are developed State Development portfolio agencies to become members of the WA Sustainable Industry Group 	<ul style="list-style-type: none"> To develop a set of eco-efficiency indicators for WA 			<ul style="list-style-type: none"> Establish new R&D priorities when eco-efficiency indicators are developed 		<ul style="list-style-type: none"> Incorporate eco-efficiency indicators into the State Sustainability Strategy & Industry WA Policy
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ECO-OFFICE AND GOVERNMENT LAND MANAGEMENT

<ul style="list-style-type: none"> Poor design of buildings adds to the cost of business & government 	<ul style="list-style-type: none"> One of the three goals of Rottne's 20 year strategic management plan is to conserve the environment & heritage as a model of sustainability 	<ul style="list-style-type: none"> Set benchmarks for Rottne's management of government vested lands which ensure progression to sustainable management 						
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<i>Issues</i>	<i>Goals</i>	<i>Targets/ Indicators</i>	<i>Actions</i>	<i>Policy/ management tools</i>	<i>Barriers</i>	<i>R&D priorities</i>	<i>Examples: best practice</i>	<i>Securing commitment</i>
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GREEN PROCUREMENT

<ul style="list-style-type: none"> • There is a trade off between stimulating 'green business' and buying lower cost goods/ services • 'Picking winners' can be difficult 	<ul style="list-style-type: none"> • Focus on a whole of life cycle buying policy that provides the best Triple bottom Line returns for WA 	<ul style="list-style-type: none"> • Number of companies complying with a 'Code of Good Practice' 	<ul style="list-style-type: none"> • Develop a 'Code of Good Practice' for sustainability • Review the concept of enforcing 'green products only' are used and sold at Rottnest 	<ul style="list-style-type: none"> • Review WA Government procurement policies & establish a 'greener' framework 	<ul style="list-style-type: none"> • High cost of compliance of ISO 14K for small companies • Cost versus value • There is insufficient information on what constitutes 'green products' 	<ul style="list-style-type: none"> • Assess government purchasing to identify areas for potential R&D 		<ul style="list-style-type: none"> • Lead by example – Government 'Green Procurement Initiative'
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APPROVALS PROCESSES

<ul style="list-style-type: none"> • Investment and jobs are threatened if approvals processes are slow, costly and inefficient 	<ul style="list-style-type: none"> • Improve inefficiency in government approvals processes 	<ul style="list-style-type: none"> • Develop sustainability criteria for project assessments 	<ul style="list-style-type: none"> • Modification of State approvals legislation to facilitate implementation of the Keating report • Establish a State Development Coordination office to provide a first point of contact for developers & perform a coordination function for approvals for projects • Government to provide land on an unencumbered basis 	<ul style="list-style-type: none"> • Requires inter-agency coordination 	<ul style="list-style-type: none"> • Cost to government 			<ul style="list-style-type: none"> • Requires high degree of policy coordination
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<i>Issues</i>	<i>Goals</i>	<i>Targets/ Indicators</i>	<i>Actions</i>	<i>Policy/ management tools</i>	<i>Barriers</i>	<i>R&D priorities</i>	<i>Examples: best practice</i>	<i>Securing commitment</i>
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INDIGENOUS ISSUES

<ul style="list-style-type: none"> • Inclusion & full participation by indigenous people is not a fact & is an essential component of sustainability • Attracting investment to Aboriginal enterprises • Recognition of environmental, social & cultural outcomes as complementary to economic outcomes for sustainable indigenous enterprises • Lack of enterprise opportunities for indigenous communities 	<ul style="list-style-type: none"> • Increase participation of indigenous peoples in tourism • Wealth creation for Aboriginal communities • Developing long term sustainable Aboriginal enterprises • Identification of new business opportunities 	<ul style="list-style-type: none"> • Number of indigenous tourism businesses included in marketing activities • Increasing rates of return on Aboriginal enterprises • Reduced dependence on government funding • Cultural values retained within economic activities • Increased number of indigenous enterprises • More indigenous enterprises in mainstream industry sectors eg mining, fishing, retail 	<ul style="list-style-type: none"> • Create a Federal/ State Indigenous Enterprise Fund • Improve access to bank funding • Promotion of multi-dimensional concept of sustainability to include cultural & social • Preserve, promote & respect the 15 Aboriginal sites at Rottnest Island • Increased partnerships between indigenous and mainstream tourism operators 	<ul style="list-style-type: none"> • Development of long term strategies aimed at sustainability • Native Title Acts • Statement of commitment 	<ul style="list-style-type: none"> • Reluctance of banks to fund projects leading to high degree of dependency on government funding • Lack of funds from all levels of government • Conflict between economic & cultural needs • Business & management expertise within indigenous communities • Remote areas present difficulties eg access to services & markets • Reluctance of broader community to purchase services from indigenous enterprises 	<ul style="list-style-type: none"> • Research into venture capital availability 	<ul style="list-style-type: none"> • Indigenous tourism in the Kimberley region • Indigenous art • WA Indigenous Tour Operators Committee 	<ul style="list-style-type: none"> • Coordinate & integrate Federal/ State programs & policies • Long term support strategies focused on sustainability
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<i>Issues</i>	<i>Goals</i>	<i>Targets/ Indicators</i>	<i>Actions</i>	<i>Policy/ management tools</i>	<i>Barriers</i>	<i>R&D priorities</i>	<i>Examples: best practice</i>	<i>Securing commitment</i>
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R&D

<ul style="list-style-type: none"> • Expenditure levels too low to develop a Knowledge Economy • Expenditure too 'bifurcated' (diffused) 	<ul style="list-style-type: none"> • Increase State Government R&D spending per unit GSP and per capita to above national & OECD average • Double the number of scientists in WA per 1000 population by 2010 	<ul style="list-style-type: none"> • R&D spending per unit GSP and per capita • R&D spending to achieve set targets by industry sector • Number of scientists per 1000 population 	<ul style="list-style-type: none"> • Develop a strategy to improve leverage of Commonwealth funding 	<ul style="list-style-type: none"> • Implement the findings of the Premier's Science Council: • Est a Government Research Agency Forum • Est an evaluation framework for State Government research 	<ul style="list-style-type: none"> • Short/ medium term budget constraints • Corporate focus on short term benefits 	<ul style="list-style-type: none"> • Areas where WA could achieve a competitive advantage in new industry development • Areas of most concern from a greenhouse perspective • Use Rottnest Island as a model for R&D into sustainability • Conduct research on rehabilitaing Lighthouse Swamp at Rottnest. Transfer that information to rehabilitate other wetlands 		<ul style="list-style-type: none"> • Implement Innovate WA • Implement WA Industry Policy
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