Regional sustainability strategies: 
A regional focus for opportunities to improve sustainability in Western Australia

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This thesis is presented for the degree of Research Masters with Training
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I declare that this thesis is my own account of my research and contains as its main content work, which has not previously been submitted for a degree at any tertiary education institution.

…………………………………

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Abstract

The spatial implications of Global and Australian national trends in economy, society and environment are diverse. At a sub-national level these combine with local trends and issues to create unique regional milieu through which an integrated approach to sustainability may be negotiated. A change in government process may be required for sustainability to be implemented, and sub-national governance mechanisms are increasingly seen as important in enacting sustainability on the ground. Yet in Western Australia, large land mass and low population density means that neither State nor Local Governments are well equipped for this task. Western Australian regional policy and governance structures, as well as Commonwealth economic and regional policy trends, are important influences on regional sustainability. Both the Draft Western Australian State Sustainability Strategy and the Draft Statement of Regional Policy for Western Australia support a regional approach to sustainability planning. Yet models of regional governance organisation for the implementation of regional sustainability in Western Australia, such as regional associations of Local Governments, and Regional Development Commissions need to be further developed. It is at this regional level where partnerships between community, government and business may emerge to enact regionally appropriate initiatives for sustainability. For this to occur, community participation and government process that enables community participation to influence decision making is necessary. Regional approaches to natural resource management provide insight into the way that a regional approach to sustainability planning and organisation may evolve. Trends that influence regional issues and Commonwealth and Western Australian regional policy and structures provide a broad context for the development of regional sustainability strategies. Analysis of these issues and of the insights that may be gained from ideals for enabling governance mechanisms and
regional natural resource management projects to facilitate regional sustainability are presented.
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Introduction

The ideal of sustainability has become central to many of the academic, political and popular movements that aim to create positive social, economic and environmental change in the world today. This thesis applies some of the ideals of sustainability, such as the principle of equity between and within generations, of human obligation to care for the environment, and of the right to participate in the decisions that effect our lives to the area of regional planning and development.

A sub-national regional approach to implementing sustainable change that is proactive and reflexive in its approach is increasingly recognised as necessary (Gray and Lawrence 2001; Government of Western Australia 2002; Jenkins, Annadale et al. 2003). A range of factors, operating at diverse spatial scales, is combined in a regional approach to sustainability in Western Australia. These factors include the requirement for;

- on the ground implementation of a global sustainability imperative,
- management of the socio-economic and political implications of economic globalisation,
- resolution of natural resource management issues; and
- local community empowerment and participation in a context of rapid change.

It is the spatial variation in social, ecological and economic issues that makes regional approaches to sustainability important (McManus and Pritchard 2001). They provide both an idea of the types of considerations that regional sustainability strategies may need to include and an argument for developing a regional scale in sustainability planning. Processes that facilitate government-community partnerships at the regional level and enable regional communities to increase their capacity to respond to rapid change will be required for a regional approach to sustainability.
In this thesis, the existence of regionally diverse sustainability issues is firmly established through analysis of the different social, economic and ecological factors experienced in different Western Australian regions. Investigation of regional planning trends and policy is used to establish a governance context for regional sustainability strategies and to demonstrate that governance structures for regional sustainability and a methodology for the development of a process for regional strategies in Western Australia need further articulation. Through discussion of the potential for enabling government processes to facilitate regional sustainability a participatory approach is established in this thesis as fundamental to the process of regional sustainability strategies. Case studies of regional natural resource management initiatives are developed to offer further insight into the types of community and government processes development of regional sustainability strategies may require. The thesis concludes by discussing the potential implications of this research for the process of developing regional sustainability strategies in Western Australia, including a summary of key recommendations for the development of regional sustainability strategies.

Central questions and aims of this thesis

The fundamental questions behind this thesis are:

1. Is a regional scale appropriate for the development of Sustainability in Western Australia?

2. What structures and policies can potentially enable sustainability to be applied at a regional scale in Western Australia?

3. What is the potential process for regional sustainability strategies in Western Australia?

This thesis endeavours to answer these questions through the following aims:

- To articulate a strong argument for a regional scale in sustainability planning in Western Australia;
• To analyse of the potential for current Commonwealth and Western Australian regional policy, Western Australian regional structures and enabling governance mechanisms to enhance regional sustainability in Western Australia; and

• To investigate regional natural resource management practice and case studies for insight into a potential process for regional sustainability strategies in Western Australia.

**Methodology**

This thesis is an exploratory study of some of the issues related to and process required for regional sustainability. A triangulation of research methods including literature review, qualitative and quantitative indicator analysis and case study was used in the development of this thesis and has enabled diverse information of relevance to regional sustainability to be presented. This reflects the interdisciplinary nature of the thesis.

**Membership on the State Sustainability Strategy Research Group**

The State Sustainability Strategy Research Group was set up to support the development of the State Sustainability Strategy by providing contemporary theory and case study analysis on various sustainability themes. As a member of this group, I undertook research into global, national and Western Australian trends and issues of relevance to regional sustainability in Western Australia, investigated case studies of relevance to its implementation, and made recommendations relevant to the development of regional sustainability strategies. This research is published as a background discussion paper to the Draft State Sustainability Strategy (Government of Western Australia 2002) entitled *Developing a Strategy for Regional Sustainability in the State of Western Australia* (Armstrong 2002). It was compiled in consultation with
staff at the Department of the Premier and Cabinet and provides the background research for parts of this thesis.

- **Semi structured interview,**

In the initial stages of research, semi structured interviews with:

  - Professor Peter Newman, Director of the Sustainability Policy Unit in the Department of the Premier and Cabinet;
  - Michael Rowe, Senior Sustainability Policy Officer in the Department of the Premier and Cabinet; and
  - Jennifer Duffecy, Senior Regional Policy Officer in the Department of the Premier and Cabinet

provided valuable direction.

Prior to the final phase of writing this thesis, informal discussion with Brian Jenkins, Director of Murdoch Environment, also provided direction for the thesis’ development.

- **Literature Review**

Literature review was the initial methodology used to explore the topic of regional sustainability. It continued throughout the development of this thesis and has enabled development of a broad perspective on the sustainability issues experienced at a sub-national, regional level in Western Australia. It was the key methodology used for Chapters 1 and 2 of this thesis, which compile background information and a context for the development of regional sustainability. Literature review has also been used throughout the thesis to inform an analysis of indicators, policy and case studies. Literature was sourced from university, public and government libraries, literature databases and the World Wide Web. The range of topics investigated includes:

  - Western Australian, Australian and International perspectives on regional planning and development.
  - National and International trends in governance, sustainability, economy, socio-demographics, and environmental wellbeing.
Theories of political change.
Commonwealth and Western Australian regional policy

- Indicator Analysis

Chapter 3 analyses qualitative and quantitative economic, social and environmental indicators, for each administrative region in Western Australia. Most of these indicators were sourced from the publication *Indicators of Regional Development in Western Australia* (Department of Local Government and Regional Development 2003). This report compiles data from a range of sources, including government organisations and initiatives with the purpose of supporting the strategic and sustainable development of Western Australia’s regions (Department of Local Government and Regional Development 2003). Indicators were also sourced from the Australian Bureau of Statistics. A qualitative index ranking Western Australian regions and Perth according to the relative degree to which they experience converging trends in environmental degradation, population loss and economic decline was developed through combining selected indicators from the *Indicators for Regional Development in Western Australia*. Chapter 3 includes a full methodology and critique of the development of this index. The indicators were selected and the index was developed following the initial literature review and development of background and context in Chapters 1 and 2. As such, they were selected and developed for a preliminary investigation into the experience of trends and issues identified as important to regional sustainability in Australia by the literature review in a Western Australian context.

Analysis was derived through:

- Inter-regional comparison of qualitative and quantitative indicators
- Comparison of regional indicators reference to selected texts and the content of Chapter 2.
This resulted in creation of a broad profile of Western Australian regions, key differences between them and the way that they related to overall trends that have been identified in regional Australia.

• **Case Study**

Sarantakos (1998) examines the purpose for case study research and suggest it includes gaining information about structure, process and complexity of the research topic and assistance with formulating hypotheses. As such, the case studies of regional natural resource management initiatives were undertaken to develop a greater understanding of the way that regional sustainability processes may be enabled, and to inform discussion on a process for regional sustainability. These case studies are exploratory in nature. They were selected through literature review, searching on the World Wide Web for examples of best practice in regional natural resource management and through consultation with my research supervisor rather than through intimate knowledge of the projects discussed. Additionally, I attended some meetings of the South West Ecoregions Steering Committee and have sourced some material from unpublished meetings minutes and terms of reference (Sarantakos 1998).

