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Sustainability and governance

Vision for Western Australia

Western Australia's system of governance is world famous for being responsive to sustainability issues, effective and financially responsible in its programs, transparent and inclusive in its processes and reflects its globally significant responsibilities towards the land and its people.

Goal

Ensure that the way we govern is driving the transition to a sustainable future.

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Government needs to show leadership on sustainability. This is a global theme that was echoed time and again in the public submissions.

Government should be giving leadership. It should be constantly raising the profile of sustainability, announcing a vision for the future. All government departments should be taking the lead to improve their economic, social and environmental performance in a demonstrable manner i.e. Government should be actually “walking the talk” in sustainable practices, soon rather than later.

Australian Corporate Citizenship Alliance, Western Australia

Government has a leadership role to play and to ensure that mechanisms are in place for all relevant government departments to have a consistent vision, commitment and approach towards the attainment of sustainability, along with clear channels of communication. In Western Australia, restructuring and the combining of natural resource management agencies such as the Department of Environmental Protection (DEP) and the Water and Rivers Commission (WRC) is a positive move towards integrating institutions and establishing a consistency in governance toward sustainability.

Eastern Metropolitan Regional Council

Governments can achieve a significant amount, by the example of how they operate their own organization, the policies they pursue and by the leadership they show to others...because of the importance we attach to strong and clear leadership from government, we recommend the Government uses its own Sustainability Strategy document to send the clearest possible signal about the future direction of WA.

BP Australia Ltd

This section proposes governance arrangements to support sustainability within the Western Australian Government and its agencies, with local government and other stakeholders, at the regional scale and in support of Indigenous sustainability. The section begins with the emerging area of sustainability assessment. It then describes how government agencies must operationalise sustainability in their planning, decision-making and day-to-day activities. It proposes institutional reform for sustainability, discusses the importance of research and development for sustainability and of recognising sustainability achievement.

Local government has a critical role in planning and decision-making for sustainability and many sustainability issues are best addressed at this level. A State-Local Government Sustainability Roundtable will be created to develop a common sustainability framework while the draft Strategy is being finalised. This will lay the foundation for a genuine partnership between state and local governments for sustainability, in particular through the planning system. The planning system is discussed in some detail as a possible statutory mechanism for implementing responses to many sustainability issues at the local and regional levels.

In recognition of the diversity within Western Australia and the government's commitment to the regions, this section proposes the development of Regional Sustainability Strategies, and describes possible future roles for Regional Development Commissions. Regional Councils (groups of local governments) are highlighted as important processes for implementing the State Sustainability Strategy.

The Western Australian Government has recognised the rights of Indigenous people through its Statement of Commitment to a New and Just Relationship, jointly signed by the government and the Aboriginal and Torres Strait Islander Commission in 2001. Building on this, the draft Strategy describes how the government will undertake to support the pursuit of sustainability for Indigenous communities.

> SUSTAINABILITY ASSESSMENT

Sustainability assessment is a new process that provides integrated advice to provide net benefit outcomes. The government will build on environmental impacts assessment to develop sustainability assessment of projects, plans, policies and programs as well as legislation, Cabinet submissions, corporate plans and proposed government agreements.

Sustainability-based environmental assessment is certainly different from the more common, narrower exercises that typically consider only some aspects of environment and focus chiefly on negative effects. It is more ambitious, more demanding and much more positive. But it is also, in important ways, not a huge step from present practice and present capabilities.

RB Gibson⁸

The Western Australian Government was elected with a commitment to improve decision-making processes across government through greater integration. In particular there is a commitment to establish a mechanism for sustainability assessment that would build upon the state's strong record in environmental impact assessment. The recently released Final Report of the Review of the Project Development Approvals System (Keating Review) has also highlighted the need for a coherent sustainability assessment framework for state significant projects in Western Australia. The review noted that most submissions in response to its interim report were supportive of establishing such a framework but not for smaller projects.

The establishment of a sustainability assessment process will be a major step forward in simplifying and creating a more effective decision-making process. It is not an easy process to change due to the silos of government and disciplines of professions. It will require slow and careful trials to establish the processes and a long-term commitment to build capacity across government and society.

There are innovative companies in the private sector already using sustainability assessment as an internal mechanism for decision-making due to the value in integration and holistic perspective (see Box 7 on Hamersley Iron).

Sustainability assessment is already beginning in government but until it is a fully developed, integrated process it is likely to be limited to consideration of separate environmental, social and economic factors. This is best labelled 'triple bottom line' assessment. Sustainability assessment integrates these factors at the start and throughout the assessment process with clear goals and outcomes guiding the process.

While government will move to establish the institutional and legislative basis for sustainability assessment, it is proposed that transitional arrangements be put in place to enable important government decisions to begin to be assessed in this way. Important experience can be gained in the interim arrangements as set out below.

The character of sustainability assessment

Sustainability assessment is not meant to provide another set of barriers or 'hoops to jump through' for proponents seeking approval for projects, plans, policies and programs. Sustainability assessment will make transparent the kind of social and economic issues that government must take into account when considering a project, plan, policy or program.

Government often considers social and economic issues (along with formal environmental assessment conclusions) but these considerations are not necessarily transparent and are rarely integrated. This generally means that government sometimes has to make difficult decisions, involving significant tradeoffs between social, economic or environmental factors. Sustainability assessment is designed to work through the social and economic issues in a transparent way (similar to that for environmental considerations) and then to find integrated solutions where tradeoffs are minimised or non-existent wherever possible. It is about 'win-win-win' or net benefit.

Sustainability assessment is emerging as a way to improve decision-making on complex projects, plans, policies and programs with opportunities for public engagement. It not only offers the potential to resolve apparently deep conflicts and minimise potentially harmful impacts, it has the potential to provide clear, positive benefits. It is a new paradigm in assessment and therefore requires a new framework to be developed for guiding decision making.

⁸ RB Gibson, *Specification of Sustainability-Based Environmental Assessment Decision Criteria and Implications for Determining 'Significance' in Environmental Assessment*, 2001, p. 50, viewed 5 August 2002, <http://www.sustreport.org/downloads/Sustainability_EA.doc>

BOX 7 HAMERSLEY IRON'S SUSTAINABILITY ASSESSMENT PROCESS

Hamersley Iron has recently adopted an internal decision-making process based on sustainability assessment. The key idea is to try and find net benefit in the social, environmental and economic areas in an integrated way.

An example is an assessment that was conducted on the management of the company's pastoral leases in the Pilbara. The question was whether to operate these leases to maximise yields of cattle, relinquish them to achieve social and environmental benefit only, or consolidate them with a balance of these goals. The process involved detailed interviews with over 30 stakeholders from government, Hamersley Iron, community and industry groups. The results were put into a 'spider web' decision-making diagram where the results on each issue were either positive or negative along an axis (based on the strength of responses given in the interviews). The distance along the line in a positive or negative direction could then be added to give an overall social result, an overall economic result and an overall environmental result.

The first attempt did not show any of the three management options as having net benefit on all three factors. Potential mitigations were developed and the options were presented to stakeholders again. This time a clear result for the consolidated option came through with net benefit in all three areas.

The company has since applied the technique to a much more complex mining decision and also found that the first options were not acceptable in this sustainability framework. After modification an option was found that solved this problem. Technical assessment of this option is now underway. This option could then be taken to the Board and eventually to government for their approval processes. Hamersley Iron acknowledges the need to refine the process but will not be returning to simple models of the 'single bottom line' again.

Source: Bruce Larson, Hamersley Iron

The sustainability assessment framework

Sustainability assessment builds on the sustainability framework outlined previously and has the additional elements of criteria, assessment techniques, procedures and guidelines. A discussion of the emerging procedures and techniques associated with sustainability assessment is provided in the background paper by Kathryn Buselich *An Outline of Current Thinking on Sustainability Assessment* (see CD-ROM).

Table 2 below sets out a series of criteria that could be used in the process of a sustainability assessment. These are derived from and supplement the sustainability principles within the sustainability framework. The two columns show the major differences in approaches to assessment: one is to minimise the negative impacts of a project, plan, policy or program; the other is to promote the positive outcomes. The first approach is what is usually called 'impact assessment' and the second describes how the 'sustainability assessment' approach would work.

Table 2. Possible criteria for sustainability assessment of projects, plans, policies and programs.

Managing the negative	Promoting the positive
Provides short-term gain but long-term economic gain is uncertain.	Provides both short and long term economic gain.
Minimises impacts on access, equity and human rights in the provision of material security and effective choices.	Increases access, equity and human rights in the provision of material security and effective choices.
Minimises the damage to biodiversity, ecological integrity and life support systems.	Improves biodiversity and ecological integrity and builds life support systems.
Minimises the increase in ecological footprint while improving quality of life.	Reduces ecological footprint while improving quality of life.
Minimises impacts on community and regions, 'sense of place' and heritage protection.	Builds up community and regions, 'sense of place' and heritage protection.
Minimises conservation loss and social impact while providing economic benefit.	Provides conservation benefit and net social-economic benefit.
Minimises the reduction of 'common good' resources.	Increases 'common good' resources.
Minimises the risks which are not understood.	Ensure there are acceptable levels of risk with adaptation processes for the worst scenarios.
Brings change without hope for the future as it is not part of a broader strategic vision.	Brings change and a sense of hope for the future as it is linked to a broader strategic vision.

There are many techniques to aid decision-making which integrate social, economic and environmental factors and can incorporate the principles of sustainability. There is no single preferred approach and each jurisdiction must build on the unique legislative and institutional machinery in assessment as well as the collective experience and capacity in the community, industry and government agencies.

A number of industries have already begun doing sustainability assessment as part of their internal decision making (see Box 7 on Hamersley Iron and the case study on Argyle). The techniques of integration need to be discussed between those industries grappling with the issue, consultants, academics, community groups and government agencies. A working group to facilitate this process is recommended.

Western Australia has a strong base in environmental impact assessment with some experience in strategic environmental assessment. The government has capacity in economic assessment though it is not clearly linked to environmental assessment. However, social assessment is not well established in government with the last concerted effort being phased out in 1993. There have been some recent examples of multi-criteria analysis that has shown how planning can involve a transparent process of sustainability assessment. These strengths and weaknesses have informed the recommendations on institutional change here and in following sections.

Arrangements for sustainability assessment

Sustainability assessment involves gathering information about the impact of the project, plan, policy, policy or program (PPPP) against relevant sustainability principles and government goals. Once that information has been collected, an assessment can be made as to whether the PPPP has an overall net benefit relative to other alternatives.

It is recognised that some PPPP may have an adverse impact on some sustainability principles and that some trade-offs are inevitable. In short, a PPPP will be acceptable as long as it does not compromise the government's ability to achieve any of its sustainability principles and it has a greater net benefit than alternatives when all relevant economic, social and environmental factors are taken into account.

In particular there is a need for three Sustainability Assessment Units to provide capacity for the implementation of sustainability assessment within the areas of environmental, social and economic sustainability. The three Sustainability Assessment Units will be established within:

- Environmental Protection Authority Services Unit with responsibility for environmental assessments related to sustainability
- Department for Planning and Infrastructure with responsibility for social assessments related to sustainability
- Department of the Treasury and Finance with responsibility for economic assessments related to sustainability.

These units will need to liaise closely with each other and with other relevant agencies with experience on the particular PPPP under consideration.

The Environmental Protection Authority publicly assesses the environmental impacts of significant projects. The links between these environmental assessments and the other social and economic areas are not made but will need to be if sustainability assessment is to be progressed. There has until recently been no attempt to publicly assess the economic and social impacts of major proposals. In the last few months the government has started to fill this gap, in the case of the Gorgon project in respect to the use of Barrow Island for project development. This is occurring through the Office of Major Projects preparing a social-economic-strategic assessment for public comment along with the Environmental Protection Authority's environmental assessment.

Transitional arrangements

Projects

In relation to projects, sustainability assessment can begin on two fronts: the departmental level and state significant projects.

Projects handled at a departmental level

Every department needs to develop its own expertise and capacity to handle sustainability assessment of day-to-day projects. Agencies will need to develop a social, environmental and economic checklist and a range of techniques that can help to integrate these.

