



Department of the Environment and Heritage

**COMMONWEALTH DEPARTMENT OF THE ENVIRONMENT
AND HERITAGE**

Submission to the

***House of Representatives Standing Committee on Primary Industries and
Regional Services Inquiry into Infrastructure and the Development of
Australia's Regional Areas***

Our Vision

*A natural and cultural environment
valued, enhanced and protected
in harmony with the nation's social and economic goals*

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EXECUTIVE SUMMARY

Infrastructure and the environment play an important and complementary role in sustainable regional development. This development requires a long-term regional management framework that integrates economic, environmental and social considerations, involves participation by key stakeholders, and considers a range of policy instruments, including voluntary and co-operative approaches and economic instruments.

Currently regional decision-making bodies often operate in isolation from each other and do not necessarily encourage community participation. Local Agenda 21 is one important initiative that can assist in achieving such a participative management framework, through strong partnerships between Local Government and the community.

Water and climate change policies and programs illustrate the important role that integrated decision-making and local participation play in facilitating regional development. These case studies also illustrate the role of the Commonwealth in promoting regional development, and provide important models.

The Submission also shows that building environmental credentials and strengthening environment management industries can generate significant economic opportunities for regional centres.

1. INTRODUCTION

In the context of the environmental issues associated with regional infrastructure and in the broader context of integrating these environmental considerations with economic and social factors, the Commonwealth Department of the Environment and Heritage (the Department) has a number of responsibilities.

The Department has the lead responsibility in developing and implementing a number of nationally agreed policies and strategies relevant to the Inquiry, including the National Strategy for Ecologically Sustainable Development, and the National Greenhouse Strategy.

The Department administers a number of Commonwealth Acts relevant to the Inquiry including the *Environment Protection (Impact of Proposals) Act 1974*. New Commonwealth environmental legislation is currently under consideration by the Senate.

The Department also administers a number of national programs that specifically assist the ecologically sustainable development of regional areas. The major focus of the Commonwealth Government's regional environmental strategy is the *Natural Heritage Trust*. The Trust plays a major role in developing sustainable regional natural resource management in the key areas of land, vegetation, rivers, coasts and marine, and biodiversity, and provides funding for related environmental activities.

The following Submission covers:

- a) key factors which influence sustainable local and regional development including Local Agenda 21 and streamlined project approvals;
- b) key environment programs relevant to the regions;
- c) case studies on water and climate change that illustrate the importance of regional participative management frameworks which integrate economic, social and environmental concerns; and
- d) industry opportunities relating to the environment.

2. SUSTAINABLE LOCAL AND REGIONAL DEVELOPMENT

Regional areas depend on sustainable natural resource management. Inappropriately managed infrastructure projects can lead to natural resource and environmental degradation which can be difficult and expensive to repair. For example, the biggest land rehabilitation exercise in Australia is currently being conducted in the Murray-Darling Basin to combat waterlogging and salinisation. The need to invest large sums of money in rehabilitation programs

results in part from poorly managed irrigation systems and subsidised water pricing in the past.

Key factors influencing sustainable local and regional development are:

- integrated decision making; and
- coordinated and participative local and regional management frameworks.

These factors can be encouraged by governments through the use of a blend of policy instruments, including regulation, economic instruments and voluntary and cooperative approaches. Examples of voluntary and cooperative approaches include land management projects funded by the National Heritage Trust and the Cities for Climate Protection initiative. Examples of the use of economic instruments include the provision of water entitlements and trading envisaged under the Council of Australian Governments' Water Reform Framework. These approaches are illustrated in more detail in case studies on water and climate change.

There are currently many regional decision-making bodies performing a wide range of functions including economic development, water catchment, waste management, and social and cultural development. These bodies, however, often operate in isolation from each other and do not encourage community participation in their operations.

A coordinated participative framework is needed to promote sustainable development. Such a framework would:

- ensure effective communication among local and regional bodies and other regional stakeholders such as industry and the community;
- develop regional sustainable development strategies;
- gather adequate resources from member councils, and other regional stakeholders; and
- achieve a greater coordination between relevant institutions.