**Chapter outline**

*Chapter 1* introduces the concept of regional sustainability and regional sustainability strategies in the context of the Western Australian State Sustainability Strategy Consultation Draft. The terms region and regional are defined for the purposes of this thesis, and background context and perspectives on regional sustainability that are important to the argument articulated in this thesis are summarised.

*Chapter 2* analyses the spatial implications of relevant national and global economic, socio-cultural, environmental and political trends, for Australian regions. It provides a
broad context and rationale for the assessment of sustainability challenges at a regional scale.

Chapter 3 compares Western Australian administrative regions against a range of economic, social and environmental indicators, and an index of risk of decline, providing further evidence for a regionally specific approach to sustainability planning in Western Australia.

Chapter 4 discusses trends in regional policy and development, and analyses the potential for Commonwealth and Western Australian regional policy and structures to enhance regional sustainability. It is seen that a sustainability approach to regional development and regional policy is emerging, yet needs clear articulation and direction.

Chapter 5 examines the types of government process that may be required to facilitate regional sustainability strategy development. In particular, the merging of community participation with enabling government processes is explored.

Chapter 6 discusses regional natural resource management programs and the potential insight that they offer for development of regional sustainability strategies. Some case studies of regional natural resource management projects are presented.

Chapter 7 concludes this research through a summary of this thesis' argument for regional sustainability strategies in Western Australia, identification of its suggestions for the development of regional sustainability strategies and a statement of key gaps that need further research.
Chapter 1: Background to regional sustainability and regional sustainability strategies in Western Australia

These stresses or syndromes, which result in severe environmental degradation, can be difficult to untangle from one another and complex to manage. Though often aggravated by global changes, they are shaped by the physical, ecological and social interactions at particular places, that is locales or regions. Developing and integrated and place based understanding of such threats and the options for dealing with them is a central challenge for promoting a transition towards sustainability (US National Research Council 2000)

A Context for the Development of Regional Sustainability Strategies

Regional Sustainability

Sustainability in this thesis refers to an approach that considers ecological, social and economic spheres as integrated and interdependent and that ensures equitable participation in decision making. This is expanded upon in Chapter 2. As such, sustainability is seen to require integrated consideration of a range of issues, from economic development, to ecological integrity and social well being as well as the government and community processes that facilitate or obstruct sustainability. It is argued that Regional Sustainability Strategies may enable processes of change to occur with an integrated focus on the economic, social and ecological factors that determine sustainability at a regional level through, community participation.

The idea of regional sustainability acknowledges that local issues and local participation are fundamental to sustainability but that this local focus, at times needs to be balanced by broader, regional concerns¹. It also acknowledges that regional Western Australia, when defined as that area outside of metropolitan Perth, has diverse sustainability issues that are often different to those experienced in an urban context, and need special attention. It builds upon the growing awareness that many sustainability issues need to be investigated at a regional scale that is different to local

¹ Although non capital city regions are the focus of this thesis, regional sustainability is important for city regions also. This is recognised in the Draft State Sustainability Strategy
Commonwealth and State Government levels. Sustainability challenges occur as a result of the interactions between humans and the natural environments in the places that they live. Without integrated and equal consideration of ecological, economic and social consequences of change, sustainability in regional Australia is unlikely to be achieved (Rangeways 2002). In Australia and internationally, a sub-national regional scale for implementing sustainable change that can be proactive and reflexive in its approach is increasingly recognised as necessary (Gray and Lawrence 2001; Jenkins, Annadale et al. 2003).

Converging Trends

It is a convergence of different trends and issues that increasingly require negotiation at a regional scale, that combine to create a powerful argument for regional sustainability planning. In the current context of a globalising world, in economics as well as increasingly in environmental and political spheres, there is a re-emergence of sub-national regions as important drivers of change (Mc Gee, Pang et al. 2001). It is regions that compete, economically, with each other in both national and international contexts:

*Regions are becoming the natural unit of making change happen. They are big enough to form natural economic units but not big enough to become unwieldy (Mc Kinsey & Co 1994:19).*

Ecologically, it is the regional level where interactions between society and environment occur, which can facilitate or obstruct sustainability. Natural resource management issues are often best addressed at the catchment level, and there is a growing awareness that regional strategies for natural resource management are most effective (Dore and Woodhill 1999a). From a social perspective, development of strong regional identity within regional communities is a fundamental building block for sustainable development. As the long-term sustainability of a region depends on its ability to support itself, and make best use of its natural and human resources, an
empowered community with a strong regional identity or ‘sense of place’ is a necessary condition for regional sustainability (German Ministry for Education and Research 2000).

Regions, governance and sustainability

From a governance perspective, the size and diversity of Australia, and Western Australia in particular, suggest that effective sustainability planning will require a regional focus, yet there are no formal structures for regional governance in Western Australia (Dore and Woodhill 1999a). Strategic policy and planning at the regional and local level is often seen as fundamental to creating a positive space for each region in the global economy. Also, the forces of economic globalisation and government market liberalisation have intensified the experience of spatial inequalities (Stilwell 2000) which may require government intervention at a regional scale. Government natural resource management funding is often channelled to regional projects, particularly from the Commonwealth Government through the Natural Heritage Trust. Australian Governments have seen regional strategies as mechanisms to address unemployment, environmental degradation and social malaise, as well as facilitating more balanced development between urban, peri-urban and rural areas and developing a sense of community (Beer 1999).

A History of Conflict and Change

This thesis is strongly situated in the present in that it discusses current trends and issues, governance processes and case studies that may be influencing Australia’s regions now. Gray and Lawrence (2001) present a historical perspective on the trends and issues experienced by regional Australia. Historical forces that shape the current experiences of regional communities include:

- a colonial legacy;
- a tradition of ecologically inappropriate farming methods; and
a historical dependency on national economic policy that has subsidised regional Australia and in more recent history, left it open to market forces

Whilst this thesis lacks such a historical perspective, its importance is acknowledged: “those who have not learned from history are condemned to repeat it” (Elkins 1971:xiv).

The historical circumstances from which regional Australia and regional communities have emerged shape sustainability challenges from within. Conflicting land use priorities between Indigenous traditional owners, agriculturalists, pastoralists, mining companies and conservation and tourism industries are negotiated within the context of power structures that have their roots in the colonial, frontier legacy from which contemporary Australia has emerged (Gray and Lawrence 2001; Howitt 2001). As the voices that call for changes in the way that such conflicts are negotiated, diversify and strengthen (for example, those of Indigenous people and a more socially and environmentally conscious civil society) conflict resolution and sustainable change become increasingly urgent. Stories, and other processes that facilitate exploration of these historical issues, and the way that they influence contemporary issues at a regional level, will be an important part of regional sustainability strategies.
Regional sustainability strategies and the development of the State

Sustainability Strategy

The Draft State Sustainability Strategy

The Western Australian State Sustainability Strategy Consultation Draft (The Draft State Sustainability Strategy) was developed in response to an election commitment to develop a sustainability strategy of the Gallop Labour government in 2001. It details principles and processes that will be required for a transition to a sustainable future in Western Australia. Here, sustainability is defined as “meeting the needs of current and future generations through simultaneous environmental, social and economic improvement” (Government of Western Australia 2002).

The Draft Strategy proposes Regional Sustainability Strategies as one potential mechanism that can enable on the ground transition to a more sustainable future in Western Australia.

The Draft State Sustainability Strategy states that Regional Sustainability Strategies will:

- “Provide an integrated application of the State Sustainability Strategy as it applies to the region;
- Build on regional natural resource management strategies currently in preparation;
- Incorporate the social element through sense of place ‘stories’ incorporating Aboriginal stories, natural history and the local history;

2 The final strategy has now been released. There are no differences that significantly impact upon the discussion included here.
• Link to broad, non government organisation processes in the regions to pursue regional visions, for example Eco Region South West and CSIRO Healthy Country;
• Incorporate Indigenous regional sustainability strategies;
• Provide a broad set of goals for the future from this process."

(Government of Western Australia 2002:59)

The overall objectives of regional sustainability strategies according to the State Sustainability Strategy are to:

• “Enable regional 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"

(Government of Western Australia 2002:60)

The Draft State Sustainability Strategy proposes governance in Western Australia that supports sustainability through engaging Local Governments and stakeholders at the regional scale (Government of Western Australia 2002). Effective regional strategies developed within each region that create policy that is appropriate for that region are necessary for this to occur (Alexandra 1999). There is a level of interest, demonstrated by the Western Australian government, in regional sustainability, that warrants deeper investigation into the issue of regional sustainability in Western Australia and potential processes for its implementation.
Brian Jenkins’ work on Regional Strategies

Following the release of the Draft State Sustainability Strategy, Professor Brian Jenkins of Murdoch Environment developed a model for Regional Sustainability Strategy Development through:

- investigation of international methods of regional sustainability strategy development including; and;
- combining insight from these with the requirements of the Draft State Sustainability Strategy. In particular:
  - the need for integration of sustainability considerations at the regional level; and
  - the fundamental importance of social and cultural dimensions as inputs into sustainability goals and strategies in each region.