For example, Main Roads WA use an assessment technique for all projects that initially considered environmental and economic factors and is being expanded to include social aspects. Another sustainability assessment is required at the level above this to consider all projects and prioritise them. The Minister for Planning and Infrastructure is developing a portfolio-wide response to integrated funding of planning and infrastructure (see Table 3).

Table 3. Proposed funding criteria for sustainability assessment of all projects in Planning and Infrastructure portfolio.

Goal	Strategic Direction	Objective/Outcomes
Economic	Economic	Wealth Creation International Competitiveness Shared benefits to the community Secures jobs - long term High benefit cost ratio
	Environment	Maintains ecological processes Improves use of natural resources (energy) Enhances natural and built environment Supports bio-diversity
People and Communities	Accessibility	Enhances transport choices Provides basic level of access Accessible for people with disabilities
	Social inclusion	Enhances vibrant communities Supports Indigenous communities
	Safety and health	Transport safety impacts Physical activity impacts Health impacts (third parties)
	Integration	Land use/ transport synergy Integrates transport modes Whole of government policies
Governance	Financial	Internal rate of return First year rate of return
	Community involvement	Meets community needs Involves public Uses transparent process

State significant projects

Not all large projects could begin to be assessed using sustainability assessment as the processes are yet to be properly developed. It is proposed that sustainability assessment will begin by focusing on state significant projects, as set out by the Review of Project Development Approvals System. These are projects with a high level of formal environmental assessment or are of significant public interest.

This is presently occurring with the assessment of the Gorgon Project. This is the first attempt to integrate environmental, social and economic considerations into a formal process. A public scoping document, called a sustainability statement, has been developed addressing these three dimensions and a process of public consultation is underway. The integration of these dimensions in decision-making will be a first for Western Australia and one of only very few undertaken internationally.

The government will determine arrangements for sustainability assessment of state significant projects in its response to the Keating Review.

Complex planning decisions

The Department for Planning and Infrastructure and other government agencies are currently using techniques like citizens' juries and multi-criteria analysis with community-based weighting of sustainability criteria to decide on preferred planning options. The Sustainability Code of Practice (see section on *Embracing sustainability in government agencies*) will outline how agencies can use multi-criteria analysis and similar tools as a basis for incorporating sustainability into decision-making.

Programs, policies and agreements

Government has made an election commitment to ensure that agencies incorporate sustainability principles into their activities and many agencies have been building sustainability into policies and programs. The Department of the Premier and Cabinet will continue to provide advice to government agencies on how to use sustainability as the basis for developing and reviewing programs, policies and agreements. The Sustainability Code of Practice will include guidelines for government agencies on policy development and sustainability assessment of policies, programs and agreements.

Cabinet submissions

The Policy Division, Department of the Premier and Cabinet, currently provides advice to the Premier on sustainability and other policy implications of Cabinet submissions. The Policy Division will use the sustainability assessment framework as the basis for providing advice on Cabinet submissions. The Sustainability Code of Practice will include guidelines for applying the sustainability framework to Cabinet submissions. Government will also modify the Cabinet Handbook to incorporate the requirement to address sustainability issues.

Corporate plans

Government agencies have highlighted the need for guidance on how sustainability considerations can be integrated into their decision-making processes, including criteria and guidelines to ensure their practices are consistent with sustainability objectives. The Sustainability Code of Practice will include guidelines for applying the sustainability framework to corporate plans and the Policy Division will continue to provide advice to agencies on their corporate plans.

Legislation

There has been a trend for new legislation to incorporate sustainability principles, however there is a need for a consistent and comprehensive approach in the future. The government will consider existing legislation when it is reviewed to identify where there are opportunities to incorporate sustainability principles and practices and include guidelines in the Parliamentary Counsel's Guidelines and Procedures for the drafting of legislation to ensure that sustainability is addressed in future legislation.

Long term arrangements

There is a need for commitment to the long-term evolution and development of the assessment process, to build capacity within agencies, to reform institutional and legislative arrangements and to establish new procedures, criteria and guidelines. This will need to be an incremental and organic process where government, industry and community continuously learn from experience and progressively adapt the sustainability assessment process accordingly.

It would appear that current institutional and legislative arrangements allow government to undertake triple bottom line assessments where environmental, social and economic effects are separately identified. However, it is very difficult to undertake truly integrated sustainability assessments from initiation to approval in assessing projects, plans, policies or programs. Long-term arrangements are therefore likely to require institutional changes as experience is gained in sustainability assessment.

In addition to institutional arrangements, the ability to set social and economic conditions for project approvals as well as environmental conditions needs to be established to make sustainability assessment of projects function as an integrated process. This may require legislative change in the medium term.

In short...

Vision

Sustainability assessment forms the basis of all significant government decisions and is embedded into all levels of government activity.

Objective

Enable net benefit outcomes to be achieved from an assessment process that is consistent with sustainability principles.

Actions underway include

- Triple bottom line assessments are being established for significant projects and complex planning decisions.
- *The Review Of The Project Development and Approvals System (Keating Review)* has been submitted to government after public comment.

Proposed actions

- 1.1 Establish transitionary arrangements for sustainability assessment including the establishment of a Social Assessment Unit in the Department for Planning and Infrastructure and an Economic Assessment Unit in the Department of Treasury and Finance. Capacity to address sustainability will also need to be developed within all relevant agencies.
- 1.2 Establish an Industry-Government Working Group on Sustainability Assessment to further develop processes and practices.

Indicators and targets

- Capacity within government, the private sector and the community to participate in sustainability assessment.

Global opportunities

The process for sustainability assessment is likely to produce better all round outcomes for government, industry and the community. Considerable discussion is occurring globally on the need for sustainability assessment though no government appears to have a comprehensive process in place. If Western Australia can develop this process and establish capacity to ensure it is done well, then this service could contribute to a significant global market.

Further information

Buselich, K 2002, *An outline of current thinking on Sustainability Assessment*, sustainability background paper, Draft State Sustainability Strategy CD-ROM, Department of the Premier and Cabinet, Perth

Gibson, R 2001 *Specification of Sustainability-Based Environmental Assessment Decision Criteria and Implications for Determining 'Significance' in Environmental Assessment*, Canadian Environmental Assessment Agency Research and Development Programme, viewed August 2002, <http://www.sustreport.org/downloads/Sustainability_EA.doc>.

Independent Review Committee 2002, *Review of the Project Development Approvals System: final report*, Government of Western Australia, Perth, viewed August 2002, <http://www.premier.wa.gov.au/Feature_stories/ProjectApprovalsFinalReport.pdf>

> INSTITUTIONAL CHANGE

Sustainability involves most government agencies and Ministers; each has responsibilities primarily in social, environmental or economic dimensions.

The sustainability agenda can provide a very useful framework for the State Government in achieving a more coherent whole-of-government agenda. It provides a wide range of principles by which government decision-making can be considered, and a powerful vision that can appeal to the broad community. It also provides an integrative framework that addresses all the key goals for our society and its governance, while also providing important guidance for setting priorities.

Environmental Alliance

In our view, a key role of the Sustainability Policy Unit should be to provide guidance to Government agencies on how sustainability considerations can be integrated into their decision-making. This would complement the Unit's work on awareness raising and promoting best-practice. Such guidance would assist those agencies in their work with industry.

Chamber of Minerals and Energy

This section describes the proposed institutional arrangements for sustainability.

Each government portfolio has different responsibilities for implementing aspects of the triple bottom line of sustainability—environmental, social and economic. The challenge for government will be to support the integrated thinking across agencies that sustainability demands. Rather than operating within ‘silos’ to progress only the environmental, social or economic dimensions, government agencies need to work in a way that progresses all three elements concurrently.

In recognition of the need for coordinated planning and decision-making the government established Cabinet Standing Committees for Economic, Environmental, Regional and Social Policy in 2001, which has enabled ‘joined-up’ consideration and development of government policy in these broad areas.

The Machinery of Government reforms have also resulted in fewer departments and the consolidation of responsibilities and functions to minimise overlap and duplication. This has benefited sustainability thinking by integrating responsibilities that were previously separate, for example the transport portfolio is now part of the Department for Planning and Infrastructure. This provides the mechanism for better integrating transport planning with planning for sustainable urban form. Similarly, water resources management and environmental protection are now the responsibility of the Department of Environment, Water and Catchment Protection.

No single minister or agency is currently able to provide the integrating mechanisms across government that are required for sustainability. However, the Sustainability Policy Unit within the Department of the Premier and Cabinet can undertake many functions to improve integration including:

- supporting sustainability assessment
- assisting with capacity building in sustainability assessment
- advising agencies on how to operationalise sustainability in their own activities through developing a Sustainability Code of Practice and a Sustainability Resource Guide (see *Embracing sustainability in government agencies*)
- coordinating across-government activity in sustainability reporting
- providing sustainability policy advice including overseeing the implementation of the State Sustainability Strategy as well as the incorporation of sustainability principles into legislation, the approvals process and the planning process

- providing community advice and programs on sustainability including the State Sustainability Strategy process.

As outlined earlier in *Sustainability assessment*, Sustainability Assessment Units are proposed in the Department for Planning and Infrastructure, Department of Treasury and Finance and the Environmental Protection Authority. Staff within these assessment units will require training for the implementation of sustainability assessment. The Department for Planning and Infrastructure will also play an important role in the implementation of the State Sustainability Strategy through the establishment of statutory processes with local government and Regional Councils (see *Partnerships for action*).

Other agencies also need to ensure sustainability capacity within their policy functions. This will have the advantage of enabling a network of skilled staff across government to achieve a 'whole-of-government' perspective on sustainability. The Sustainability Policy Unit will support regular communication and information exchange across this network to support capacity building for sustainability across the public sector.

In short...

Vision

Institutions for sustainability are established and functioning as an essential and integral part of how government functions.

Objectives

- To enable robust institutional arrangements within and across the state government to ensure sustainability is embedded into government activities.
- To enable adaptability and progressive learning on how institutional arrangements can most effectively enable sustainability to be realised.

Actions underway include

- The Sustainability Policy Unit is established within the Policy Division of the Department of the Premier and Cabinet.
- The Department for Planning and Infrastructure has been conducting a sustainability assessment of the freight network and the Southern Rail City entrance options.
- The Department of Housing and Works has a policy group with sustainability expertise.
- The Department of Fisheries has an ecologically sustainable development reference group.
- The Department of Conservation and Land Management and other departments have had commitments to sustainability within its corporate plan for some years.
- The Machinery of Government Taskforce has restructured government agencies to achieve more integrated, whole of government outcomes.

Proposed actions

1.3 Require the Sustainability Policy Unit to:

- support sustainability assessment
- assist agencies in implementing the State Sustainability Strategy within their own areas of responsibility
- coordinate sustainability reporting across government
- provide general policy advice on sustainability and monitor implementation of the State Sustainability Strategy
- support regular communication and information exchange for capacity building in sustainability across the public sector
- provide community education programs on sustainability including the State Sustainability Strategy process.

In short cont'd...

- 1.4 Assist relevant agencies to incorporate sustainability capacity into their policy functions, enabling a network across government to achieve a 'whole-of-government' perspective on sustainability.

Indicators and targets

- Number of agencies with sustainability policy functions.
- Number of public servants with sustainability expertise and experience.

Global opportunities

The establishment of sustainability in a proper institutional framework and the experience generated will become a major, globally innovative process. The potential to use this in capacity building within developing countries could be greater than the processes which have been developed over the past 20 years in environmental protection.

Further information

The Machinery of Government Taskforce 2001, *Government Structures for Better Results: The Report of the Taskforce Established to Review the Machinery of Western Australia's Government*, Ministry of the Premier and Cabinet, Perth.

> EMBRACING SUSTAINABILITY IN GOVERNMENT AGENCIES

Government needs to lead by example on workplace sustainability and a range of agency sustainability innovations will be implemented.