2.1 Improving Regional Decision Making – The Role of Local Agenda 21

Local Agenda 21 is one important initiative to achieve integrated local and regional management, through creating a strong partnership between Local Government and the community. It is guided by the preparation of a long term strategic action plan that integrates existing policies and programs and an agreed future direction. Local Agenda 21 is an established process with increasing national and international significance (see [Appendix A](#)). It includes the use of tools such as environmental management systems and local environmental accounting that encourage infrastructure goods and services to

be priced to reflect their full economic, social and environmental costs. In 1997, the Australian government committed itself to double the number of councils implementing Local Agenda 21 by 2003.

The Local Agenda 21 process is not just a local initiative. It is increasingly being used to coordinate regional sustainability initiatives where issues, such as water management, transportation and employment, cross local jurisdictional boundaries. Where there is sufficient commitment and cooperation, neighbouring councils and regional organisations can produce a regional Local Agenda 21.

For example, the *Northern Rivers – Framework for a Sustainable Future*, is the first step towards coordinated and integrated planning for the Northern Rivers Region in New South Wales. The aim of the strategy is to sustainably manage land use, natural resources, economic development and infrastructure. It is the result of considerable cooperation between the Northern Rivers Regional Organisation of Councils, the Northern Rivers Regional Economic Development Organisation, and State and Commonwealth governments. The strategy draws upon active community participation.

2.1.1 Partnerships Models

There are many examples of partnerships in the regional management of infrastructure needs. The Commonwealth Government's Natural Heritage Trust (see below) provides a prominent example of how the Commonwealth Government can promote an ecologically sustainable approach to development through partnerships with Local Government.

2.1.2 Measuring and Reporting

A regional framework of ecologically sustainable development also needs to be able to measure the relationship between infrastructure and the environment and their impact on development. This involves physical and financial measuring and reporting tools such as local sustainability indicators and environmental accounting. The Commonwealth sponsored an international conference in April 1999 on the Gold Coast on the application of environmental accounting by Local Governments. Both tools help measure sustainable development performance and facilitate information sharing between councils.

2.2 The Role of Commonwealth Environment Programs in Promoting Sustainable Regional Development

Commonwealth Government environmental policies and programs help to promote a sustainable resource management framework in which infrastructure decisions can be made. They provide important models for regional management which promote both resource certainty and ecologically sustainable management.

2.2.1 Natural Heritage Trust

The Natural Heritage Trust funds a significant amount of regional activity across Australia. Funding of \$1.499 billion has been earmarked by the Commonwealth Government. In excess of 3,000 funded projects involving thousands of community volunteers and landholders are now under way, funded through the various programs under the Natural Heritage Trust (for example the Bushcare program below).

Most funding from the Natural Heritage Trust for regional areas is channelled through the One-Stop-Shop process. This provides for regional communities to play an active role in assessing regional priorities. Proponent applications are assessed by Regional Assessment Panels which have substantial community representation. In developing project applications proponents are expected to integrate their projects with regional and Local Government plans.

With respect to economic sustainability and infrastructure development, the key issue addressed by the Trust is the integrated nature of agricultural sustainability and biodiversity conservation. Many of the following examples, programs and case studies are funded through the Natural Heritage Trust.

2.2.2 Bushcare Program

The establishment of the Bushcare Program, predominantly funded through the Natural Heritage Trust, is enabling a dramatic expansion on previous work to increase the extent and quality of native vegetation in regional Australia up to 2000/01.

During 1997/98 and 1998/99 about \$58 million of funds have been committed to regional areas through the One-Stop-Shop process, with about a remaining \$30 million contributing directly to that work by developing institutional and community frameworks and supporting the long-term sustainable management of natural resources.

Local community group involvement is at the core of the Program, with these groups receiving about three quarters of the One-Stop-Shop funds for about 1500 projects, most of which are located in regional Australia. There has been a dramatic expansion of the extension network to assist these groups with an injection of about 150 facilitators and coordinators - funded through Bushcare - into regional Australia.

2.2.3 Regional Forests Agreements

Regional Forest Agreements (RFAs) provide a 20 year framework for the future management and conservation of Australia's forests. In doing so they provide the basis for an internationally competitive and ecologically sustainable forest products industry. Key provisions of these agreements will be additions to the

reserve system for each RFA region and improvements to forest management systems to deliver Ecologically Sustainable Forest Management.