Figure 1 Presents the model for strategy development that was suggested through this research.
**Story telling and community visioning for regional sustainability**

Research written by Susan Waller and published as a Background Paper for the State Sustainability Strategy entitled *Story-telling and Community Visioning: Tools for Sustainability* (Waller 2003), is another important component research undertaken into a process for regional sustainability strategies in Western Australia. The draft State Sustainability Strategy views story telling and visioning as fundamental to the process of regional sustainability in Western Australia (Government of Western Australia 2002).

Story telling is seen to have potential in developing a shared understanding between diverse regional communities, aiding in defining sense of place, community values and future aspirations, and conflict resolution. Community visioning, which can be aided by story telling, also has the aim of developing a shared future vision for a regional community (Waller 2003). Both community visioning and story telling are intimately linked to the idea of developing regional sense of place, or linking individual and community identity to a regional area.

*Place is the intersection where ecological, economic and social worlds meet. It is the site where communities and individuals construct sustainable (or unsustainable) landscapes from past experience and future intentions* (Armstrong 2002).

This sense of place can then enhance a community’s capacity to participate in regional planning for sustainability, and can mean that regional communities are less likely to accept unsustainable practices.

The processes of story telling and community visioning may provide mechanisms for processes such as:

- Broad regional participation in regional sustainability development
- Conflict resolution;
• Integration of social, economic and ecological aspects of sustainability;
• Reconciliation;

at a regional level. As such, they are an important part of the process for regional sustainability in Western Australia.

A link between this thesis and Draft State Sustainability Strategy

Initial research for this thesis was undertaken for the writing of a Background paper to inform the development of the Draft State Sustainability Strategy (Armstrong 2003). This thesis takes a broad focus on economic, environmental political and community aspects of regional sustainability, that is complemented by the more specific research in to story telling and community visioning undertaken by Susan Waller and in regional sustainability assessment undertaken by Brian Jenkins.

This thesis endeavours to add to the work already undertaken in Western Australia through:

• Setting up a broad argument and context for regional sustainability strategy development in Western Australia; and
• Developing deeper insight into the types of government and community process and structures that may need to underlie a methodology for regional sustainability strategy development.

Defining Regions

The terms region and regional are fairly fluid, so a discussion of the use of these terms in this thesis, in Western Australia and in relevant literature is necessary. A region is essentially a social construction of given space (Keating 2003). In the context of this thesis, the region is a sub-national space that is larger than a Local Government area and smaller than a state. Hence the term regional is also used in this thesis to
describe an action undertaken in a particular sub-national space: a regional sustainability strategy. Alexandra (1999:216) states that:

- regions are amorphous and chameleon-like. The term region is loosely applied, almost independently of scale…whether this accomplishes strength in diversity or confusion in complexity is debatable.

So complexity and ambiguity may be inherent in the idea of a region. It may be a space for economic, social or ecological relationships, for government administration, or a political entity, or “constructed from the confluence of (these) differing concepts of space” (Keating 2003:256). Any region that is the basis of a sustainability strategy will need to consider the different scales of interaction within it.

Regional, particularly in a government context, is often used to refer to non capital city Australia. In Western Australia only 28% of the population lives outside of Perth, in areas classified in this way as regional, yet the vast majority of Western Australia’s land is regional, rural and remote from townships (Patterson Market Research 1999). Gray and Lawrence (2001:2), conceptualise regions as “that part of Australia and its population which has a distinctive relationship, sometimes incompletely described as dependency, with metropolitan Australia”. Here it is inferred that centralised decision making at the state and national level (and within capital cities) at least partially determines the socio-economic climate, or the range of options available to regional stakeholders.

Regional (non capital city) Australia suffers disproportionately from ecological problems such as salinity, social problems such as youth suicide and ageing populations, and economic problems like lack of employment, service withdrawal and declining terms of trade (Lawrence, Share et al. 1993; Jones and Tonts 1995; Gray and Lawrence 2001; National Heritage Trust 2002). Much of the research presented in Chapter 2 discusses trends for regional Australia, defined as non capital city Australia, yet there is an
acknowledgement that within regional Australia there is much spatial variation in sustainability issues: they occur in particular places and not necessarily across the whole of regional Western Australia.

Some definitions of regions as particular scales of interaction are presented below.

1. An area
   
   that is meaningful to all the likely stakeholders and one that is practical for management purposes...(that) reflect(s) the environment and natural resource management issues of concern to stakeholders in the region (National Heritage Trust 1998:4).

2. A bioregion,
   
   a geographic space that contains one whole or several nested ecosystems, characterised by its landforms, vegetative cover, human culture and history as is identified by local communities, government agencies and scientists (Miller 1996:11).

3. An ecoregion
   
   a relatively large unit of land or water containing a characteristic set of natural communities that share a large majority of their species, dynamics, and environmental conditions (Olson, Dinerstein et al. 2000:3).

4. An agglomeration of Local Government units.

5. An administrative, electoral or statistical division.

6. An area with economic or industrial, social or cultural linkages.

   (Dore and Woodhill 1999a)

Governments most frequently create regions to enable decentralisation of their functions. Regionalisation of government agencies and processes however is not undertaken with a standard approach and as a result, regional boundaries often differ.
A simple way to conceive of this scale in Western Australia, from is through looking at the boundaries used by the Western Australian Regional Development Council\textsuperscript{3}. Here, Western Australia is divided into nine administrative regions, each coordinated by a Regional Development Commission. These regions are used in Chapter 3 as the spatial scales at which regional differences in Western Australian are analysed. Bioregions, for Australia are set in the Interim Biogeographic Regionalisation of Australia\textsuperscript{4}. Within and between any constructions of regions, there will be different scales at which it will be appropriate to look at sustainability issues.

Osborne (1997:12) notes that

\begin{quote}
while inventing new regions for new forms of study…may seem initially attractive, it would seem… that there are already many systems for defining regions with their capacity to create confusion, without adding any extra.
\end{quote}

The challenge is to be reflexive, and incorporate different conceptions of regions for different purposes within regional sustainability strategies. This will require networking and communication among relevant stakeholders both within and between regions. Networks that enhance the relationships between inter and intra regional spatial differentiations like the catchment and the bioregion, or the economy of a regional town and the economy of a whole region, are a critical factor to consider for regional sustainability strategies (Arndt, Gowron et al. 2000), requiring a depth of understanding of the term region that encompasses more that just regional boundaries. For the purposes of this thesis, rather that setting a firm definition of regions and regional, these terms need to be considered in context, where they are used.

\textsuperscript{3} Map available at : http://www.regional.wa.gov.au/maps/wa.asp
\textsuperscript{4} Map available at http://ea.gov.au/parks/nrs/ibra/version4-0/framework/map1.ht
Chapter 2: Background to regional sustainability - national and global trends and issues influencing regional sustainability in Western Australia

Introduction

In this chapter, the implications of global and national trends in ecology, society and economy for sub-national regions in Australia are considered. Global and national trends are key shapers of regional sustainability, creating a broad context within which regional sustainability strategies must be negotiated. Throughout Australia, different non metropolitan regions are experiencing the influences of global change differently. Diverse regional and local circumstances such as local and regional industries, level of economic diversity, environmental degradation issue, socio-cultural or demographic factors and the history of the region all affect the influences global and national trends. It is this spatial variation in the impact of global and national trends, on social, ecological and economic issues and that makes regional planning for sustainability an important consideration (McManus and Pritchard 2001).

The idea of globalisation is central to this chapter. Economic globalisation broadly refers to the increasing power and influence of the global economy, relative to the power that nations and sub-national units have over their own economies. Nation states as economic units are either considered as increasingly irrelevant, or increasingly under the influence of global economic forces (Hirst and Thomson 1997; United Nations Economic Development Commission for Latin America and the Caribbean 2002). In this sense, globalisation has important national economic, and political influences. Innovations in communication and transport have increased the ease and pace at which business can take place across large distances and national boundaries (Keller 2001). Yet the economic policies of nation states are also important in facilitating and directing economic globalisation (Wiseman 1998). There are also social and ecological dimensions of globalisation. Increasingly, nations are connected
through shared environmental or resource management issues, including global warming, fisheries and water supply. A growing number of globally interconnected non-government organisations apply pressure on nations and sub-national regions to preserve natural environments, or ensure social justice and human rights (Brown 2001). These global dimensions are increasingly reflected in global treaties and agreements in areas as diverse as trade, development, human rights and environmental protection. Growth in a globally oriented consumer culture, reflected in global icons such as Barbie, Coke and Mc Donalds and the increasing influence of neoliberal\(^5\) politics, are also associated with economic globalisation (Stilwell 2000).