Government agencies should at least minimise their own ecological footprint, by adopting eco-efficient office operations, critically reviewing transport and travel and inclusion of environment and sustainability criteria in government purchasing and contracting. "The government cannot urge sustainability on the rest of the community without putting its own house in order. Leadership must be provided in the first instance by the Premier, Geoff Gallop, and by the relevant Ministers in the departments and agencies under their control.

Environmental Alliance

The Department has also sought to move towards sustainability in its operations. It has for many years established renewable energy systems in isolated locations wherever practicable, and has more recently committed to purchasing a portion of its electricity from renewable sources. Paper, plastic and metal recycling programs are active in most Departmental locations. These activities will be coordinated and enhanced through a "Cleaner Production Plan" which is currently in development.

Department of Conservation and Land Management

Perth Zoo has a vision for becoming the World's first "Sustainable Zoo", consolidating Perth Zoo as a world leader and providing the Western Australian public with a leading cultural institution, that educates, entertains and undertakes vital conservation work and breeding programs. Perth Zoo plans to achieve a vision for a sustainable approach to its own management and development using environmental management systems, water recycling, waste re-use, conservation and community education and maintaining a focus on sustainable eco-systems within Zoo enclosures.

Perth Zoo

Part of the government's leadership role is to ensure that its agencies embrace and pursue sustainability principles, supporting a transition to a more sustainable future through its considerable influence in setting policies, making decisions, purchasing and procurement and managing its own activities to positively support sustainability. This sends clear signals to the community and businesses that the government is 'walking its own talk' and 'putting its house in order'.

Many jurisdictions around the world have responded to the sustainability imperative through initiatives that support the 'greening of government'. Government agencies in Western Australia have made some progress in workplace sustainability. Some agencies have already begun a comprehensive response to this issue through the adoption of an Eco-Office Program or through becoming signatories to the Western Australian Sustainable Industries Group's Cleaner Production Statement. Box 8 describes the Perth Zoo's efforts to become the world's first sustainable zoo.

The implementation of sustainability across the public sector requires a holistic and well-planned approach to ensure that this is undertaken comprehensively. In its Environment Policy, the government committed to developing a Code of Conduct for policy-making and management practices that would enable sustainability principles and practices to be incorporated into all aspects of government decision-making.

A Sustainability Code of Practice for Government Agencies will summarise Government's requirements for its agencies in addressing sustainability, as outlined in this section, including:

- applying sustainability principles in the discharge of agency functions
- ensuring agencies' day-to-day activities are sustainable
- supporting sustainability assessment of legislation, policies, agreements, Cabinet submissions and projects
- monitoring and reporting on agency achievements and commitments to sustainability.

BOX 8 PERTH ZOO: THE WORLD'S FIRST SUSTAINABLE ZOO

It is Perth Zoo's vision to become the world's first sustainable zoo. It is setting an example for other recreation and tourism venues by developing management strategies that integrate environmental, economic and social sustainability and demonstrate possibilities for the future. Being the most popular tourist and family destination in the state, with approximately 550,000 visitors annually, the Perth Zoo aims to use its success and popularity to increase support for world conservation, sound environmental practices, community education and sustainable business practices.

The Zoo is developing a sustainability management plan in conjunction with Curtin University's Centre for Cleaner Production. The sustainability plan for the zoo recognises the importance of research, continual improvement and the establishment of long-term business and sponsorship relationships. These relationships involve organisations that similarly demonstrate an ongoing commitment to the environment and conservation ethos.

Perth Zoo is limited by space and funding. Therefore its sustainability strategy must embrace these challenges as opportunities to increase the economic and ecological efficiency of its operations. Strategies have so far involved: an Environmental Management System; energy and water conservation; alternative energy sources and solar design; onsite chipping and composting; the use of recycled paper in offices and shredded paper for animal bedding; the introduction of public recycling stations; the encouragement of electronic communication when possible; and an Environmental Management Committee chaired by the CEO. The Perth Zoo has found that implementing these strategies not only provides social and environmental benefits they are also economically efficient.

In leading by example the morale of the zoo staff is increased and its role in education is enriched. The Zoo has a role to inform the public about global biodiversity protection and research on endangered species and their habitats. The impact of this on local families, school groups and tourists is increased when it is clear that the zoo is 'walking the talk' on global sustainability issues in general. The Zoo's Homestead exhibit provides an environmental showcase for the public. Information is provided on recycling, waste reduction and reuse, permaculture, alternative energy sources and solar passive design principles. The Zoo believes this is an effective way of communicating actions that individual householders can take to minimise their impact on the environment.

The implementation of a sustainability management plan focusing on community education and conservation has given the Perth Zoo great potential as a community and industry leader in sound environmental management and business sustainability.

Source: Amber Hadley and Elyse Casserly

Agencies will develop a *Sustainability Action Plan* to respond to the Sustainability Code of Practice and comprehensively address how sustainability will be pursued. This will ensure the operationalisation of sustainability within agencies beyond the State Sustainability Strategy. It will also allow flexibility and an evolutionary approach by enabling agencies to determine what sustainability means for them in the context of their statutory responsibilities, operating environments and customers. At the same time, it will also enable a consistency of approach for important government wide-actions such as procurement policy and energy efficiency. Box 9 summarises the possible main elements of a sustainability action plan. Agencies will also report on the implementation of the sustainability action plan in their Annual Reports.

The Sustainability Policy Unit will prepare guidelines in consultation with agencies to assist the development of sustainability action plans. The unit will also review draft plans.

BOX 9 GOVERNMENT AGENCY'S SUSTAINABILITY ACTION PLANS

Sustainability Action Plans will be developed in consultation with key stakeholders and:

- address issues outlined within the State Sustainability Strategy of relevance to the agency
- identify any agreed actions for which they are primarily responsible arising from the State Sustainability Strategy
- describe how the agency will shift to more sustainable day-to-day management of their operations, including the adoption of existing government-wide programs and policies for procurement as well as targets for energy use, water use, waste reduction and recycling, vehicle use, travel reduction and other relevant targets
- set out a community engagement plan
- set out proposals for action and improvement over a three year period (2003 - 2006)
- be incorporated into strategic and business plans as these plans are reviewed and or prepared
- define the measures that agencies will use to report on progress towards sustainability.

Applying sustainability principles

Agencies will review and amend their existing strategic and operational plans to:

- incorporate sustainability principles
- reflect any commitments they are responsible for under the State Sustainability Strategy
- adopt additional measures that are available to implement sustainability principles in agency operations.

Additional measures to implement sustainability principles will vary between agencies. For example:

- an agency responsible for making decisions concerning the use of natural resources should specify how sustainability principles will be applied in making those decisions
- an agency that plans for transport infrastructure should specify that the full costs, including infrastructure, environmental and safety costs, should be taken into account in developing those plans (see Table 3, the Department for Planning and Infrastructure's proposed criteria for assessment of projects)
- an agency that assists particular industries should set out strategies for using that assistance to promote sustainability in that industry.

Ensuring agencies' day-to-day activities are sustainable

Government agencies are significant resource consumers in their own right and will be required to embed sustainability into their day-to-day activities including through purchasing and procurement.

The Western Australian Government spends around \$5 billion on goods and services, construction and building related services. This is a significant contribution to Western Australia's economy. Clearly, government purchasing and procurement can be a powerful driver to support more sustainable behaviour as well as the emergence and establishment of sustainable behaviours in businesses and industries that supply goods and services to government. As the submission from the State Development Portfolio notes, '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.'

The Premier has established an Interdepartmental Committee on Sustainability Procurement to prepare a comprehensive approach to sustainability procurement in government. This new approach will be included in the final version of the State Sustainability Strategy.

In its Environment Policy the government committed to introducing annual environmental performance reporting requirements for all government agencies in areas such as energy consumption, waste disposal, vehicle fuel efficiency and recycling; as well as requiring departments and agencies to set targets for waste reduction and recycling. These were to be audited according to the principles of sustainability and included in Annual Reports.

Through the Sustainability Action Plan agencies will be required to put in place programs and resourcing consistent with this election commitment and respond to government-wide targets and initiatives including for the following areas:

- sustainability procurement
- waste reduction and recycling
- energy use
- water use
- reduced travel and vehicle use and vehicle fuel efficiency.

Existing government initiatives, requirements and targets in each of these areas are summarised in Box 10.

Assistance for agencies is available in some areas, for example through the Sustainable Energy Development Office's Energy Smart Government Program that provides funding for agencies to invest in energy saving activities. A new common-use contract has also been established to provide a panel of consultants who can conduct waste audits for agencies.

The Sustainability Policy Unit will develop detailed guidance for agencies in how to develop a Sustainability Action Plan through preparing a Sustainability Resource Guide for Government Agencies, in consultation with relevant agencies.

BOX 10 GOVERNMENT WIDE PROGRAMS AND COMMITMENTS FOR SUSTAINABILITY

Waste reduction and recycling

The government requires its agencies to meet the Waste 2020 target of towards zero waste by 2020. The Waste Management Board will develop specific waste reduction and recycling targets for government agencies.

Energy use

As part of the Energy Smart Government Program, the government requires agencies to achieve 5%, 6%, 7%, 8% and 12% energy savings per year for the years 2002-3 to 2006-7. Building on the present Financing Energy Efficiency Program, the new Energy Smart Government Program supported by the Sustainable Energy Development Office will enable agency offices to be audited and refitted for energy conservation.

The government will undertake to purchase renewable energy for an increasing proportion of electricity requirements in the most cost effective manner.

Building design

The development of government building and landscaping will incorporate the principles of solar orientation, energy efficiency, waste recycling, water use efficiency, accessible design and other sustainability innovations.

Water use

Government properties will demonstrate best practice in water use efficiency through water wise gardens, bores, rainwater tanks, grey water recycling and water efficient appliances (see *Sustainability and settlements: Our water future*).

Vehicle packages, fuels, reduced travel and vehicle use

The number of cars in the government vehicle fleet will continue to be reviewed to ensure these remain at the optimum level and are reduced where possible and options will be available for senior public servants to include provisions for taking public transport in lieu of vehicles.

Agencies will incorporate individualised travel management programs.

The vehicle fleet and electric train system will be carbon neutral by tendering for the best option to purchase greenhouse credits.

The LPG conversion program of 25% of eligible replacement six cylinder vehicle (both passenger and utilities) will continue into 2002 and 2003.

Gas, hydrogen and biodiesel will be actively used in buses to demonstrate the applicability of these fuels for heavy vehicles.

Government centres will develop Internet conferencing facilities to ensure that meeting travel is minimised.

Public engagement

The government will ensure transparent, participatory and engaging public processes are embedded in agency activity.

Social responsibility

The government will require agencies to examine strategies for community-building and social responsibility involving their own employees.

Supporting sustainability assessment of legislation, policies, agreements, cabinet submissions and projects

Relevant government agencies will support sustainability assessment as described in the section on *Sustainability assessment*.

Public engagement

Public consultation and engagement is an important principle of sustainability and agencies are expected to undertake this as part of their core business. Each agency could utilise the *Consulting Citizens Resource Guide* developed by the Citizens and Civics Unit, Department of the Premier and Cabinet, to facilitate public engagement.

The process of engagement will also be assisted by the historic development of the WA Collaboration, a grouping of civic society in Western Australia, involving conservation groups, unions, social services, churches, youth, seniors and other interests. The Lotteries Commission provided funding to the WA Collaboration to help implement the State Sustainability Strategy.

Monitoring and reporting on agency achievements and commitments to sustainability

An increasing number of businesses and government agencies around the world are preparing triple bottom line reports and working to determine how best to report their social, economic and environmental activities. Within Western Australia, the Water Corporation, WMC and BP Australia Ltd have all recently prepared a triple bottom line or sustainability report.

The State Strategic Plan will inform the structure of future budgets and include environmental, social and economic goals for government. The Department of Treasury and Finance is investigating triple bottom line reporting at a whole of government level.

Triple bottom line reporting in government agencies will be trialed with selected agencies. These agencies will prepare their annual reports against a triple bottom line framework and include additional information in terms of the social and environmental aspects of their operation. The success of this will be reviewed with a view to making this a government-wide requirement in years to come. Agencies could also choose to prepare a separate triple bottom line report as the Water Corporation has already done.