RFAs promote environmental conservation through the establishment of a comprehensive, adequate and representative (CAR) reserve system. The agreements provide resource certainty and enable the development of an internationally competitive forest industry while promoting the ecologically sustainable management of the whole forest estate. The Commonwealth has provided funding for a Forest Industry Structural Adjustment Package in recognition of the structural adjustments entailed in the establishment of the CAR reserve system.

RFAs have been completed most recently for the South-West Forest region of Western Australia. In addition to this, the Commonwealth has signed two RFAs with Victoria for the East Gippsland and Central Highland regions, and another covering Tasmania. The remaining agreements are due by the end of the year.

2.2.4 Australia's Oceans Policy

In December 1998, the Government launched Australia's Oceans Policy - the first comprehensive national plan to protect and manage Australia's oceans. At the core of the Oceans Policy is the Commonwealth Government's commitment to move to integrated and ecosystem-based planning and management approaches through the development of Regional Marine Plans, based on large marine ecosystems. The first plan to be prepared will be for the south-eastern region of Australia's marine jurisdiction which broadly includes the waters off southern New South, Victoria, Tasmania and eastern South Australia.

It is intended that the Policy will lead to better coordination across all spheres of government, and partnerships between government, the private sector and the scientific and wider communities and in so doing provide long-term security to marine based industries.

2.3 Streamlining Environment Processes

2.3.1 Environmental Approvals

It is important that there exists an effective mechanism that ensures that the full range of necessary Commonwealth decisions for any major investment proposal are handled within an overall project management framework.

The Commonwealth is currently reforming its key environmental legislation to help address the perception of environmental regulation as being an impediment. The resulting Environment Protection and Biodiversity Conservation Bill 1998 will contribute to a more efficient and timely project approvals process that will ensure that the Commonwealth is only involved in assessing projects of national environmental significance. The Bill in particular

will focus on matters such as World Heritage, Ramsar wetlands of international importance, listed threatened species and communities, listed migratory species, protection of the environment from nuclear activities, and the marine environment.

The Bill implements a modern environmental assessment and approval process, which includes:

- Reliance on direct environmental triggers based on the six matters of national environmental significance. This will substantially increase the certainty and efficiency of Commonwealth involvement in the assessment and approval of projects having a significant impact on matters of national environmental significance. It will also mean that the Commonwealth will not be involved in matters that are of only local or State significance;
- Commonwealth involvement will be triggered early, which will provide certainty for industry and interest groups, and greater efficiency in the assessment and approval process. In addition, the proponent may trigger the assessment and approval process, avoiding the current delays under existing legislation;
- Tight statutory timeframes are now included at all stages in the assessment and approvals process to ensure timely decision-making;
- The Minister must take the principles of ecologically sustainable development into account when making decisions. The promotion of ecologically sustainable development is one of the objects of the Bill and the ecologically sustainable development principles are an integral part of the Bill;
- Duplication between the Commonwealth and the States can be reduced through bilateral agreements, which can be employed by the Commonwealth to accredit State and Territory assessments and/or approvals; and
- Strategic assessment can be used to assess the likely overall impact of a policy, plan or program. This will allow early assessment of the cumulative impacts of individual actions taken under the policy, plan or program. It also makes a more streamlined assessment of individual actions possible.

2.3.2 Information Infrastructure

Environmental assessments and approvals for major projects can also be streamlined by providing a publicly accessible, integrated information base to assist planning as well as clarifying approvals processes, responsibilities and requirements; and by improving the environmental database available to support decision-making. Information infrastructure, based on existing

Internet/World Wide Web technologies, can provide a 'one-stop-shop' to underpin these processes.

The Department's Environmental Resources Information Network (ERIN) is developing such a system. However, the quantity and quality of regional environmental information and the ability to identify impacts of proposed activities remain significant challenges. This information infrastructure will ensure that regional Australia, through electronic networks, has ready access to environmental and resource information.

3. CASE STUDIES

The following case studies on water and climate change infrastructure illustrate the important role that integrated decision-making and local and regional participation play in facilitating regional infrastructure development. They also illustrate how, with an awareness of such goals, careful targeting of government environmental policies and programs, and the strategic use of policy instruments, can facilitate such development.