**The Sustainability Agenda**

The interrelationship between global trends in environment, economic development and social well being has led to the emergence of sustainability as a world wide concern, both politically and socially. Concern for the negative impact of human systems on the natural environment, and over persistent poverty has changed the way that many people perceive economic development. Brown (2001) asserts that a revolution in thought that recognises that the economy is a subset of the environment, rather than the environment being a subset of the economy, is both necessary and emerging. Economic theories fail to explain, or solve ecological phenomena that now represent global scale threats to human livelihoods and require integration of environmental and social considerations into development. At a sub-national and regional level, global sustainability issues combine with broader national trends, issues and policy responses, as well as particular regional and local circumstances, to create a unique milieu for each region to consider for sustainability.

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The World Commission on Environment and Development in 1987, concluded that "preserving the environment, addressing global inequities and fighting poverty could fuel, not hinder, economic growth by promoting sustainable development" (Runyan and Norderhaug 2002:33). Since this time, international recognition of sustainable development has grown, and two United Nations Conferences on Environment and Development (UNCED) have brought nations together to discuss sustainability. UNCED 1992 resulted in two key documents:

- *The Rio Declaration* which developed a philosophical basis for the environmental and economic behaviour of nations with relation to sustainability; and

- *Agenda 21*, an action plan for sustainability, addressing several key areas of environmental and development interaction, including:
  - socio-economic dimensions of development such as poverty;
  - resource conservation and management; and
  - broad participation in sustainable development particularly for women, youth, Indigenous peoples, non government organisations and Local Governments.

At the recent UNCED conference in Johannesburg, in 2002, there was an attempt to reaffirm commitments and establish targets to implement sustainable development, in recognition that poverty and environmental degradation have become worse in the ten years between the Rio and Johannesburg Summits (United Nations 2002b; United Nations 2002a). At the UNCED 2002 in Johannesburg, the need for strengthening arrangements at the international, national and regional level, for implementation of sustainability was asserted and the concept of partnership between government, business and civil society for the implementation of sustainability was also promoted (United Nations 2002b). These are of particular importance to the idea of regional
sustainability in Western Australia, where an appropriate scale for implementing sustainability planning in partnership with these groups may be possible.

Australia’s initial response to the UNCED 1992 was positive, with Australia signing the climate change and biodiversity treaties, committing to reduction of greenhouse gas emissions, and asserting that it would be a leader in integration of the environment into decision making (Aplin, Mitchell et al. 1999). Australia’s national strategy for Ecologically Sustainable Development (ESD), released in 1992, identified ESD as the greatest challenge for Australians in the near future and aims to guide community, government and business towards sustainability. It recognises the need for:

- national, international and regional perspectives on natural resource management;
- consideration for threats from unsustainable practices to both the environment and the economy;
- integration of long-term economic, social and environmental considerations in decision making process, and policy making processes for governments, business and community.

(Commonwealth of Australia 1996)

The National Strategy also led to the evolution of:

- National State of the Environment Reporting,
- the National Greenhouse Response Strategy,
- the Intergovernmental Agreement on the Environment,
- the Oceans Policy,
- the National Action Plan on Salinity and Water Quality; and
- the Environmental Protection and Biodiversity Conservation Act (1999).

(Commonwealth of Australia 1996; Environment Australia 2003).
The Australian Conservation Foundation proposes stronger Commonwealth leadership on national and international environmental issues, and stronger national environmental laws to achieve greater sustainability in Australia (Krockenberger, Kinrade et al. 2000). While a critique of the national ESD process in not included in this thesis, it is suffice to say that much of the forward momentum that was established through Australia’s attendance and position at the 1992 UNCED meeting has slowed. Specific commitments to reduction of greenhouse gas emissions and biodiversity protection have been neglected (Aplin, Mitchell et al. 1999). The Commonwealth and United Nations Sustainability agendas provide a broad context for sustainability in Australia, yet sustainability has not been actively pursued. Increasing recognition of the need to implement sustainability on the ground requires consideration of an appropriate scale for sustainability strategies and there is growing realisation that a regional approach to sustainability is worth investigation.

A regional level provides a compromise between detached and de-contextualised decision making at a state or national level, and the potential for parochial decision making at a local scale, where local issues may either be given priority over regional issues, or decisions may be made without consideration of a broader context. Brown (2001) states that we know the type of change that is required to create a sustainable future, but that it is the pace of the change that is required that poses the greatest challenge to governance for sustainability. Decentralised decision making at the regional scale has the potential to be more adaptive and to respond more quickly to the required changes (Dore and Woodhill 1999a). Regions are small enough for local communities, businesses and government agencies to direct change, yet large enough for the effects of that change to be of state-wide benefit (Shearlock, James et al. 2000).

Inclusion of the need for Local Agenda 21 plans to implement the ideas of sustainability at a local level, in Agenda 21 at UNCED 1992 demonstrates long standing recognition
of the need for sub-national frameworks for the implementation of sustainability. These plans require Local Governments to consider the economic, social and environment issues that impact on sustainability in their area and collaborate with the local community in devising ways to become more sustainable (City of Adelaide 1996). Only 15 out of 142 Western Australian Local Government areas have committed to the process of developing local agenda 21 plans, and these are predominantly urban Local Government areas (Aplin, Mitchell et al. 1999; Government of Western Australia 2002; Western Australian Local Government Association no date-b). This further indicates the need for a regional scale process for sustainability in Western Australia, as factors such as size, low population and limited revenue raising and statutory powers of Local Governments may obstruct sustainability actions at a Local Government level, particularly in non capital city areas.

Maintaining natural environmental processes both for their own integrity and to ensure the future viability of human systems is central to sustainability discourse. The current global economy compromises the resource base upon which it relies for raw materials and waste assimilation, for food, clean water and air (Brown 2001). The flow on impact of global environmental issues, through, for example, their impact on global markets, regional environments, as well as the impact of specific regional environmental issues, will influence regional sustainability. Degradation of the natural environment threatens Australia’s long term socio-economic viability, and the need for a regional approach to

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6 Chapter 4 provides more detailed discussion of the roles of Local, State and Commonwealth Governments in regional planning.
7 For a thorough discussion of global scale environmental issue and their potential implications for sustainability, see the following texts:
   Western Australian Technology and Industry Advisory Council (2000) Drivers and Shapers of Economic Development in Western Australia in the 21st Century. WATIAC, September 2002,
natural resource management has been recognised as fundamental to its future sustainability (Dore and Woodhill 1999b; National Heritage Trust 2002).

There is large spatial variation in the type and extent of ecological degradation issues throughout Australia. Regional approaches to natural resource management have been developed to a greater extent than regional approaches to economic and social sustainability in an attempt to resolve environmental degradation issues on the ground. As society increasingly values the natural environment, ecological responsibility is likely to become both a source, and a requirement for competitive advantage in the global economy (Western Australian Technology and Industry Advisory Council 2000; World Resource Institute, United Nations Environment Program et al. 2002). Further discussion of ecological issues at a regional level in Western Australia is presented in Chapter 3. Case studies of regional natural resource management initiatives are presented in Chapter 6. However, global warming is discussed here as a global, national and regional issue of particular concern.

It is now known that greenhouse gas emissions will change the global climate and that this change is likely to impact severely on Australian environments and several sectors of the Australian economy (Manins 2001). The impact of global warming is likely to vary from region to region depending on broader climatic changes as well as the response of local environments and industries but is likely to include:
• Increases in extreme climatic events such as droughts and cyclones;
• Rising sea levels that alter coastal ecology and threaten coastal settlements;
• Changes in rainfall distribution and hydrological systems;
• Increased spread of pests and diseases;
• Altered agricultural productivity; and
• Increased land degradation


Whilst Australia was a keen signatory to the Framework Convention on Climate Change that emerged from UNCED 1992, it is unlikely to fulfil commitments made under this convention and has been an unenthusiastic participant in subsequent international attempts to increase emissions reduction targets. As global concern over climate change increased, political pressure and even economic pressure may force Australia to take more care with its response to global warming (Aplin, Mitchell et al. 1999; Western Australian Technology and Industry Advisory Council 2000; World Resource Institute, United Nations Environment Program et al. 2002). The impact of climate change therefore will depend both on the impact of climate change itself, as well as the impact of any emission reduction strategies on regional, state and national economies and environments. Planning for the impact of climate change at a regional level is an important consideration for sustainability.