The government will also report publicly on the implementation of the State Sustainability Strategy.

In short...

Vision

Western Australian government agencies are recognised nationally and internationally for their sustainability innovations.

Objective

Ensure government agencies are leading by example in pursuing sustainability through adopting sustainability in their planning, decision-making, everyday activities and reporting.

Actions underway include

- Some agencies have adopted a dedicated Eco-Office Program, developed an Environmental Management Plan or are signatories to the Western Australian Sustainable Industries Group Cleaner Production Statement in order to minimise the environmental impact of their activities.
- The Sustainable Energy Development Office provides the Energy Smart Government Program to support the adoption of energy efficient activities within government agencies.
- The State Supply Commission's *Supporting other Government Directions Policy* encourages agencies to purchase recycled and recyclable goods.
- The Perth Zoo has adopted a comprehensive environmental management program and aims to be the first sustainable zoo of the 21st Century.
- The Premier has established an Interdepartmental Committee for Sustainable Procurement to develop a comprehensive policy on this issue.
- The Department of Fisheries is developing a process to assess all Western Australian fisheries in terms of ecologically sustainable development and to report to Environment Australia and the Western Australian community.

In short cont'd...

Proposed actions

- 1.5 Incorporate sustainability principles and practices into the legislation administered by relevant government agencies as it comes up for review or drafting.
- 1.6 Develop a Sustainability Code of Practice in consultation with government agencies to provide direction and guidance for how government agencies should plan for, manage, report on and operationalise sustainability. The Sustainability Code of Practice will require agencies to create Sustainability Action Plans in order to put these programs into practice. A Sustainability Resource Guide will be developed to assist agencies in this process.
- 1.7 The Sustainability Code of Practice and Action Plan will incorporate a number of initiatives across government including requirements for:
 - sustainability assessment
 - agency policies and decision making to incorporate sustainability
 - procurement policy
 - the Energy Smart Government Program
 - reducing vehicle use through individualised travel management processes
 - improving vehicle fuel efficiency and demonstrating the use of gas, hydrogen and biodiesel bus demonstrations
 - investigate how the government vehicle fleet and the electric train system can reduce greenhouse gases by purchasing equivalent carbon credits from Western Australian carbon sequestration projects
 - working towards achieving zero waste by 2020 and increasing recycling
 - reducing water use as outlined in the draft State Water Conservation Strategy
 - demonstrating sustainability innovation in building design and construction
 - purchasing renewable energy for an increasing proportion of electricity requirements in the most cost effective manner
 - ensuring transparent, participatory and engaging public processes are embedded in all aspects of agency activity.

Indicators and targets

- Number of government agencies that have developed and are implementing a comprehensive Sustainability Action Plan.
- Percentage of government spending supporting sustainable industries.
- Number of government agencies preparing triple bottom line reports or reporting on sustainability actions through their Annual Reports.
- Number of Acts modified to incorporate sustainability principles and practices.

Global opportunities

Achieving sustainability in government is one of the key challenges in the global sustainability agenda. For example, there are large World Bank projects on these issues. Agencies and consultants developing this expertise will be able to participate in this market.

Further information

L Aitken, *Towards a sustainable procurement strategy*, sustainability background paper, Draft State Sustainability Strategy CD-ROM, Department of the Premier and Cabinet, Perth

S Waller, *'Walking the walk': workplace sustainability policy, program and actions within the state government of Western Australia*, sustainability background paper, Draft State Sustainability Strategy CD-ROM, Department of the Premier and Cabinet, Perth

> PARTNERSHIPS FOR ACTION

Implementation of sustainability will require partnerships with a range of key stakeholders. Local government in particular will be a key partner for implementing sustainability.

Individual governments, just like individual companies and individual people, cannot deliver sustainability on their own—global approaches are required as well as local approaches, and partnership is essential.

BP Australia Ltd

Local governments around the world and in Australia have taken sustainability seriously for a long time. Chapter 28 of Agenda 21 considered the role of local authorities in supporting sustainability. This initiative has become known as Local Agenda 21 and has provided the framework and driver for much action by local government around the world.

The Western Australian Local Government Association indicates that some 6,416 local authorities in 113 countries have either made a formal commitment to Local Agenda 21 or are actively undertaking the process. At the end of 2000, over 70 Councils in Australia were either starting or had developed a Local Agenda 21 program. To date, 15 Western Australian Local Governments have formally committed to a Local Agenda 21 process including the Cities of Fremantle, Armadale, Mandurah, Nedlands, Subiaco, Stirling, Joondalup and Cockburn, the Shire of Serpentine-Jarrahdale and the Town of Cottesloe.

The Western Australian Local Government Association provided a detailed submission setting out how local government needs to be involved in every aspect of the State Sustainability Strategy. The association proposed:

... that a Sustainability Partnership [be] formalised (under the umbrella of the more general State-Local Partnership) at the time the Strategy is finalised; and in the meantime a Roundtable is established as an embryonic Advisory Council to progress the Strategy formulation.

Given the complexity of the issues involved and the Western Australian Government's intention to work more closely with local government on a range of issues, it is desirable that opportunities to jointly pursue sustainability be considered comprehensively by state and local governments working together.

Therefore, during the process of public consultation on the draft State Sustainability Strategy, the government will establish a roundtable with the Western Australian Local Government Association (representing local government). This effort will be directed towards creating a State-Local Government Common Sustainability Framework consisting of common principles, goals, approaches, and programs building on the sustainability framework outlined in this strategy (see Figure 2). This partnership on sustainability policy and implementation between the state government and local government is probably unique in Australia.

The framework will address institutional accountability, alignment of state and local government policy directions and processes on sustainability, regional groupings of local government for responsibilities in different areas (see below), and common state-local government methodologies and resources. The partnership agreement should build on the draft State Sustainability Strategy and be completed in time for finalisation with the final State Sustainability Strategy.

Local governments have expressed the view that some large regional projects do not adequately address local social and economic considerations. The roundtable can suggest ways forward, including through partnerships with industry, state and local government to consider these matters for new and on-going projects.

A key process will be how to use the Town Planning and Development Act to enable sustainability principles and processes to be incorporated into statutory processes at the local level. This will include exploring how Regional Councils could be created to address sustainability issues and the use of various statutory

powers by agencies and local governments directly for sustainability outcomes for natural resource management, settlement and community issues.

Regional Councils can be established with the powers of a local government under the Local Government Act. These were originally set up to manage waste as it was obvious that each local authority (especially in the city) could not have their own landfill site nor could they have the ability to establish a recycling centre in each locality. Regional partnerships were required.

The same issue now confronts local government on many of the sustainability issues outlined in this report: natural resource management issues (especially landcare, drainage and coastal issues), settlement issues (especially transport, growth management, air quality, waste, renewable energy location and heritage) and community issues (especially on location of community services, social housing, health and education). There is a real need for local government to establish regional partnerships with the state government on these issues while at the same time maintaining their local identities and close links so vital to the implementation of any policy. This will be achieved in incremental steps to ensure regional capacity building and ownership is in place. Many issues will also be managed by agencies or by local government directly.

There are already two good models of Regional Councils (both of which made substantial submissions to the State Sustainability Strategy): the Eastern Metropolitan Region of Councils (representing six Councils in the east of Perth); and the North East Wheatbelt Regional Council (NEWROC, which represents seven councils in the Wheatbelt). Both Regional Councils have been able to develop staff and capacity to make significant contributions on policies for sustainability. Neither has yet used their statutory powers for other than waste management. The process for implementation of the State Sustainability Strategy through this roundtable and partnership agreement is set out in Figure 2.

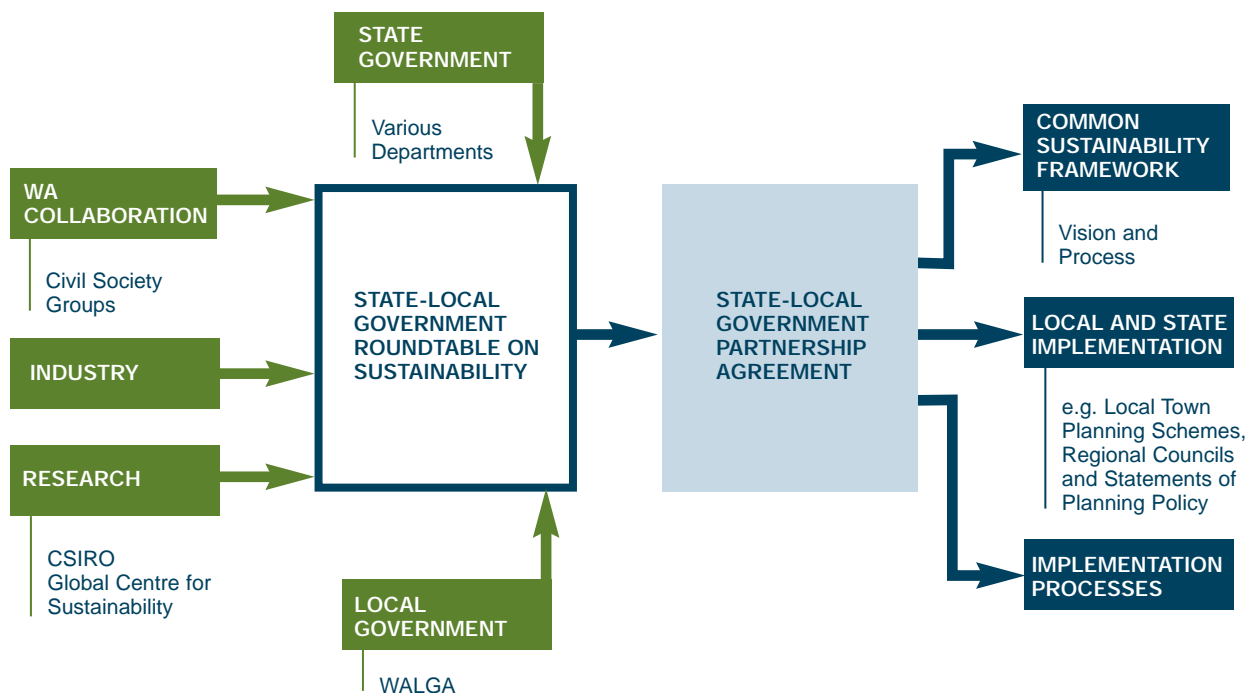
The roundtable has primary representation from various state government agencies (different for each issue) and the WA Local Government Association. It also includes the WA Collaboration (a combination of civil society groups including conservation, churches, unions, social services representatives), industry, (for example the Western Australian Sustainable Industries Group, the Chambers of Commerce and Industry and Minerals and Energy), and research organisations (CSIRO and the Global Sustainability Centre). Its major outputs will be a Common Sustainability Framework and a set of recommended implementing processes including Regional Councils and other policy instruments and processes. The roundtable can develop clear agendas for implementing the State Sustainability Strategy for the priority areas outlined in the draft Strategy.

The draft Strategy also proposes additional partnerships involving civil society, research organisations and industry to undertake further work in key areas important to the different sectors. These partnerships will be described in more detail in other parts of the draft Strategy. Proposed additional partnerships include:

- *Regional sustainability* (particularly universities)
- *Research and development for sustainability* (industry, universities and CSIRO)
- *Sustainability assessment* (industry)
- *Sustainable mining and petroleum production* (industry)
- *Corporate social responsibility* (with industry)
- *Eco-efficiency and industrial ecology* (with industry).

Each of these partnerships will be an inclusive process to try and achieve creative and innovative solutions through dialogue and involve representation from the WA Collaboration.

Figure 2 The State-Local Government Roundtable process to develop a common sustainability framework and processes (such as Regional Councils) to implement the State Sustainability Strategy



In short...

Vision

State and local governments are acting in unison to realise a sustainable future for the Western Australian community. Other partnerships with universities and industry are able to creatively resolve sustainability issues.

Objectives

- Establish partnerships involving civil society, industry, local government and research organisations to progress, finalise and implement the State Sustainability Strategy.
- Achieve integrated state-local government approaches to sustainability and align state and local government policy and processes with sustainability principles.