3.1 Water Infrastructure

3.1.1 Water Reform Framework

Settlement and economic growth in Australia has relied upon large scale damming, diversion, pumping and drainage of surface waters, and extraction of groundwater for irrigation, stock, domestic and industrial use.

Many of these water infrastructure schemes were developed in times when their effects on the environment were poorly understood. There was often a lack of an integrated approach to infrastructure development, and subsidised water infrastructure goods and services were not generally priced to reflect full environmental costs. Consequently, a number of these schemes have resulted in major environmental and economic impacts, including waterlogging and salinisation. The diversion of water for irrigation purposes has also altered the natural flow regimes of many waterways, causing a loss of diversity in plant and animal species and reducing the environmental health of some rivers. As a result many of Australia's waters and water dependant ecosystems are now suffering extensive damage, with growing economic and environmental costs to the nation.

In February 1994, the Council of Australian Governments (COAG) tried to address some of these issues by agreeing to implement a "strategic framework to achieve an efficient and sustainable water industry" through establishing an integrated and consistent approach to water resource management throughout Australia. It includes provisions for water entitlements and trading, water pricing, environmental requirements, institutional reform, public consultation and education, and research. This approach is encouraging the more efficient and effective use of Australia's water resources by improving water ownership

rights, pricing water to reflect full costs, and encouraging stakeholders to improve decisions and implementation.

In April 1995, COAG endorsed the National Competition Policy for Australia. Under this policy, a total of \$16 billion has been made available for States and Territories that successfully implement a range of important reforms – including the COAG Water Reform Framework. As a result of this process, implementation and continued observance of the COAG water reforms is now a requirement for States and Territories to receive their full share of payments under the National Competition Policy.

3.1.2 New Infrastructure – Dams, Diversions, Pipelines

The Commonwealth is committed to working with governments at all levels and the community, to ensure that surface and groundwater resources are sustainably managed consistent with the principles set out in the COAG's Water Reform Framework. A key requirement of the COAG Water Reform Framework (Section 4(f) and 3(d)(iii)) requires that future investment in new dams or irrigation schemes or extensions to existing schemes, is undertaken only after appraisal indicates it is economically viable and ecologically sustainable. Any new infrastructure proposal would need to demonstrate that it complied with these two criteria.

A similar integrated approach to infrastructure development should also relate to groundwater issues which pose particular management challenges. Instances of overuse are becoming a major concern in some places. Unsustainable extraction levels can lead to permanent degradation of the resource and have serious impacts on ecosystems that are dependent upon it for their survival. It is generally accepted that groundwater issues are implicitly included in many provisions of the COAG Water Reform Framework, in particular, Clause 4(d) stipulates the environmental requirements necessary to maintain the “health and viability of river systems and groundwater basins”.

3.1.3 The National River Health Program

Under the Department's National River Health Program, governments are undertaking an extensive assessment of the health of the nation's inland waters, making a significant investment to identify priorities to protect and repair that health and to establish environmental flow requirements for our rivers.

The National River Health Program will provide crucial information for the achievement of water reforms agreed by Commonwealth, State, Territory and Local Governments at COAG. These reforms aim to reverse the widespread natural resource degradation caused, in part, by unsustainable use of water. The National River Health Program has been targeted to assist the multi-billion dollar investments in these reforms to achieve key environmental objectives including:

- establishing adequate environmental flows;
- ensuring water resource development is sustainable;
- developing strategies to reduce withdrawals in over-allocated systems; and
- supporting integrated catchment management.

It is anticipated that river health assessment and environmental flow initiatives funded under the Program will form a basic building block for the establishment of water related project priorities at the catchment, regional, state and national level and will provide tools for assessment of riverine ecosystem impacts of these projects.

3.2 Climate Change and Climate Variability Infrastructure

3.2.1 Climate Change and Regional Infrastructure Planning

Climate change is a good example of how environmental challenges facing regional communities are being converted into opportunities for regional development.

Under agreements made through the Kyoto Protocol, Australia will be required to limit growth in its greenhouse emissions in the period 2008 to 2012 to 8 per cent above its 1990 levels. Australia's domestic greenhouse policy is outlined in the National Greenhouse Strategy (NGS). The NGS provides the strategic direction for Australia's greenhouse response and is the primary mechanism through which our international commitments on climate change under the United Nations Framework Convention on Climate Change and the more recent Kyoto targets, will be met. It is essential that regional communities are aware of climate change issues and the potential effects of climate change upon regional communities and infrastructure.