The global sustainability agenda influences the policies and strategies of national, state and Local Governments, through creating pressure and also creating direction for implementing sustainability. There are also other global political trends that are relevant to regional sustainability.
Changing political and social trends and issues that influence regional sustainability

There is a global dimension to trends in economic policy, social values and the spatial expression of political power that influence sustainability in Australian regions. Changing social values, both in terms of the relationship between human and non human systems, and also changes in attitudes to poverty and oppression are challenging economic development processes that place economic growth at the centre of development concerns. Whilst economic forces may currently hold greatest sway in terms of global and national politics, these counter currents are increasingly influential (Hirst and Thomson 1997; Gray and Lawrence 2001). Increasing recognition of Indigenous rights is one such force that is discussed in particular detail as an issue of importance to regional sustainability.

Politically, globalisation has been associated with a trend towards capitalist democracy and neo liberalism, with many nations attempting to develop liberal democratic institutions if they do not have them already, and to develop market driven, outwards focused economies (World Resource Institute, United Nations Environment Program et al. 2002). Tension between the requirement for sustainability and the freedom of the global economy is emerging with global economic agreements often in conflict with social and environmental concerns. National economic policies, including Australian economic policy, are increasingly aligned with the perceived requirements of economic globalisation and there has been a trend away from both left and right wing state intervention in national economies. Economic deregulation and the privatisation of state owned enterprise, a philosophy of market based individualism⁸, and increasing reluctance to fund national welfare systems, are features of Australian and other national economies as they endeavour to conform to the requirements of a global free economy.

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⁸ – the idea that a free market can provide the needs and wants of each individual most efficiently
market (Gerritsen 2000; Botsman 2001). Yet as there is a global dimension to the pressure to conform to free markets, stemming from global economic agreements and the power of multinational and transnational business, there is also growing global pressure that stems from other global agreements as well as globally networked non-government organisations to ensure social justice and environmental protection (Brown 2001).

International governance mechanisms, including human rights treaties, environmental and economic agreements and conventions are becoming more influential on national law, as well as international trade. (World Resource Institute, United Nations Environment Program et al. 2002). There is, however, tension between forces for global economic governance and those that promote sustainability and social justice with sustainability often being at odds with the forces of global free trade. The World Trade Organisation is known to consider economic arguments over social or environmental arguments in its rulings. Yet opposition to this organisation is strong. 50,000 people protested against negative social and environmental consequences of global free trade agreements at a World Trade Organisation meeting in Seattle in 1999 (Brown 2001). At the World Summit for Sustainable Development in Johannesburg, in 2002, conflict between global economic agreements and global sustainability agreements remained unresolved. Yet it seems that rulings of the World Trade Organisation, and supranational regional economic bodies such as the North America Free Trade Association (NAFTA) Australasian Pacific forum for Economic Cooperation (APEC) continue to have greater force than both global treaties and national legislation regarding sustainability issues (Wiseman 1998; Gardiner 2002).

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9 The influences of economic globalisation on regions, and on national policies are discussed in more detail in the following section and in Chapter 4
For sub-national regions in Australia, there is an increasingly global dimension to support for managing regional sustainability issues, yet there is also a global dimension to the economic challenges that they must negotiate. As globalisation has increased the outward focus of national governments, it is also leading to changes in the expression of political power within nations. Particularly in Europe, sub-national regions are increasing their potential to function as economic, political and/or cultural entities in relationship with the nation, as well as other regions in other nations (Keating 2003). In the context of increased global integration, international economic, political and social forces are not only the concern of national governments but also concerns for regions.

Growing recognition of the rights of Indigenous peoples is a global trend that is of particular importance to regional sustainability in Australia and Western Australia. Indigenous Australians have historically been dispossessed of their land yet recent legal recognition of Indigenous rights through Native Title legislation, and increasing Indigenous management and joint management of land means that Indigenous Australians are becoming more powerful players in land management issues (Krockenberger, Kinrade et al. 2000). Native Title in Australia recognises Indigenous rights to land, in accordance with traditional customs and laws where traditional connections to land have been maintained and Native Title has not been extinguished by Government legislation or Acts of parliament (Wik Task Force 1998). Even though the rights that Native Title confers to Indigenous Australians are limited, and may only involve right to access but not ownership of land (Yunupingu 1997), Indigenous Australians manage 1/5 of Australia’s land mass and have some Native Title rights over around 2/3 of Australia (Krockenberger, Kinrade et al. 2000).

Indigenous people have traditionally been left out of development processes (Howitt 2001) and the need to recognise Indigenous rights creates a challenge for both traditional development and sustainable development processes. International
awareness of the rights of Indigenous peoples is growing. The role of Indigenous people in sustainable development is also increasingly recognised, with traditional Indigenous lifestyles often seen as examples of sustainability in practice (IUCN Inter-Commission Task Force on Indigenous Peoples 1997). The rights accorded to Indigenous people through international treaties and agreements that Australia is signatory to include:

- Rights to fair process in negotiating agreements on the use of land and resources, incorporation of Indigenous decision making systems and protection of Indigenous knowledge. These rights are established in Agenda 21 that emerged from the World Conference on Sustainable Development in 1992.

- The right to share in benefits of Indigenous knowledge, innovation and practice in biodiversity established through the Convention on Biodiversity.

- The right to development that integrates Indigenous knowledge, ethics and concerns, that enables equitable Indigenous participation and reflects Indigenous development aspirations as established in the United Nations Declaration on the Human Right to Development (IUCN Inter-Commission Task Force on Indigenous Peoples 1997).

- The right to respect for culture, participation in decision making and to rejection of assimilationist national policies as established in the International Labour Organisation Convention no. 169 (Organisacion Internacional Del Trabajo 1999).

Native title legislation and the rights that Australian Indigenous people have as a result of international treaties and agreements that Australia is signatory to, provide a broad framework to recognition of Indigenous rights in Australia. The importance of Indigenous communities to sustainability, and regional sustainability in particular, is asserted in the Draft State Sustainability Strategy. Diverse factors, including the value
of Indigenous culture and knowledge to the sustainability process, protection of Aboriginal heritage, Aboriginal economic development, and issues of housing, infrastructure, education and safety and health are cited as important to sustainability. The different circumstances that Indigenous people experience as well as diverse community, family and cultural groupings in different Western Australia places mean that local and regional approaches to both Indigenous sustainability, and Indigenous participation in the broader sustainability process are required.

The key objectives identified for Indigenous sustainability in the Draft Sustainability Strategy are:

- recognition of Native Title and its importance to the sustainability process,
- recognition of Indigenous cultural understandings as important to resource management,
- acknowledgement of Indigenous knowledge in land management practices,
- capacity building to support Indigenous regional sustainability, and
- recognition of Indigenous cultural diversity and governance mechanisms in future development

(Government of Western Australia 2002)

In this document it is proposed that Indigenous regional sustainability strategies be developed as a complement to broader regional sustainability strategies (Government of Western Australia 2002).

Whilst sustainability is frequently thought of in terms of integration of environmental concerns into decision making, there are clearly other influences of importance to sustainability, including global economic agreements and agreements on human rights and Indigenous rights. The emergence of Indigenous rights as a global and national concern requires Indigenous communities to be key players in the development or
Increasing integration of national economies on a global scale, however is one of the most powerful forces influencing national policies and regional economies.

**Economic Globalisation and the influence of global and national economic trends on regional economies**

Global economic trends, the national response to them and the diverse implications that these have for regions, is an important part of the context for regional sustainability, yet it is only one part of it. Overemphasising the role of economic globalisation is a reflection of neo-liberal policy agendas rather than economic necessity (Marinova 1997). The idea that there is no alternative to aggressively pursuing a globally oriented free market economic agenda may be a dangerous intellectual rigidity (Lester 2003). The impact of global and national economic trends for sub-national regions, and some of the ideas that different authors have on what this means for regions, are discussed here. It is the responsibility of the Commonwealth Government to set national economic policy (Beer 1999; Department of Transport and Regional Services 2002). Western Australian regions, as well as any State Government based strategies for their sustainability will need to work within the broader national economic framework which they have no direct power to change.