Actions already underway

- Fifteen Western Australian local governments have formally committed to a Local Agenda 21 process including the Cities of Fremantle, Armadale, Mandurah, Nedlands, Subiaco, Stirling, Joondalup and Cockburn, the Shire of Serpentine-Jarrahdale and the Town of Cottesloe.
- Some 67% of Western Australia's population live in a local government area involved with the Cities for Climate Protection program.
- Some partnerships with government for sustainability already occur, for example the WA Sustainable Industries Group.

Proposed actions

- 1.8 Establish a partnership with local government (represented by the Western Australian Local Government Association) to create a State-Local Government Common Sustainability Framework consisting of common principles, goals, approaches, and programs. It will build on the sustainability framework outlined in this strategy. This framework will be formally set out in a partnership agreement.

In short cont'd...

- 1.9 Support a State-Local Government Sustainability Roundtable to create the partnership agreement and its implications for local government sustainability. The Roundtable will explore the role of regional councils (groups of local government) in supporting sustainability, the implementation by individual local government and the role of state government in enabling local governments to fulfill these roles. Involve the WA Collaboration in the roundtable as well as industry and research interests.
- 1.10 Work with the WA Collaboration and industry stakeholders to implement the State Sustainability Strategy through similar partnership processes.
- 1.11 As part of the State-Local Government Roundtable examine the issue of how assessment can create a better process for involving local government in large development projects.

Indicators and targets

- Number of regional councils and local governments working on sustainability issues.
- Level of engagement by key stakeholders in implementing the State Sustainability Strategy.

Global opportunities

Agencies, local governments, industry and civil society can participate in the growing international market for sharing the insights and innovations from places like Western Australia that develop unique partnerships for sustainability.

Further information

G Alderson and S Turner, *Moving Towards Sustainability in the City of Gosnells: A Case Study of Local Government Addressing the Sustainability Agenda*, 2002, <<http://www.sustainability.dpc.wa.gov.au/CaseStudies/gosnells/gosnells.htm>>

C Leigh, *Local Government and Sustainability: How the Western Australian Local Government Association is assisting local councils to adapt to the new agenda of sustainability*, 2002, <<http://www.sustainability.dpc.wa.gov.au/CaseStudies/WALGA/walga.htm>>

X Menage, *Working Towards Sustainability: Local Government Greenhouse Action through the Cities for Climate Protection Campaign*, 2002, <<http://www.sustainability.dpc.wa.gov.au/CaseStudies/Greenhouse%20Action/greenhouseaction.htm>>

P Zele, *Local Agenda 21 Applied Locally in Western Australia: The City of Cockburn Case Study February*, 2002, <<http://www.sustainability.dpc.wa.gov.au/CaseStudies/la21/localagenda21.htm>>

> PLANNING FOR SUSTAINABILITY

Sustainability presents a new emphasis in traditional planning practice. The statutory planning tools to prepare, implement and review policies and plans offer a powerful mechanism to apply the principles of sustainability.

Western Australia is fortunate in that it has an established planning system administered by agencies and institutions with considerable experience in dealing with a range of development issues and community views. It provides significant opportunity through strategies, policies, regulation and special projects to influence the direction and type of growth and development throughout the State and demonstrate commitment to sustainability principles.

Royal Australian Planning Institute

The EMRC provides a successful model of a partnership by its member Councils to enable a strategic long-term focus that is both environmentally and culturally sensitive to the Region. The Regional Environmental Strategy 2000 (RES) is a major strategic initiative undertaken by the EMRC to protect and manage the Region's natural environment and resources. The RES also identifies issues and defines future actions aimed at achieving sustainability and to value and preserve the environmental, social and economic aspects that make the Region unique.

Eastern Metropolitan Regional Council

The core process in sustainability consists of:

- finding a strategic vision of the future which is the desired outcome for a majority of the community based on common good principles
- setting out practical steps that integrate economic, social and environmental outcomes relevant to that vision and which can be taken through every element of development
- embedding this through statutory processes and procedures where appropriate to make a significant contribution to the implementation of the State Sustainability Strategy.

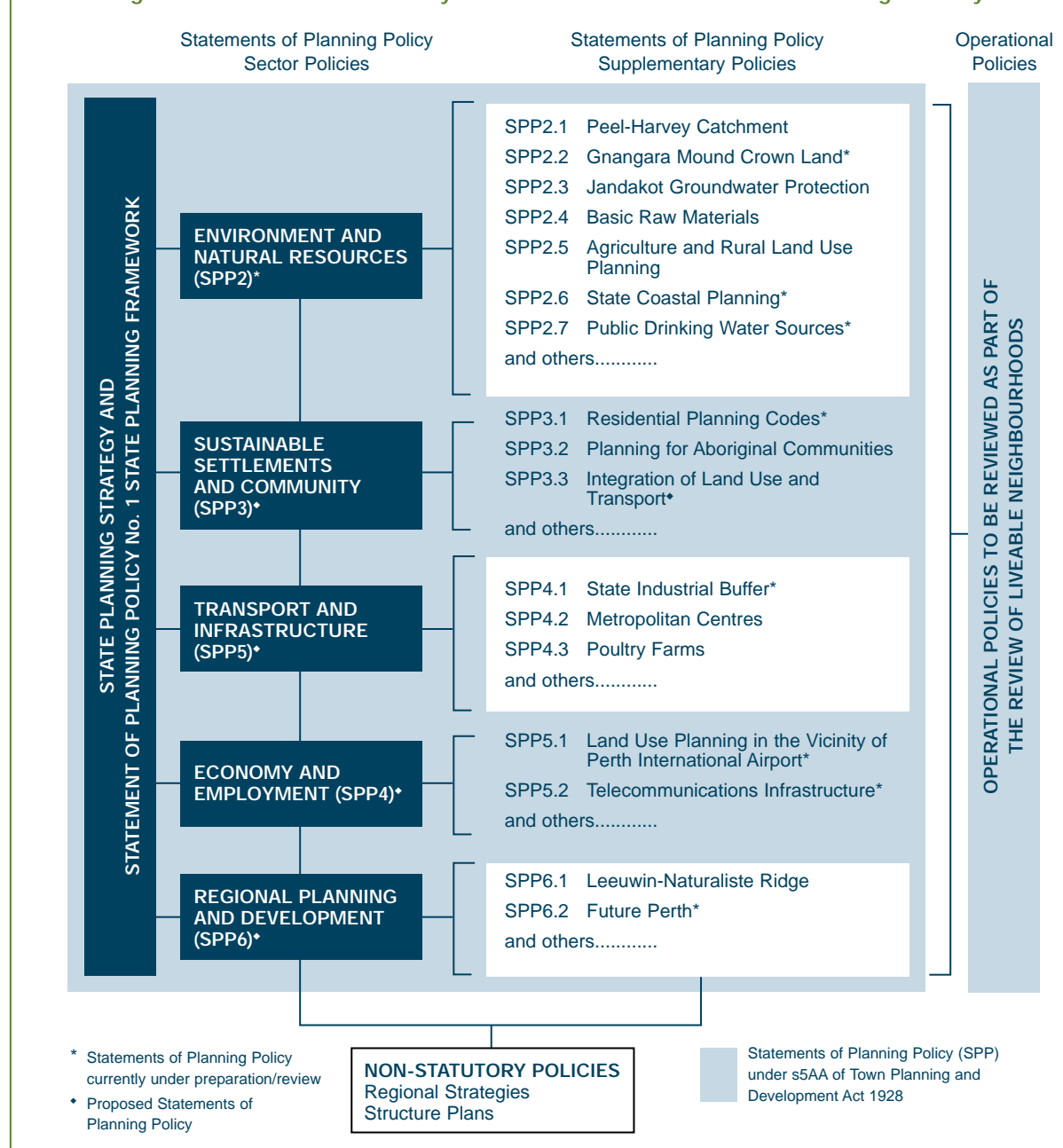
This is also the process that has traditionally been called 'town and country planning'. The town planning profession arose out of health and transport problems at the turn of the 19th century and has provided an orderly statutory process of achieving social, environmental and economic goals for over a hundred years, in all parts of the world including Western Australia.

Local government is a major stakeholder in all levels of planning. Local Town Planning Schemes are an important mechanism for addressing sustainability issues in the statutory process as well as Metropolitan Region Schemes and Regional Plans. However the vision for tackling sustainability issues has mostly come from other processes. Local governments have been preparing Local Agenda 21 Plans and have participated in the international program Cities for Climate Protection. Natural resource management groups have had close links to local government, and much community development occurs through local government. Yet little of this is incorporated into the statutory planning process despite it having significant implications for land use (and transport) planning.

Another planning instrument created under the Town Planning and Development Act, the Statement of Planning Policy, has great potential to be used more widely to promote sustainability. In particular, it has the potential to be used as a whole-of-government document, developed in accordance with sustainability principles, to integrate land use and management requirements for specified areas of the state. Current Statements of Planning Policy are provided in environment and natural resources, sustainable settlements, economy and employment, transport and infrastructure, and regional planning. The classification system for existing and proposed Statements of Planning Policy is provided at Figure 3.

The state local government roundtable will identify opportunities through planning processes and procedures to implement the State Sustainability Strategy.

Figure 3 Classification System for Statements of Planning Policy



Source: Department for Planning and Infrastructure

The foundation of this process is the common sustainability framework and the process of establishing Regional Councils of local governments that are better able to focus on the sustainability issues confronting them. The capacity to address these issues is created through local government and state government processes to create the vision for the region in question, developing triple bottom line steps and then embedding this into a Statement of Planning Policy. The Statement of Planning Policy will be approved by the state government and guide the planning and actions of state agencies as well as the planning and actions of local government.

In short...

Vision

Planning provides the processes and procedures to create regional and local sustainability visions and triple bottom line actions to achieve these visions.

Objectives

- Better incorporate sustainability principles into statutory planning, especially integrated land use and transport planning.
- Identify opportunities through planning processes and procedures to implement the State Sustainability Strategy.
- More effectively involve local government in sustainability planning.

Actions underway include

- Longer-term planning processes, such as the State Planning Strategy, have incorporated triple bottom line approaches.
- Specific projects such as the Freight Network Review and the Perth City Rail Access Committee on the Southern Rail have used sustainability techniques.
- Some Regional Councils of Local Government have demonstrated regional sustainability planning.

Proposed actions

- 1.12 Work with local government, industry and community through the State-Local Government Roundtable to investigate the application of statutory planning and other processes in support of sustainability outcomes. Statements of Planning Policy can be developed and then be given legal effect through adoption by the Western Australian Planning Commission and state government. Once adopted, Statements of Planning Policy will guide the actions of Local Government and State Government agencies.
- 1.13 Support the increased involvement of local government in planning for natural resource management generally, including issues of agricultural sustainability, particularly regional drainage, biodiversity conservation, regional revegetation programs and water quality. As part of the State-Local Government Partnership Agreement explore opportunities for regional councils and local councils and statutory planning processes (such as Statements of Planning Policy and Environmental Protection Policies) to support natural resource management outcomes, including the possibility of adopting regional natural resource management strategies through Statements of Planning Policy.
- 1.14 Establish a Strategic Alliance for Sustainability within the Department for Planning and Infrastructure to assist in the implementation of new initiatives related to planning that are proposed in the State Sustainability Strategy.
- 1.15 Conduct a 'Planning for Sustainability Forum' in November 2002 to establish principles and processes for implementing sustainability across the planning and infrastructure portfolio.

Indicators and targets

- Extent to which planning processes and procedures incorporate sustainability principles.

Global opportunities

Planning professionals from Western Australia are already in demand for global development projects in the Asia Pacific Region. Town planning is established worldwide but rarely has it been applied in its full capacity to solving sustainability issues. If Western Australia can demonstrate this then planning professionals and sustainability professionals involved will have many global opportunities to pass on their expertise and experience.

Further information

West Australian Planning Commission, <<http://www.planning.wa.gov.au/>>

> SUSTAINABILITY IN THE REGIONS

Sustainability means most when it is applied at a regional scale.