The potential implications of climate change on Australia's regional areas are many and varied. They range from possible increases in the frequency and severity of episodic climatic events, such as storms and droughts; changes in climate characteristics such as temperatures and rainfall that will alter infrastructure needs; and the emergence of opportunities as a result of climate changes, including increased production due to CO₂ fertilisation, the establishment of carbon sinks and renewable energy technologies.

These potential climate changes may not impact on regions until well into the next century, but nevertheless could be important to regional centres because they have the potential to affect the spatial patterns of agricultural enterprises on which these centres depend. This would in turn result in similar changes in the distribution of related infrastructure. For example, if an area is no longer

suitable for wheat production, its silos etc would no longer be required and new ones may be needed elsewhere.

By impacting on the temporal and spatial patterns of rainfall, climate change may have substantial impacts on existing and planned regional infrastructure such as dams, flood levees, water and sewage reticulation systems. All of these can be affected by extreme rainfall events – climate change scenarios suggest increases in the frequency and intensity of larger rainfall events, even where total rainfall is reduced.

Climate change may also affect transport infrastructure. Bridges and roads may be affected by higher rainfall and flooding, airports may be affected by higher wind velocities. As this transport infrastructure is generally long lived it is important that any changes in future conditions are taken into account at the time of construction.

Further improvement in regional climate change scenarios is required in order to better identify the likely impacts of climate change on infrastructure in regional areas.

3.2.2 Climate Change and Sustainable Agriculture

The potential impacts of climate change on Australian agriculture are substantial. Possible impacts will include crop and pasture growth rate changes due to carbon dioxide fertilisation and changed rainfall and temperature regimes; changes in crop quality and pasture nutrition; changes in soil fertility; shifts in the suitability of districts for particular crops; and increased weed, pest and disease incursion.

With an integrated regional management framework climate change can be ameliorated, or in some cases turned to benefit, at farm level through adaptations such as changes in tillage practices, selection of better adapted crop varieties, planting at different times in the season, reducing stocking rates and changes in cropping locations.

There is also potential for Australian agriculture to reduce its greenhouse gas emissions without compromising earnings. The NGS includes a number of measures focusing on sustainable agricultural management practices which also reduce greenhouse gas emissions. These include opportunities for reducing energy use, conservation cropping, opportunities to improve animal husbandry, manure management and the use of biogas (and other technologies by intensive animal industry), and reduction in biomass burning.

It is envisaged that NGS programs will include development of information packages for each key industry type and region and, where appropriate, pilot programs and case studies will also be conducted.

3.2.3 Infrastructure and Carbon Sinks, Credits and Trading

A key goal of the NGS is to limit greenhouse gas emissions. This can be partially accomplished by taking action to enhance greenhouse sinks, encourage sustainable forestry, and vegetation management and reduce greenhouse gas emissions from agriculture production.

The creation of carbon sinks, such as forestry plantations, may provide further future benefits for regional areas through incorporation into an emissions trading system. For example, following allocation of credits for the amount of carbon sequestered (stored in plants), plantation operators could sell these credits in a future emissions trading system.

No decisions concerning the introduction of an emissions trading system or a carbon trading system have yet been made by the Australian government. However, regional communities should be aware of the progress of these issues, and the opportunities that may arise to increase their involvement and develop appropriate infrastructure.

There are currently a number of government programs that may assist regional infrastructure development, including to support and manage carbon sinks. These include:

3.2.4 Bush for Greenhouse

The Bush for Greenhouse (BFG) program aims to enhance Australia's sinks by encouraging greater private investment in revegetation and provides a framework for capacity building in the community, industry and government.

BFG has begun with a trial phase that involves attracting private sponsorship or investment into revegetation projects, which provide sequestered carbon for companies to offset emissions. Key elements of the program include developing the methodologies and tools required to estimate carbon sequestration and trialing approaches in revegetation projects as well as providing extension services and supporting information exchange.