**Key Global Trends**

Increased global economic integration, means that global forces have a stronger influence on the development of local areas (Wiseman 1998; Keller 2001). Local and regional firms and industries are faced with global competition in price, access to capital and resources, and from expansion of transnational businesses that monopolise production, supply and distribution functions, and out compete smaller, local enterprise (City of Swan 2002). Increased global competition means that the capacity of a regional or local economy to enhance its own competitiveness rather than relying on
the state to intervene, is fundamental to economic success (Keating 2003). A sub-national, or regional response to global economic trends is increasingly required, as a direct result of the spatial implications of globalisation that emphasise place based, local qualities in attracting economic development.

Growth in global trade of natural resource commodities has slowed over the last 10-20 years and there has been an increase in competitiveness in natural resource prices. This is primarily a result of increasing importance of knowledge, and its embodiment in goods and services in the economy which has decreased the relative value of resource commodities (United Nations Economic Development Commission for Latin America and the Caribbean 2002). Resource dependent economies are suffering declining terms of trade in the global economy and traditionally resource dependent rural areas, worldwide, have been faced with an imperative to change or decline. Most rural regions that are thriving have diversified so that they do not solely rely on traditionally rural natural resource commodities (Keller 2001). As Australia, and rural and regional Australia in particular, are traditionally resource dependent this is a particular challenge. Much of regional Australia is faced with a dual challenge from globalisation. It is challenged both by declining terms of trade for natural resources and by the imperative to create change at a sub-national level that enables integration into the global economy in a positive way.

Economic globalisation has also changed the nature of the workforce. In developed countries such as Australia, employment in industries such as agriculture and manufacturing has declined and service sector and professional employment increased (Forster 1999; Aranachalum 2000). Changes in the workforce have spatial dimensions, with globally oriented cities increasingly providing highly skilled workers with high wages, while some regions experience declines in income and employment security as their workforce remains focused on declining primary and secondary industries.
(Wiseman 1998; Douglass 2001). Globally, this trend is reflected in an increase in unemployment and casual, part-time and temporary employment, with employment becoming less secure over time (Spiller 1999; Hancock, Howe et al. 2000).

Regional implications of global economic trends

Global economic trends, place based factors, and economic success are intrinsically linked within the current economic climate. Localisation of the influence of economic globalisation, changes in the structure of global trading systems and changes in employment trends have diverse influences on sub-national regions. Perceived advantages of location, including infrastructure, access to labour, materials or transport, and attractiveness as a place to live are vital determinants of investment, and labour attraction (Spillar 2000). These influences can be positive or negative. Most importantly, however, they require a regional response.

On the positive side, knowledge and information can be made relevant to local circumstances. Knowledge of existing industries, knowledge of the global economy regional innovations and regional culture and history can be integrated to create unique regional opportunities for economic development (Garlick 1999). Place based clusters of business are an emerging feature of the global economy that demonstrates the link between place or region, knowledge and success. Clusters are places of unusual economic success, where knowledge, networks, competition and cooperation promote competitive advantage (Porter 1998). They occur where related businesses develop within a supportive environment, have strong positive links to one another, and combine to enhance the economic success of an area. The computer industry in Silicon Valley in California or, in Australia, the Goulburn Valley food export industry, and the Margaret River wine industry are examples of place based clusters (Brown 1996; Loughton and Pollack 1998). Regional economic development, that is locally appropriate yet acknowledges important global trends, possibly including facilitation of
cluster development where appropriate, is one strategy that can be pursued to enhance economic performance in a global economy.

With regards to integration of knowledge within regional economies, innovation in existing industries such as mining and food and wine manufacturing, or sustainable agriculture are as important as the development of new knowledge intensive industries, like biotechnology or renewable energy. Increasing economic efficiency through economic diversification, moving towards the supply of value added products, and increasing investment in non resource based industries such as tourism and carbon trading, rather than relying on unprocessed agricultural commodities are new directions for regional economies to pursue (Lawrence, Share et al. 1993; Western Australian Technology and Industry Advisory Council 2000).

While knowledge has the potential to create competitive advantage in the global economy, there are other forces that can create competitive advantage or disadvantage in a global economy that have negative implications. Relative increases in the importance of finance and investment in global capital flows when compared to place based assets like factories or natural resources, mean that corporations can pressure governments to reduce industry regulations in areas such as wages, restrictions on working conditions, environmental standards and taxation. Removal of operations to another country or region with less regulation is a real threat. This process, where nations, or sub-national regions compete to offer, for example the lowest wages, the lowest taxes or the lowest environmental standard is known as downward levelling (Wiseman 1998). It demonstrates the potential of economic globalisation to have negative consequences for global and regional sustainability. It also demonstrates that becoming a winner or loser in the global economy is not only about integrating with the global economy: it is also about the way that a place
becomes integrated with the global economy. Some potential strategies for integration in the global economy have negative social, environmental and local economic effects.

Structural adjustment aimed at increasing Australia’s compatibility with global markets as well as the impact of economic globalisation have changed the balance of wealth between metropolitan and regional Australia. They have also had uneven spatial impact across regional Australia (Tonts 1999; Hugo 2001). Transition from a resource based to a knowledge based economy means that regional economies, particularly those based on primary resources, are less secure (Dixon 2001).

Globalisation has been unkind to regions outside the major urban centres. The common reliance of these areas on commodity products as their prime source of income has meant that they have generally suffered decline (Western Australian Technology and Industry Advisory Council 2000:45).

Structural adjustment has particularly affected farmers, where deregulation of agricultural and financial markets, removal of price supports, and the reduction of tariffs and import restrictions have combined to remove the market protection under which farmers previously operated (Tonts 1999). Conversely, many mining regions, which are also natural resource dependent, are thriving.

Emerging evidence of the need for regional planning in a global economy

Globalisation creates many challenges for regions, as all places are at least to some degree linked to the global economy, and local institutions and businesses need to be aware of a global context in decision making (Garlick 1999). It is frequently suggested that regions need to develop a coherent set of advantages to attract the type of development that they want to take part in, through harnessing external capital (Western Australian Technology and Industry Advisory Council 2000). However, recent research suggests that external business, talent and capital attraction alone are not necessarily the key to economic success in the long term. The spatial implications of
mobile capital are increasingly out of the control of nation states and local areas. An outward focus on global and national economic factors needs to be balanced by local and community development strategies and a recognition that the spatial implications of economic trends may need mediation.

The competition that emerged between the Shepparton and La Trobe Valley regions to attract National Foods Limited’s new dairy processing factory demonstrates the mixed fortunes entailed with attraction of large business into an area. Each region viewed the factory as a partial solution to regional unemployment, population decline, and service withdrawal, and as an excellent opportunity for regional economic development that would offer around 120 new jobs. Yet it would replace 2 processing plants, one in South Australia and one in New South Wales as well as 4 distribution centres and require less than half the labour currently required by these businesses. Gibson & Cameron et al (1999) suggest that attraction of large business offers less to regional economic development than may be expected, and can occur at the expense of other, more community driven activities that are at least as likely to enhance the local or regional economy. As investment can be attracted into a region, it can also be attracted out of a region and there is the risk of downward levelling in an attempt to attract external investment (Wiseman 1998; Gibson, Cameron et al. 1999).

Douglass (2001) uses an analysis of the Asian economic crisis of 1997 to demonstrate why outward focused, free market economic strategies and the attraction of transnational business make poor economic policy if they occur without strategic urban and regional planning. He argues that the uneven spatial development entailed in global strategies favours large, global cities and starves rural areas of both public and private investment, creating economies that are not resilient in crises. This was demonstrated in the Asian economic crisis, where withdrawal of capital from global Asian cities led to a decreased ability of these cities to absorb migration from rural areas and increasing
urban unemployment and poverty. Factors that include urban bias in planning as well as the impact agricultural modernisation meant that rural areas could not reabsorb people from the cities. Global integration without strategic regional and urban planning decreased economic resilience. It is suggested that a local and regional fabric of economic development that is more resilient to change may have been able to offset some of the consequences of this economic crisis (Douglass 2001; Kumsaa and McGee 2001).

An outward focus on global and national economic factors needs to be balanced by local and community based strategies as well. Douglass’ research suggests that local economic growth through diversification and value adding to offset the unpredictable nature of global capital, development of reciprocity between urban and rural regions and development of local governance mechanisms may balance globalisation forces at a regional and local level, creating regional economic resilience (Douglass 2001). An appropriate regional approach to economic development may involve facilitating internal economic growth, attracting external investment or a mixture of both strategies (Keating 2003). Attraction of industry, business and resources from outside the region needs to be balanced by local business retention and expansion strategies such as the development of new enterprises, plugging leaks in the local economy, increased job linking capacity within the community (Community Builders 2002).