Regions need to be proactive in their creation of a sustainable future. This is a significant challenge for regions in decline. Demographic, service and employment issues that many regions are experiencing are intimately related to economic and ecological change. The ability of regional communities to care for their natural environments is dependent on economic and social wellbeing.

R Armstrong

There is clearly a need to develop sustainability strategies which target rural/regional/remote communities, and which acknowledge and address the very real differences between metropolitan and non-metropolitan communities and between various non-metropolitan communities. It is also clear that there is a need to engage communities in any sustainability initiatives."

Western Australian Council of Social Services

In order to achieve a transition to sustainability and permit strategic planning for sustainability, it will be important to have a clear understanding of the state of the social, economic and cultural environments in regional Western Australia. The WAM, with its knowledge resource - environmental, historical and cultural - and its museums in key regions (Albany, Geraldton and Kalgoorlie), is well placed to play a key role in this process....It is intended that MuseumLink will facilitate the engagement of regional communities with important societal issues such as sustainability, and thus empower them to better participate in the dialogue about their future.

WA Museum

The sheer size of Western Australia means that there is enormous variation in environments, economies and communities. At the regional scale, however, the natural environment becomes more defined and the regional variation in land, water and vegetation less distinct. Regions are a useful scale to plan for environmental and natural resource management as seen in the emergence of regional natural resource management groups and groupings of local authorities such as the North Eastern Wheatbelt Regional Organisation of Councils and the Eastern Metropolitan Regional Council.

Regions are linked to state, national and especially global economic factors but are also influenced by the predominant industry within that region (such as mining, agriculture or tourism). The formation of Regional Development Commissions recognised the need to capitalise on the different economic strengths and opportunities within the regions. Also local communities exist within and relate to a region—it is part of their identity. Many government services are delivered and administered regionally because it is a manageable scale.

For all these reasons, the State Sustainability Strategy encourages the pursuit of sustainability at the regional scale through the development of Regional Sustainability Strategies. These strategies will provide an opportunity to apply the broad framework of the State Sustainability Strategy working with groups of local government as outlined above. Many other government processes can also feed into the strategies, for example the Regional Natural Resource Management Strategies being prepared by Regional Natural Resource Management Groups. However, the Regional Sustainability Strategies have a rationale of their own—to tell regional 'stories'. The strategies can produce a regional 'sense of place' document to facilitate a shared understanding of the past, and a shared vision of sustainability for each region's future.

Regional strategies can provide the key to how future development should proceed; an issue explored by the Review of the Project Development Approvals System. The Regional Sustainability Strategies can define the issues that require further action and the resources that are available. They can describe the human dimension to a region through telling the 'story' of an area as suggested by City Vision:

The cultural and social dimensions of the state, the people, the place and how they have interrelated with each other and their natural environment

are the source of many rich stories. Some of the most skilled and powerful story-tellers the state has to offer are its artists, writers, composers, filmmakers, scientists and historians. The real challenge is to determine how the skills of these story-tellers and the rich repository of stories which exist, can contribute more overtly to the shaping of Perth's identity and to its longer term planning and development.

City Vision, 'Can Perth Be More Creative?', 2002.

This story telling approach can apply in regions of the city and in rural areas. The strategies will be prepared through community-based processes and involve universities, industry, local government and regional bodies.

The 'story' of each region will include Indigenous stories and history, natural history and local history. Partnerships to achieve these perspectives are already being established, for example, Professor Bolton's team at Murdoch University is developing an Indigenous history of Western Australia, the Department of Conservation and Land Management has regional conservation studies, the WA Museum is creating an approach to regional 'belonging' and local history and the Department of Planning and Infrastructure and Regional Development Commissions have various strategies and regional plans. Box 11 describes two other projects which add valuable insight to the development of regional sustainability strategies.

BOX 11 FLAGSHIP PROGRAMS FOR SUSTAINABILITY

Regional Sustainability will be given a boost in Western Australia by two major projects: CSIRO's Healthy Country Program and the World Wildlife Fund's Eco Region South West.

Healthy Country will address many of the regional sustainability research and development issues that are critical to the future for the State. This important initiative will be closely tied to the implementation of the State Sustainability Strategy and is further outlined in *Research and development for sustainability*. Eco Region South West is an international project by the World Wildlife Fund which has as its focus the management of the region's globally significant biodiversity. The project will be community-based to provide 'bottom-up' solutions to the many issues facing the region with an emphasis on policy and a biodiversity vision.

Both of these flagship projects support the implementation of the State Sustainability Strategy and help provide substance to a Regional Sustainability Strategy for the South West.

Regional Sustainability Strategies will:

- provide an integrated application of the State Sustainability Strategy as it applies to the region
- build on the regional natural resource management strategies currently in preparation
- incorporate the social element through sense of place 'stories' incorporating aboriginal stories, the natural history and the local history
- link to broad, non-government organisation processes in the regions to pursue regional visions, for example, Eco Region South West and CSIRO Health Country
- Incorporate Indigenous regional sustainability strategies (see next section)
- provide a broad set of goals for the future from this process.

There are also important policy issues to be considered with local governments and Regional Development Commissions, for example on how best to determine boundaries for managing sustainability issues through Regional Councils of Local Governments. As part of the State-Local Government Partnership Agreement the government will provide encouragement and support for the establishment of Regional Councils of Local Governments particularly for sustainability issues including natural resource management, water supply and drainage, waste management, transport planning, economic and social planning.

The government will also investigate the potential role of Regional Development Commissions in supporting sustainability as part of the review of *Regional Development Commissions Act 1993*. The Regional Development Commissions will also be invited to support the development of Regional Sustainability Strategies and Regional Councils of Local Governments.

In short...

Vision

Each region has its 'story' that is constantly updated by the people who live there. This 'sense of place' resource enables all development project proponents to assess how they can contribute to the area as well as becoming a resource for tourism and education in the region.

Objectives

- Enable regional Western Australia to develop more sustainably.
- Apply the State Sustainability Strategy regionally.
- Develop a process that can enhance the long and short-term 'sense of place' in the regions of Western Australia.

Actions underway include

- The Department of Conservation and Land Management's biodiversity research and natural resource management studies, provide environmental perspective on regions.
- Regional natural resource management councils are preparing regional natural resource management plans.
- Regional development plans have economic, social and environmental components and Regional Development Commissions have elements of all three components in their activities.
- Regional cultural studies are beginning as part of cultural mapping for Indigenous perspectives.

Proposed actions

- 1.16 Develop Regional Sustainability Strategies. These strategies will provide an opportunity to apply the broad framework of the State Sustainability Strategy with Regional Councils and local government through Statements of Planning Policy and other statutory and non-statutory instruments, as described throughout the Strategy. These strategies will build on regional natural resource plans, regional development plans and Indigenous regional sustainability strategies. They will create regional 'sense of place' stories and future aspirations for regions. Regions will be defined across the state and within the city.
- 1.17 Take account of the role of Regional Development Commissions in supporting sustainability as part of the review of the *Regional Development Commissions Act 1993*. The Regional Development Commissions will also be invited to contribute to the development of Regional Sustainability Strategies.
- 1.18 Conduct Sustainable Business Investment tours to attract investment (including 'ethical' investment).

Indicators and Targets

- Number of Regional Sustainability Strategies completed.

Global opportunities

The regional 'sense of place' documents can give the social basis for development as well as the economic and environmental factors. This will be a significant achievement and generate international interest.

Further information

Armstrong, R 2002, *Developing a Strategy for Regional Sustainability in the State of Western Australia*, sustainability background paper, Draft State Sustainability Strategy CD-ROM, Department of the Premier and Cabinet, Perth.

Newman, L 2002, *Permaculture: Designing For A Sustainable Future*, sustainability case study, Department of the Premier and Cabinet, Perth, viewed 15 August 2002, <<http://www.sustainability.dpc.wa.gov.au/CaseStudies/permaculture/Permaculture.htm>>

Stanton-Hicks, E 2002, *Sustainability and the Iron Ore Industry in the Pilbara: A Regional Perspective*, sustainability case study, Department of the Premier and Cabinet, Perth, viewed 15 August 2002, <<http://www.sustainability.dpc.wa.gov.au/CaseStudies/pilbara/pilbara.htm>>

> INDIGENOUS COMMUNITIES AND SUSTAINABILITY

There is much to learn from the Indigenous people of Western Australia about sustainability. They have lived in this country for 500 generations with an integrated social, environmental and economic perspective. All social, economic and health indicators suggest high levels of deprivation.

The Sustainability of Indigenous Communities is fundamentally dependent on two factors. The first is that Indigenous Communities undertake to identify appropriate governance structures. These bodies will be ultimately responsible for development of the community and all of the process through which this will occur. If these bodies have credibility within the Indigenous Community, and are able to deal with the environment within which those communities operate, there will be resilience and cohesion necessary to implement changes for a preferred future.

The other factor is that the whole of Government undertakes to develop appropriate processes to work with Indigenous Communities. If this is undertaken in a way that respects the history, values and uniqueness of Indigenous Communities then the service required by the Indigenous Communities will deliver outcomes in line with those experienced by mainstream WA.

Department of Indigenous Affairs

Aboriginal people and their cultures are a unique and invaluable part of the State of Western Australia. They have continuing rights and responsibilities as the first peoples of Western Australia, including traditional ownership and connection to land and waters.

For Indigenous Western Australians, sustainability touches diverse areas including: Indigenous 'country' management, biodiversity conservation, protection of spiritual cultural heritage, and the essential preconditions of employment, housing, infrastructure, education, substance abuse, domestic violence, and safety and security and economic development. All of these issues interrelate and influence each other to affect Indigenous advancement.

Wealth creation in the general Western Australian community is fundamentally important in the process of addressing issues facing Aboriginal people. Certainty for industry's development proposals and security for Aboriginal peoples' cultural heritage and values must be equally respected within the overall development of the State.

Circumstances of Aboriginal people can differ significantly between regions and localities. Regional and local approaches are required to address issues that impact on Aboriginal communities, families and individuals. To achieve improvement, Government and Aboriginal people need to work together in partnership and share responsibilities. It is only through this process that sustainability can be achieved.

There are constraints to achieving sustainability including:

- divisions between communities leading to lack of resolution on many issues, lack of provision to change such patterns for Indigenous communities, and lack of capacity building and facilitation
- a lack of long term strategies, partnerships and program support for long-term change
- an inadequate service delivery model for Indigenous development
- an emphasis on commercial resource use in the policies and programs for the management of Aboriginal lands with limited consultation with Aboriginal people
- an inability to tap the groundswell movement within Western Australian Aboriginal communities to achieve commonly agreed outcomes e.g. to manage and maintain Indigenous 'Country', to maintain Aboriginal cultural heritage, provide employment, and protect and conserve Indigenous knowledge.

However, there are also promising opportunities for sustainability in Indigenous communities arising from:

- the signing of the Statement of Commitment to a New and Just Relationship between the Government of Western Australia and Aboriginal Western Australians

- the groundswell of the Indigenous community-driven movement towards managing Indigenous 'country' according to cultural groupings and on a regional 'country' basis
- the investment of Native Title Representative Bodies in community negotiation, governance, and representative structures
- the new and unique collaborative knowledge-creating work of environmentalists, ecologists, and Indigenous traditional owners that result from actual Indigenous community interaction with Indigenous lands
- the growth in mining company initiatives for training and employment of Indigenous people from the regions.

In accordance with the Statement of Commitment to a New and Just Relationship between the Government of Western Australia and Aboriginal Western Australians, the Government will work with the Aboriginal and Torres Strait Islander Commission to:

- Agree on a set of principles and a process for the negotiation of a State-wide framework that can facilitate negotiated agreements at the local and regional level.
- Negotiate a new approach in Aboriginal affairs policy and administration in Western Australia based on regional agreements.
- Enhance negotiated outcomes that protect and respect the inherent rights of Aboriginal people and to significantly improve the health, education, living standards and wealth of Aboriginal people.

Steve Kinnane's background paper *Beyond The Boundaries – Exploring Indigenous Sustainability Issues Within a Regional Focus* proposes that processes for strategic policy development be anchored in community-based programs.