3.2.5 Cities for Climate Protection

The Cities for Climate Protection (CCP) Australia program is a national program for all councils in Australia that recognises that Local Governments have a significant role to play in responding to the challenges of climate change. It is a voluntary program that assists Local Governments to achieve sustainable reductions in local emissions of greenhouse gases. 52 political declarations have currently be made by Australian Local Governments to take action on greenhouse through the program.

This program could be utilised to provide assistance to Local Government to enable them to utilise local planning approaches and zoning to facilitate sinks

development. It could also facilitate councils providing information to local communities on the potential of carbon credits and other issues related to carbon sinks.

3.2.6 Climate Variability

Knowledge of Australia's weather is built upon a national infrastructure that includes the national meteorological observing networks operated by the Bureau of Meteorology and networks for monitoring atmospheric composition, water resources and ocean surface and sub-surface characteristics operated by other organisations such as CSIRO and State agencies.

There is a growing demand for climate services provided by this network in regional areas, particularly for seasonal outlooks and analyses of climate data. Likewise, the design of regional infrastructure such as urban drainage, culvert, bridge, dam and hydraulic structure is based on knowledge of the characteristics of rainfall, particularly its distribution and intensity. This design work is supported by the Bureau of Meteorology's hydrometeorological advisory services. The hydrometeorological advisory services also provide support for land-use planning and management design and the development of national design standards.

Climate services are provided mainly through cooperative arrangements with the rural press, television and radio stations. Fax and Internet are increasingly being used to provide services and there are also across-the-counter services provided by Bureau of Meteorology offices located in regional areas. The importance of the services provided by such offices in regional areas has been recognised by the government and in line with the recommendations of the *Review of the Operation of the Bureau of Meteorology* (Professor R Slatyer, 1996) their service capacity is being enhanced through a major upgrade of their communications capacity which will enable each office to have full connectivity with the Bureau of Meteorology's intranet and internet resources.

Just as past advances in the understanding of the Australian climate were based on the availability of national meteorological observing networks, further advances rely on the continuing availability of high quality sea and atmospheric observations. Such networks are an essential part of the infrastructure needed for research to develop improved climate-based services and advice that have the potential to contribute to the sustainable development of regional Australia.

4 INDUSTRY OPPORTUNITIES RELATING TO THE ENVIRONMENT

Regional sustainable development provides many opportunities for regional industry, including those mentioned below, to build environmental credentials and strengthen environment management industries encouraging eco-efficiency.

4.1 Renewable Energy in Regional Areas

Renewable energy technologies provide development opportunities for rural communities. Market development experience in the past two decades for renewable energy technologies (RET) indicates that there are many suitable sites and applications in regional areas for the use of renewable energy and to create jobs. Australia is taking a leading role in researching some of these applications, such as the development of photovoltaic cells.

Renewable energy requires a market for the energy produced. In some situations, the remote location of the site may be an advantage for RET. For example, a site where electricity is needed may be remote from coal or gas generated electricity and so represent a potential stand alone market for RET. If the electricity demand is supplied by the electricity grid, efficiency losses of 10 – 20% during transmission can be anticipated and these can be avoided by the use of local generation.

Current regional electricity supply reliability and quality is below urban standards which can present problems for local business such as computer failure. Local supply can improve quality. These “end of line” opportunities for RET to improve regional electricity supply represent other types of regional development opportunity.

Landcare initiatives and RET opportunities can potentially be linked for the commercial benefit of both. For example, the WA Department of Conservation and Land Management and Western Power are currently trialing opportunities to simultaneously reduce soil salinity, improve soil stability, and generate electricity through the establishment of forestry plantations and/or tree coppicing.

Regional use of RET can be expected to create regional employment opportunities. One study of biomass RET opportunities in the Richmond Tweed; Gwydir Valley; and Illawarra regions has estimated an expansion of the local economy by up to 2% using biomass feedstocks such as forest/plantation thinings, cereal crop residues or wheat starch. Further region specific work is required to define these opportunities.

4.2 National Parks in Regional Australia

There are many opportunities for regional employment and local business opportunities that arise from Australia’s national parks. Parks Australia administers three major national parks in regional Australia, namely Kakadu National Park, Uluru-Kata Tjuta National Park and Booderee National Park. Parks Australia also administers three smaller parks, namely Christmas Island National Park, Pulu Keeling National Park and Norfolk Island National Park. In total these parks have an operating budget of \$36 million in 1998/99 and employ 268 staff.