*Global demographics and the integration of Australian regions into the global economy*

A recent report released by the World Resources Institute, *Tomorrow's markets: Global trends and their implications for business*, asserts that population dynamics are the most significant of all trends shaping world markets in the future (World Resource Institute, United Nations Environment Program et al. 2002). Population growth in most developed nations is at, or below, replacement level. Increasing population in the developing world, however will create large numbers of additional workers and
consumers in nations where maintaining even a basic standard of living for the poorest people is a global challenge (Brown 2001). New and growing markets will primarily occur in the developing world where affordability and the provision of basic needs is a central concern. Conversely, markets within the developed world will increasingly be focussed towards providing goods and services to a stable sized, ageing consumer base (Western Australian Technology and Industry Advisory Council 2000).

New innovations in areas such as affordable small scale renewable energy production, mobile communications systems, water and sanitation, health and sustainable agriculture are fundamental to supplying basic needs and are already growth areas of the global economy (World Resource Institute, United Nations Environment Program et al. 2002). The influence of global demographic trends on the future of the global economy is an important consideration for regions in Australia, particularly where a region faces a need to diversify its economy. Further, as much of regional Australia and Western Australia is remote it has a clear opportunity to be a leader in the development of these technologies.

Conclusion

Global economic forces, and the national policy responses to them are driving forces behind economic change in Australia. They are creating new challenges for sub-national regions where national governments once provided a mediating force. Economic considerations are often at the forefront of policy makers concerns, yet markets alone can’t produce optimal social, economic or environmental outcomes, particularly when their diverse spatial impacts are considered. Digesting and transforming the regional impact of these changes, and incorporating economic strategies within an integrated approach to sustainability, are important considerations for regional sustainability strategies.
Socio-demographic implications of national and global economic trends in Australia's regions

There are clear links between global, national and regional economic trends and issues. Many of the social issues experienced in Australia's regions are also closely linked to these economic trends and issues. Loss of population, particularly of young community members, ageing of the remaining population, withdrawal of services, and limited employment opportunities are recurring social issues throughout non-metropolitan Australia. While economic and ecological sustainability have been investigated in, Australia comparatively less attention has been given to social sustainability (Jones and Tonts 1995). Structural adjustment of farm related industry has created an economic crisis for many farmers, whose incomes are declining. This in turn impacts upon the town communities that service agriculture, that can enter a "downward demographic-economic spiral", where declining population leads to declining services, and economic hardship within the town in a self reinforcing cycle (Gray and Lawrence 2001:95).

The demographic trend of urbanisation is affecting all parts of the world. By 2005, 50% of the world’s population will live in urban areas (Keller 2001). Not only are more people living in urban areas, globally oriented urban areas, such as Sydney, Melbourne and to a lesser degree Perth, are increasingly dominating trade and attracting capital investment. The relationship between these global cities, the nation as a whole, and the regions that surrounding them is in a state of flux (Dockery 1996). In 2002, an estimated 64% of the Australian population was living in capital cities (Australian Bureau of Statistics 2003) and capital cities are growing at a faster rate than non capital city areas (Australian Bureau of Statistics 2000). Overall, the greatest proportion of job prospects, and higher paying jobs are in metropolitan Australia and regional centres, which attract growing populations. This combines with decline in some rural
sectors of the economy due to structural change to push and pull people out of rural areas and small country towns (Spiller 1999; Hugo 2001).

Highest population growth is recorded in outer suburban areas of capital cities and coastal strips where lifestyle attracts retirees and others who cannot afford lifestyle locations in capital cities. Regional centres that have particular lifestyle attractions, service mining operations, are in areas of growth in intensive agriculture or that increasingly pull residents from surrounding small towns in decline, are also experiencing strong population growth. (Australian Bureau of Statistics 2000; Gray and Lawrence 2001; Hugo 2001; Australian Bureau of Statistics 2003). Pastoral areas in central Australia, some areas of dryland wheat and sheep farming (including the Western Australian Wheatbelt) and regions that have experienced a decline or closure of traditional mining or manufacturing activities, are most likely to be experiencing population decline (Hugo 2001; Australian Bureau of Statistics 2003).

While population decline is a noted phenomenon in non-capital city Australia, it is spatially uneven (Gray and Lawrence 2001), and related to the broader demographic trends described above as well as internal and historical dynamics within regions: there are both push and pull factors that influence migration (Gilbert and Gulger 1992). The reasons behind small town decline and growth of regional centres and larger country towns, are complex, but partially explained by an increase in mobility due to improved transport, so that people can access cheaper and more diverse services provided by larger centres, causing loss of business and eventually loss of population in smaller towns. Over a longer timeframe, mechanisation of the agricultural industry, and absorption of smaller farms into larger properties has decreased the labour force and therefore ability to support population of some agricultural and pastoral regions (Hugo 2001; Rogers and Collits 2001). The introduction of equal wages for Aboriginal workers in 1969 had huge implications for many Aboriginal people and the distribution of
Aboriginal populations. Fitzroy Crossing, in the Western Australian Kimberley region, was described in the early 1970’s as a refugee town that sprung up as a result of Aboriginal people choosing, or being forced, to leave pastoral leases where they were no longer offered work (Pedersen and Woorunmurra 1995).

Population structure is also changing in Australia. Between 1901 and 2001, the proportion of Australians over the age of 65 trebled to 12%, and is likely to increase to 18% by 2020. Whilst population ageing is a result of declining birth rates and increased life expectancy, regional variations in age structure are the result of internal migration trends. Capital city Australia has a lower proportion of people over 65 (11.8%) than non capital city Australia (13.3%), resulting, in part, from higher education and employment prospects for youth in capital cities, and the attraction of non metropolitan coastal settlements for retirees. In non capital city areas, coastal lifestyle settlements and dryland wheat and sheep agricultural regions are most likely to have high proportions of aged residents. In contrast, remote inland regions of Australia have the lowest proportion of residents over 65 (Australian Bureau of Statistics 2002a). Many non metropolitan Australian regions that are in decline are losing residents in the 15-24 year age group at particularly high rates (Gray and Lawrence 2001). While children under 15 years are over represented in non metropolitan Australia, due to higher fertility rates, those young persons aged 20-34 are under represented (Hugo 2001).

Ageing, and loss of youth from the population are particularly marked among the farming community. Between 1986 and 1996 the number of farmers declined overall, the number of farmers aged between 15 and 34 almost halved and yet there was an increase in the number of farmers aged over 65 years (National Heritage Trust 2002:76-78). It is argued that urbanisation trends outlined above combine with rural youth aspiring to urban life, declining cultural relevance of farming as a lifestyle option, changing expectations of women towards career and marriage, all compound these
demographic shifts among farmers (National Heritage Trust 2002). Thus, it seems that the reasons behind regional population decline, in general, are compounded for farmers and for young people in particular, who leave declining regions at the highest rates to access better opportunities elsewhere.

Population movements are clearly linked to economic change and both affect broader regional socio-economic processes. Population decline, population ageing and loss of youth pose important challenges to social sustainability for affected regions. Social sustainability of rural communities has been defined as “the continuing ability of rural communities to retain their demographic and socio-economic functions” (Troughton 1993 in Jones and Tonts 1995:136). Cycles of service rationalisation, employment loss, and population decline not only affect the economic viability of a community, but they also eventually impact on the social structures of that community. Demographic and economic decline has potential to compromise the ability of these communities to be proactive to position themselves sustainably within the global and national economy, unless processes that facilitate their ability to take control of change are established (Centre for Strategic Economic Studies 2000). These trends are linked to the wealth disparity that increasingly occurs with distinct spatial dimensions, between capital city and non capital city Australia, between regions that are favoured in the current global and national economic climate, and those that are in decline (Wiseman 1998).

Social capital is increasingly viewed as essential to regional economic and community development within an economic climate that emphasises the role of communities in creating a positive future for themselves. Social capital is defined by Eva Cox as “the processes between people which establish networks, norms and social trust and facilitate co-ordination and co-operation for mutual benefit” (Cox 1996:15). Social capital is the networks and norms upon which active civil society and positive economic development are based. It is strongly related to the concept of trust. Feelings of trust
within the family and close community, towards strangers and those who are different, and in government systems are all important elements of social capital (Stone and Hughes 2001).