The government will establish Indigenous Regional Sustainability Strategies to promote and achieve sustainability for Aboriginal communities. The process to establish these could include:

- In the short-term (over the next year) instigate a pilot project for a state-funded Aboriginal Country Management Program building upon existing Aboriginal land and sea management programs, such as in the Kimberley region.
- In the medium-term (two to three years) ensure that these programs are established through negotiated partnership agreements (Indigenous Regional Sustainability Strategies) between the state and Indigenous groups, and expand the program to other regions throughout Western Australia.
- In the longer-term (within five years, ongoing) use these programs as the basis for the development of Indigenous Regional Sustainability Strategies contributing to regional agreements that are part of the Statement of Commitment.

By investing in existing structures and initiatives, the government will be providing employment for Aboriginal rangers and supporting the development of a network of Aboriginal land and water management specialists with the capacity to drive the development of broader strategies. Western Australia will be a national leader in innovative and sustainable solutions to Aboriginal community development.

As discussed in *Regional sustainability*, it is intended to include Aboriginal stories in the 'sense of place' document to be created for each region (in the country and city). Indigenous regional sustainability can begin around the Aboriginal stories and history that are being developed as part of the Regional Sustainability Strategies, other Aboriginal arts and cultural tourism projects, and the Aboriginal history project being conducted under the supervision of Professor Geoffrey Bolton, Murdoch University. Indigenous Regional Sustainability Strategies will feed directly into the development of Regional Sustainability Strategies as outlined in the previous section.

There are other important strategies for Indigenous sustainability. The fundamentals of health, housing, safety, stability and employment are still sadly lacking for many Indigenous people. Commitments to overcoming the

underlying issues here need to be built into many government programs with the goal of improving comparable life expectancy rates as for other Western Australians. This will require partnerships. These partnerships will be effective and sustainable where they are:

- based on integrated planning, shared responsibility and accountability of outcomes
- formalised through agreement
- based on realistic and measurable outcomes supported by agreed benchmarks and targets
- clear in terms of the roles, responsibilities and liabilities of the parties
- inclusive of an agreed accountability process to monitor negotiations and outcomes from agreements.

Underlying so many of the social problems of Indigenous people is the inability to participate in meaningful employment due to a lack of education and training. Recent trends in the mining industry have demonstrated how such issues can be overcome if appropriate training is provided (see *Further information* below).

The Pilbara iron ore companies, Rio Tinto and BHP now have a goal of 12% Aboriginal employment in their companies and are well on the way to achieving this. Argyle has a goal of 15% Indigenous employment in its Kimberley operations. Other companies involved in regional development will need to address such targets.

This is part of the social charter of sustainability assessment. Companies would be encouraged as part of sustainability assessment to show how they will contribute to training Indigenous people.

In short...

Vision

Reconciliation and Native Title lead to Aboriginal organisations with sustainable employment, while retaining their communities' cultural focus. Indigenous health indicators are the same as the rest of the population.

Objectives

- Native Title is recognised, protected and progressively used to help create Indigenous community sustainability.
- Resources are managed in a sustainable manner in concurrence with regional Aboriginal cultural understandings of sustainable resource management and development.
- Indigenous knowledge is incorporated in land management activities on all public and Indigenous lands towards building skills in Indigenous communities and educating mainstream environmental and land management agencies and field workers.
- Capacity building is associated with and implemented to support the Regional Indigenous Sustainability Strategies.
- Future developments take account of regional Indigenous cultural diversity and governance.

Actions underway include

- The signing of the Statement of Commitment to a New and Just Relationship with Aboriginal people between the Government of Western Australia and Aboriginal Western Australians. This provides the framework to create regional negotiated agreements to improved governance, capacity building and economic independence.
- The Department of Indigenous Affairs supports landcare grants to Indigenous people and there are various programs to support the preservation of Indigenous culture.

In short cont'd...

- The Aboriginal and Torres Strait Islander Commission is supporting the development of Comprehensive Regional Agreements and Regional Planning processes.
- The Department of Fisheries is working with the Aboriginal community to develop fishing strategies to ensure recognition of Aboriginal fishing interests and aspirations within the existing sustainable fisheries management framework.
- The Department of Conservation and Land Management is implementing joint management strategies for conservation lands.
- The Government has committed to employ more Aboriginal people in the public sector particularly in senior levels and in decision-making roles.

Proposed actions

- 1.19 Develop Indigenous Regional Sustainability Strategies that will feed into the Regional Sustainability Strategies (outlined above) and regional agreements as set out in the Statement of Commitment to a New and Just Relationship jointly agreed by the Western Australian Government and the Aboriginal and Torres Strait Islander Commission.
- 1.20 Pilot an Indigenous Country Management Program (also known as community ranger schemes) to enhance long-term employment for Indigenous people in their regions. Trial programs will be undertaken using the Department of Conservation and Land Management and functioning Aboriginal Land and Sea Management programs.
- 1.21 Assist Indigenous communities to establish keeping places and interpretive centres to preserve and showcase Indigenous culture and support the intellectual property rights of Indigenous communities and artists.
- 1.22 Expand Indigenous Cross-Cultural Awareness Training within the Western Australian Public Sector for all employees who have involvement with Indigenous people or are involved in Indigenous policy.
- 1.23 Work with Indigenous and industry stakeholders to promote targets for Indigenous employment in major new resource development projects.
- 1.24 Continue to work to enhance housing and health programs for Indigenous Western Australians.

Indicators and targets

- Proportion of Indigenous people employed in environmental management and rehabilitation of Indigenous country as well as management of public reserves and mining rehabilitation.
- Completion of Indigenous Regional Sustainability Strategies to manage cultural and natural resources across Western Australia.
- Revitalisation of Regional Indigenous governance structures leading to reduced cycles of dependency and disadvantage.

Global opportunities

Western Australia is well placed to show global leadership on Indigenous sustainability through a practical program of initiatives, strategies and agreements. This can be a real contribution to global sustainability and become the basis for future employment in the global industry.

In short cont'd...

Further information

Kinnane, S 2002, *Beyond The Boundaries: Exploring Indigenous Sustainability Issues*, sustainability background paper, Draft State Sustainability Strategy CD-ROM, Department of the Premier and Cabinet, Perth.

Miles, N 2002, *Placer Dome, Mt Keith: Gold and Indigenous Development*, sustainability case study, Department of the Premier and Cabinet, Perth, viewed 15 August 2002, <<http://www.sustainability.dpc.wa.gov.au/CaseStudies/grannysmith/grannysmith.htm>>

Ruane, S 2002, *Indigenous Tourism: Sustainability Issues and Opportunities*, sustainability case study, Department of the Premier and Cabinet, Perth, viewed 15 August 2002, <<http://www.sustainability.dpc.wa.gov.au/CaseStudies/indigenoustourism/indigenoustourism.htm>>

Stanton-Hicks, E & Newman, P 2002, *Argyle: 'Creating a Future'*, sustainability case study, Department of the Premier and Cabinet, Perth, viewed 15 August 2002, <<http://www.sustainability.dpc.wa.gov.au/CaseStudies/Argyle/Argyle.htm>>

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Suntrekking PV panels used to power reverse osmosis desalination systems. This technology was developed for remote Aboriginal settlements to provide clean water from solar energy. The technology is now being upscaled for use in cities.

Source: Environmental Technology Centre, Murdoch University

> RESEARCH AND DEVELOPMENT FOR SUSTAINABILITY

Sustainability requires innovation in the economy. Government leadership is required to ensure research and development assists the sustainability agenda.

Most modern economic theories recognise the importance of innovation, technology and new ideas in generating sustained economic growth. Innovation, technology and new ideas are also crucial to achieving our social and environmental goals and these goals would be best achieved through a vibrant research and development community.

Chamber of Commerce and Industry

Many of the State's sustainability challenges ... require the development of new methodologies or technologies. The State's universities are an under-utilised resource in this regard. A closer alignment between the research activities (particularly in the natural and social sciences/engineering) and the needs of community to develop more sustainable practices would be a major contribution to the State's sustainability.

Western Australian Local Government Association

Many submissions called for more research and development for sustainability in Western Australia.

Government must work in partnership with other stakeholders to conduct research and development. In 1998/99 the Western Australian Government conducted research and development worth \$92 million. During the same year industry undertook research and development worth \$434 million, universities \$225 million and Commonwealth government agencies \$64 million.

The Office of Science and Innovation was established on 1 July 2002 to provide support for the science community in Western Australia. The Centres of Excellence in Science and Innovation program is administered through the Office and provides funding support for commercially oriented research. Generally, centres are established as a partnership between universities, CSIRO, the private sector and/or public sector agencies.

The Office of Science and Innovation currently provides almost \$7 million, or 30% of current program commitments, to 10 centres which have a recognised focus on sustainability issues.

These are:

- The Centre for Management of Arid Environments
- Centre for Organic Waste Management
- Cooperative Research Centre for Biological Control of Pest Animals
- Centre for Marine Science and Technology
- Centre for Water Research
- WA Centre of Excellence in Industrial Optimisation
- Centre of Excellence in Natural Resource Management
- International Environmental Technology Centre
- Centre for Sustainable Mine Lakes
- Cooperative Research Centre in Dry Land Salinity

Further support is envisaged with seven proposed Cooperative Research Centres (CRCs) currently under consideration:

- CRC in Application of Earth Observations
- CRC in Sustainable Tourism
- CRC in Greenhouse Gas Technologies
- CRC in Environmental Biotechnology
- CRC in Renewable Energy
- CRC in Coastal Zone, Estuary and Waterway Management
- CRC in Sustainable Minerals and Metals Processing.

The Centre of Excellence in Cleaner Production at Curtin University is funded through the Western Australian Government's Waste Management and Recycling Fund. The government is also assisting in the establishment of a new centre called the Global Centre for Sustainability. This centre is a partnership between the five Universities, CSIRO, the State Government and private industry. The aim of the centre is to develop partnerships around major international funding opportunities from the World Bank, AusAID and the Asian Development Bank. These large projects require innovation in sustainability that is often very evident in Western Australia, but this state rarely is considered for such projects. The Global Centre for Sustainability will facilitate the necessary support to seek out and form the government-university-industry partnerships so often needed to compete globally.

BOX 12 BIODIVERSITY RESEARCH IN WESTERN AUSTRALIA

The Department of Conservation and Land Management (including the Herbarium) has a \$10 million budget for 180 environmental research projects, primarily based on describing and documenting the state's biological diversity and how it can be conserved.

In Australia, some 6000 species are under threat and 40% of these are in Western Australia. Species recovery has occurred for three threatened mammals as a result of research undertaken by the Department of Conservation and Land Management. The Botanic Parks and Gardens Authority has a budget of \$0.8 million for similar biodiversity work. Kings Park discovered the effect of smoke on the germination of native plant seed which has enabled the horticulture and landcare industries to access 20 per cent of the Australian biota previously considered unavailable for propagation. The Western Australian Museum also research bio- and geodiversity and recently won the Golden Gecko Award for its research and development with Woodside on the Dampier Archipelago. The Zoo conducts research on global biodiversity issues such as orangutans as well as some native species. The biodiversity of the marine environment is only just beginning to be researched in comparison with other parts of the environment.

The Western Australian Government has undertaken a considerable amount of research and development in sustainability (see Box 12 and 13). There is a need to prioritise government research and development in sustainability and to encourage partnerships with other research and development groups in government, universities, CSIRO and industry. It is proposed that a Science Council–CSIRO forum on sustainability science be held with all relevant research and development groups to help develop priorities and partnerships, especially in the light of CSIRO's Healthy Country initiative (see Box 14).

Sustainability science is emerging as a new discipline that integrates perspectives on large scale and regional scale sustainability issues, allowing scenarios to be drawn up and modelled.

BOX 13 NATURAL RESOURCE MANAGEMENT RESEARCH

The Water and Rivers Commission allocates between \$1 and \$3 million per year to jointly funded projects water management research projects. These projects include the development of a computer model to understand the extent and dynamics of all the ground water aquifers in the Perth basin and how they are linked. This will enable government to decide how to optimise the use of the aquifers and minimise environmental impact. This million-dollar project is attracting world attention.