The infrastructure of the parks is significant and its maintenance and replacement offer considerable opportunities for the generation of employment in and near the parks. These include major capital and maintenance work; opportunities to assist in environmental works on a contract basis; and works with local communities in providing services to tourists.

4.3 Sustainable Tourism

Australia has some strong models for sustainable tourism, in particular its integrated management of regional tourist destinations such as the Great Barrier Reef and wet tropics world heritage areas. Australia's experience with sustainable tourism was recently highlighted at the high level segment on Tourism and Sustainable Development at the Commission on Sustainable Development (CSD). The CSD highlighted the need for strong integrated planning particularly involving Local Authorities. The challenge for Australia is to make these strong sustainable development models universal for our growing regional tourism market.

5 CONCLUSION

Infrastructure and the environment play an important and complementary role in regional development.

The establishment of a long-term integrated regional management framework that involves participation by key stakeholders will encourage sustainable regional development. A blend of policy instruments, including regulation, economic instruments, and voluntary and co-operative approaches, will help to maximise the returns to infrastructure development in the long-term.

Such an approach contributes to economic development through creating business opportunities in regional areas and avoids the development of long term barriers to economic development.

Ecologically Sustainable Development

In 1992, the United Nations Conference on Environment and Development developed a blueprint for action to achieve sustainable development – Agenda 21. Agenda 21 calls upon governments to implement relevant national level policies and strategies, integration of decision-making processes and community involvement to promote ecologically sustainable development.

Australia has responded by developing ‘The National Strategy for Ecologically Sustainable Development’. This strategy recognises the central place of ecologically sustainable development in the strategic and policy framework for development in Australia.

A framework for ecologically sustainable development emphasises integrated environment, social and development policy, planning and management; effective regulatory and legal frameworks; effective use of market and economic instruments and incentives; and integrated environmental and economic accounting. It requires cooperation across the many organisations that are responsible for related issues such as air quality, transportation, regional industry and so on.

An ecologically sustainable development framework includes stakeholder involvement and local participation in decision making.

Local Agenda 21

Local Agenda 21 is a program aimed at implementing sustainable development at the local level. A Local Agenda 21 program comprises systems and processes to integrate environmental, economic and social development. It is based on a strong partnership between local government and the community that is guided by the preparation of a long term strategic action plan that integrates existing policies and programs and an agreed future direction. The main focus of Local Agenda 21 is to involve all groups in sustainable development planning in the major areas of economic, social and environmental development.

International support for Local Agenda 21 has been expressed in forums such as the Asia Pacific Economic Cooperation (APEC). At the APEC meeting in June 1997, responsible central government ministers, including Australia, committed to double the number of councils implementing Local Agenda 21 by the year 2003.

Local Agenda 21 recognises that Local Governments are increasingly becoming lead agencies for the provision of local infrastructure and services. The Australian Bureau of Statistics has identified that in 1997-98, Local Governments spent around \$3,486 million on environment protection and

natural resources use and management, primarily in the area of solid waste management (\$941m), waste water management (\$924m), inland water management (\$681m) and land management (\$638m).

Local Agenda 21 can provide the context for managing all council operations relating to environment protection and natural resource management by providing an effective framework for planning and implementing sustainable development at the local level. It is not a separate project but rather is a means to combine existing and new council programs into a coherent strategy.

Local Agenda 21 is growing in popularity around Australia. For example, in South Australia, a partnership for Local Agenda 21 exists between the state government, Local Government Association, and some 30 Councils. In New South Wales, the *Local Government Act 1993* requires Councils to have regard to the principles of ecologically sustainable development in carrying out all of their responsibilities. This requirement has acted as a catalyst for Local Agenda 21 by focusing on local state of the environment requirements and community participation.

Regions are increasingly becoming a focus for environment management and regional environment strategies are being developed, such as the Gascoyne-Murchison in Western Australia, the Mount Lofty Ranges in South Australia, and Launceston Tamar in Tasmania. Regional Local Agenda 21 planning frameworks provide a more holistic approach to interactions between the community, governments, industry and the environment.