The Water Corporation spends \$4 million on research and development a year and its MIEX plant, opened by the Premier in 2002, is a world first water purification plant based on joint research with CSIRO that magnetically removes organic pollutants from water.

The former Department of Environmental Protection allocated \$5 million to research that allowed the establishment of clear environmental criteria for managing water in Cockburn Sound enabled Pilbara air quality studies to reduce dust impacts as well as air toxin research on personal exposure and health monitoring and the public health aspects of air quality.

The Department of Agriculture's research and development budget is the biggest of the State's budget of \$48 million per year. This reflects its value to the Western Australian economy of \$4.6 billion per year. Research is conducted on new agri-industries, ecologically sustainable agricultural practices and protecting the resource base. The Department of Agriculture allocates around \$11 million per year to salinity monitoring and management studies including rapid catchment appraisal work based on satellite imagery and data from 7000 bores linked to a database. The Department of Agriculture is also doing research on nutrient management in the Peel Harvey, Wilson Inlet and Albany Harbours, including groundbreaking work with local community involvement in Denmark. An innovative project to remove phosphorus from the Swan Canning system through 'Phoslock' technology has been developed jointly with UWA and CSIRO.

BOX 13 NATURAL RESOURCE MANAGEMENT RESEARCH CONT'D

The Department of Conservation and Land Management has a number of biodiversity recovery catchments that are threatened by salinity, to ensure all is done to prevent loss of species. Lake Toolibin is being pumped to enable plant life to survive that would have died from saline invasion.

Forest Production Commission spends \$3.5 million per year on research into how salt affected land can be remediated through reforestation. With the Department of Conservation and Land Management they are investigating how oil mallees could help revitalise rural land and local communities through new industries and power generation.

The Department of Fisheries allocates \$10 million to research and development to ensure the sustainability of the state's fisheries.

In a state as large as Western Australia it is important to have good data on the land and its resource base. Western Australia has internationally recognised research and development that is constantly tapping the new technology of satellite imagery and ground-truthing with detailed surveys. The Geological Survey maps geological resources. The Department of Land Administration and the Leeuwin Centre map all land surface characteristics using different parts of the light spectrum to enable land management to be pursued. The proposed Cooperative Research Centre in Earth Observations will make more productive use of these data and make it more accessible to decision makers.

BOX 14 CSIRO 'HEALTHY COUNTRY' PROJECT

'Healthy Country' is one of CSIRO's seven 'Big Hairy Audacious Goals' which is redefining how CSIRO will do a significant proportion of its research.

One of four focus regions for this project will be the South West of Western Australia with biodiversity, land degradation and water questions paramount. The research it will undertake can provide answers to many of the deep questions that face us by focussing on key areas of knowledge and innovation. The priority of this research will be determined through processes involving scientists, industry, the community and government.

They will be seeking to locate the significant research that can really make a difference, unlocking solutions to broad scale systems of land and water ecosystems as well as their human and social context. The State Sustainability Strategy recommendations and implementation will be closely tied into this project.

In short...

Vision

Western Australia is recognised around the world as a global centre for research and development on sustainability that is not only innovative globally but is practical and relevant to solving Western Australia's problems.

Objectives

- Initiate research and development targeting sustainable outcomes for Western Australia's land, water, air and other natural resources.
- Make Western Australian industry and resource use more efficient.
- Facilitate Western Australia's involvement in the global sustainability economy.
- Create long-term jobs for Western Australians.

Actions underway include

- Many state government agencies undertake research on sustainability issues.
- The Western Australian Government provides funding to support Centres of Excellence through the Office of Science and Innovation and other research organisations.
- The Institute for Regional Development has been established at the University of Western Australia.
- Edith Cowan University in Bunbury has established a Professorial Chair in regional development.

In short cont'd...

Proposed actions

- 1.25 Assist in the development of the Global Centre for Sustainability as a partnership for sustainability research and development in Western Australia. The Global Centre for Sustainability would facilitate partnerships between the 5 universities, TAFE, the CSIRO, the State Government and industry on globally significant sustainability projects.
- 1.26 Continue to support bids for Commonwealth funding for CRC's and other research funding programs related to sustainability.
- 1.27 Through the Science Council, Office of Science and Innovation and with all relevant research and development groups (including CSIRO), determine research priorities and partnerships in sustainability research and development, including social science aspects.
- 1.28 Endorse the CSIRO's commitment to implement the Healthy Country initiative in the South West of Western Australia.

Targets and indicators

- Implementation of relevant products, services and technologies.
- Research and development on sustainability issues through or partnered with the State Government.

Global opportunities

The global market for environmental technology has been estimated to be worth \$1 trillion dollars and funding on global aid is similarly enormous. The strategies outlined above are designed to enable Western Australia to access these markets as well as solving many of the sustainability challenges of our own State.

Further Information

The Centre of Excellence in Cleaner Production, Curtin University
<<http://cleanerproduction.curtin.edu.au/>>

Environmental Technology Centre, Murdoch University
<<http://wwwies.murdoch.edu.au/etc/>>

Premiers Science Council <<http://www.sciencecouncil.dpc.wa.gov.au/>>

Centres of Excellence in Science and Innovation Program
<<http://www.dpc.wa.gov.au>>

> SUSTAINABILITY INFORMATION ONLINE

Information is critical to sustainability but it needs to be integrated and accessible.

Government must support community access to the latest research, data and technology to enable improved land management.

Environmental Alliance

To tell how we are tracking on the sustainability agenda in the management of land, water, air and settlements it is essential to have a mechanism that allows regular periodic reporting of progress. Available systems provide an incomplete picture.

For example, the Australian Bureau of Statistics regularly reports economic data including the cost of living, inflation, unemployment etc, at the national and state scale, yet reports on occasional social measures like crime rates and population changes by state. Periodic State of the Environment reporting at state, as well as regional and local government levels, provides information on the environment and natural resource management but this is rarely as available as economic and social data.

For sustainability to be effective we need to harness the data sources for all three elements into a more integrated information system that is readily available to decision makers and the public. This will enhance the power of community groups and agencies working on sustainability issues.

At the national level an approach has been made through such work as the National Land and Water Resources Audit that has brought together social, economic and environmental data in some cases, for particular areas. However it is important to develop a state system for monitoring, data analysis and reporting on sustainability.

Sustainability cannot be delivered without accurate, up-to-date and reliable land and geographic information. Geographic information helps us to understand and form effective strategies to address critical sustainability issues such as salinity, forest management, native title, land use conflict and infrastructure planning. Easy access to information is crucial to the success of the strategy.

Co-ordination of the development, management and access to land and geographic information is critical to the success of the Sustainability Strategy. The Western Australian Land Information System is a key avenue through which policies relating to the provision of land and geographic information can foster the goals of the State Sustainability Strategy. Government will support coordinated approaches to the continued development of suitable land and geographical information.

The WA Atlas is an interactive mapping service managed by the Western Australian Land Information System and provides free access to reliable information to assist government, community and industry, to support improved environmental planning and decision making. The WA Atlas enables users to overlay different geographic datasets, including coastal, infrastructure, topographic and environmental themes, to meet their differing needs.

The Government will establish a Sustainability Online web site which will be an atlas of Western Australia resources combining and integrating economic, environmental and social information. Sustainability Online will be designed to make information easily accessible to government, community and industry. This system will service many users at a range of scales and provide the most up to date available.

This site will build on the work of the Western Australian Land Information System, the Department of Environmental Protection, the Australian Bureau of Statistics, the National Land and Water Resources Audit and the Department of the Local Government and Regional Development.

This site will be a support tool for Government to provide the public with an understanding of the state of the environment and sustainability issues in general. Access to a range of environmental data will result in easier and better decision making on state development projects. Proponents are frequently required to create their own environmental information, as they are unable to locate or obtain this information from Government. This leads to increased costs and data is produced that may not be using the appropriate standards.

Initially it will be the major source of up-to-date environmental information. However, in time it will include integrated social and economic data sources that support improved natural resource management, as new indicators for progress towards sustainability emerge. It will provide a portal to already functioning web sites on sustainability such as the Department of the Premier and Cabinet's sustainability web site and the Sustainable Energy Development Office web site.

Over time the site will include locally and regionally monitored community data where this is important to the sustainability of that local or regional area.

The system will, for the first time, incorporate a range of natural resource management spatial datasets including those created through:

- Land Monitor
- National Land and Water Resource Audit
- NW Shelf programmes
- Salinity Action Plan
- State of Environment Report
- Metropolitan Air Quality
- Greenhouse
- Sustainability projects
- Regional and catchment planning
- Biodiversity data from CALM / Museum / Botanic Gardens Authority;
- Water quality data.

The site will contain advice and policies generated by the Environmental Protection Authority, spatial data with mapping capabilities, metadata search and input tools, scientific reports, and other environmental statements and reports. Integration of the data at the regional scale will be attempted in the next few years as part of the development of Regional Sustainability Strategies.

In short...

Vision

An internet one-stop-shop provides easy access for anyone wanting sustainability information from government.

Objectives

Improve access to sustainability information to increase the capacity for all stakeholders to make informed decisions about environmental and sustainability issues.

Actions underway include

- The Land Monitor Project provides fundamental datasets for environmental monitoring and assessment.
- The Departments for Planning and Infrastructure and Environment, Water and Catchment Protection have established an inventory within the online Western Australian Land Information System 'Interrogator' to provide a central database for storing government and non-government information (metadata) on Western Australia's natural resource datasets.
- The Department of Fisheries publishes an annual State of the Fisheries report which reports in detail on the activities and impacts of the commercial and recreational fisheries and aquaculture sectors in Western Australia.
- Websites with considerable public information are available in most government agencies, e.g. Sustainable Energy Development Office, Water Corporation.

Proposed actions

- 1.29 Work to establish Sustainability Online to deliver the government's election commitment to establish a 'one-stop-shop' for sustainability information. Sustainability Online will be accessible to the public through the internet and will list and integrate environmental, economic and social data from a range of sources including community data collected by local groups, schools and universities.

Indicators and targets

- The extent to which information used for guiding sustainability assessments and policy is accessible.
- The extent to which information systems can be used for guiding sustainability assessments and policy.

Global opportunities

The problem of integrating data and making it accessible to the public is a universal issue. If Western Australia can adequately address this issue it will be of global significance. The involvement of the staff of the Department of Land Administration in global development projects has shown how our land data systems can be of value in major aid projects.

Further information

Department of Environmental Protection
<<http://www.environ.wa.gov.au/>>

Sustainable Energy Development Office
<<http://www1.sedo.energy.wa.gov.au/>>

Water and Rivers Commission
<<http://www.wrc.wa.gov.au/>>

Western Australian Atlas
<http://www.walis.wa.gov.au/content/wa_atlas_popup.html>

> RECOGNISING SUSTAINABILITY EXCELLENCE

Sustainability needs leadership from individuals or groups from across the whole community. When this occurs such leadership should be recognised and celebrated.

Innovation that leads to less resource use, cleaner production and help meet sustainability targets (eg. Greenhouse gas emissions) must be supported and rewarded.

Swan Catchment Council

Sustainability awards and recognition could occur.

WA No-Tillage Farmers Association

To this end the Western Australian Government will establish an annual Sustainability Award that will recognise major achievement in sustainability in Western Australia. The award will be for innovation in sustainability on a global scale and will demonstrate core sustainability principles.

In short...

Vision

Winning a Sustainability Award becomes widely accepted as the form of recognition for excellence in sustainability in Western Australia.

Objective

Recognise and celebrate leadership in sustainability in Western Australia.

Actions underway include

- The Premier's Awards For Excellence In Public Sector Management recognise achievements across the triple bottom line in each of the existing categories.
- The Great Southern Development Commission has instituted a regional award for sustainability.
- The Minister for Environment and Heritage has instituted the Environment Awards.

Proposed action

- 1.30 The Government will create an Annual Sustainability Award to recognise significant achievement in sustainability.