Research conducted by the Australian Institute for Family Studies suggests that non metropolitan Australian regions have strong social capital within close family and community networks. However, when social capital is measured in terms of networks and ties with individuals, groups and organisations outside close family and community networks, particularly those with access to power, non metropolitan regions on average show lower levels of social capital. Whilst close community bonds can provide support in times of crisis, social capital theory suggests that outward focused ties are needed if communities are to influence external pressures, and direct the change that their communities are experiencing. Gray and Lawrence (2001) point out that issues relating to rural culture, including gender, class and intercultural barriers further complicate the concept of social capital in regional Australia. They make a distinction between community and individual social capital, and emphasise that while strong social ties and levels of trust can be beneficial to a whole community, they can also be harnessed for the benefit of powerful individuals.

The links between social capital and sustainability of communities are clearly complicated, yet social capital remains a useful concept for describing and analysing community dynamics that can facilitate or obstruct sustainable change. Linking different regional communities and organisations and enabling community participation in decision making are potential policy measures to increase social capital in regional communities (Stone and Hughes 2001). Ensuring equitable participation by all interest groups particularly those who are traditionally left out of decision making processes is equally important. This theme is developed further in Chapters 5 and 6.
Conclusion

It is a complex melange of national and global trends that are blending with particular social and ecological and economic issues at a regional level to create regionally specific sustainability issues. It is clear that some regions, for example those that have their economic basis in declining industries, are disadvantaged in the current national and global climate. In Australia, since the late 1980s there has been a rising number of regional organisations and increased funding for regional activity (Dore and Woodhill 1999a). This can be seen as a partial response to many of these issues, particularly the economic and ecological issues that have been described. Integrated consideration of the diverse internal and external influences on regions and the interplay between them will be a challenge for implementing regional sustainable change. It is clear that a new approach to development is necessary for a sustainable future. In his closing address to the Johannesburg Summit, Kofi Annan, the secretary General of the United Nations stated

"we do expect conferences like this to generate political commitment, momentum and energy for the attainment of the goals…We invited the leaders of the world to come here and commit themselves to sustainable development, to protecting our planet, to maintaining the essential balance and to go back home and take action. It is on the ground that we will have to test how really successful we are" (United Nations 2002a).

It is the national and sub-national application of sustainability principles that will result in sustainable development. This is likely to require enabling community participation, rather than top down implementation sustainability strategies.
Chapter 3 Regional Trends and Issues in Western Australia

There is clearly a need to develop sustainability strategies which target rural/regional/remote communities and which acknowledge the very real differences between metropolitan and non-metropolitan communities… (Government of Western Australia 2002:58).

Introduction

Global trends in economy, social justice, demography and ecology provide a background context for development of regional sustainability strategies in Western Australia. However, it is the unique conditions within and between regions that require negotiation of sustainability at a regional level. These regional differences are assessed in this chapter primarily from indicators for Western Australian Administrative regions derived from the report *Indicators of Regional Development in Western Australia* (Department of Local Government and Regional Development 2003) 10. These indicators are useful in providing an overview of the types of conditions experienced in different regions, the degree to which they may be at risk of converging trends in environmental degradation, population loss and economic decline, and to demonstrate the clear existence of regional variation in sustainability issues. This has been assisted by the development of a regional index of decline from selected indicators, which is presented in the latter part of this chapter.

The data analysis presented in this chapter aims to help create an argument for the need for regional sustainability strategies but not to create an assessment of sustainability in each region. Information derived from various publications, the Australian Bureau of Statistics website and comparison with the content of Chapter 2 of this thesis is also included. It is recognised that an assessment of sustainability from within each region, that is relevant to and includes participation of regional communities

10 Unless otherwise stated, all statistics used are taken from the *Indicators of Regional Development in Western Australia* (Department of Local Government and Regional Development 2003).
will be necessary for the development of Regional Sustainability Strategies. Also, the boundaries of Western Australian Administrative regions may not reflect a scale of analysis that would otherwise be chosen for sustainability assessment.

**Western Australian Regional Economy**

Research suggests that while high amenity regions in Western Australia have a positive outlook, economically, high dependence on natural resource industries, predominantly low skill and low wage regional workforce, and remoteness that disconnects much of regional Western Australia from centres of economic activity, are key challenges for future prosperity in some regions (Synectics Creative Collaboration and Department of Commerce and Trade 1999). Regional economies in Western Australia are predominantly based on mining or agriculture, with agricultural industries more important in southern regions and mining dominant in the North of the state (Dockery 1996). Relative dependence on primary resources is more pronounced in Western Australia than it is in Australia as a whole (Western Australian Technology and Industry Advisory Council 2000). Table 1 presents indicators used to inform a regional analysis of the Western Australian economy.

An analysis of global and national economic trends has suggested that resource dependence leads to a declining economy. In spite of this, the Western Australian economy was growing at a more rapid rate than the Australian economy as a whole, at least until 1995 (Dawkins, Lang et al. 1996). Clearly Western Australia’s relative resource dependence creates some competitive advantage. Low population combined with resource abundance, may create regional competitive advantage in knowledge and technology intensive industries that serve natural resource exploitation industries (Saupin 1997). The relatively high gross regional product, and average wage for some resource rich regions, such as the Pilbara and Goldfields/Esperance in Western Australia reflect this analysis (Department of Local Government and Regional
However the social and environmental impact of natural resource dependence, including ecological degradation and the social implications of natural resource decline when it occurs, also needs to be considered. Any competitive advantage associated with natural resource dependence is limited to mining industries and Western Australian agricultural regions are declining. Further, without development of niche products from natural resource industries, accessing new and developing markets such as those offered by the developing world and development of local knowledge and technology based products, even those regions that currently thrive on natural resources extraction are at risk of future decline (Synectics Creative Collaboration and Department of Commerce and Trade 1999).

While Western Australian regions on average have a higher gross regional product, per capita than Perth, average wages and wage growth rates are lower and slightly more people earn less that $399 per week (Department of Local Government and Regional Development 2003). Perth is highly linked to the international economy, and may have begun to emerge as a location of choice for high technology service workers (Western Australian Technology and Industry Advisory Council 2000).

Some regions have experienced an overall increase in investment and employment and others have experienced a loss. Investment in mining developments in the Pilbara, Goldfields-Esperance and Mid-West regions is currently high, with much less investment in other Western Australian regions (Department of Local Government and Regional Development 2003). There is a quantifiable spatial dimension to wealth disparity between capital and non capital Western Australia that supports Australia wide trend analyses, discussed in Chapter 2.

Indicators demonstrate that the major regional industry for employment and the industry that contributes most to gross regional product influences per capita regional
product and average wages. All regions in Western Australia where wages were above the state average had mining as the major contributor to regional product, and either mining (Goldfields/Esperance and Pilbara) or government administration and defence (Kimberley) as the main industry of employment. Where agriculture, forestry and fishing was the major industry of employment, wages were consistently below State average. Lowest average wages occurred in the Great Southern and Wheatbelt regions, the only two regions where agriculture, forestry and fishing was also the major contributor to gross regional product (Department of Local Government and Regional Development 2003). The Mid West and Wheatbelt regions, both with agriculture forestry and fishing as the largest industry of employment, were the only regions to experience real declines in income between 1995 and 2000 (Department of Local Government and Regional Development 2003:60). There is a clear divergence in the economic fortunes of agricultural and mining regions, with mining regions coming out on top.

Unemployment is a complex issue that has both social and economic implications. Perth, State and non-capital city averages for unemployment were similar, between 6% and 7%, however, there was a diverse range of unemployment rates among Western Australian regions. Unemployment was highest in the Kimberley (14.3%), Mid West (8.3%), Gascoyne (7.8%) and Peel (7.2%) regions. With the exception of the Kimberley region, these regions were also highest in youth unemployment, and the Great Southern Region also experienced high youth unemployment. Indigenous unemployment was high throughout Western Australia, but was highest in Perth. The high proportion of Indigenous people receiving Community Development and Employment Program (CDEP) payments, however, explains comparatively low Indigenous unemployment in some regions, such as the Kimberley, where it was recorded as 8% in 1996. However, Indigenous unemployment in the West Kimberley, when CDEP participants are not included as employed is estimated as 63% (Department of Local Government and Regional Development 2003).
Hidden unemployment, a situation where people withdraw from the labour force and engage in other activities like study or home duties because they cannot find a job, is more common for youth and women, and distorts unemployment data to varying degrees (Whitfield and Ross 1996). CDEP, whilst an important source of skills development and community funding for Indigenous communities, is also likely to be a source of hidden unemployment for Indigenous Australians. Issues of hidden unemployment as well as factors like migration to access job opportunities compound generalised analysis of unemployment. The data, however, shows that unemployment trends are different in different regions, and therefore need deeper regional analysis. Employment opportunity influences retention of youth and of skilled labour, and is a key factor in population decline (Spillar 2000; Hugo 2001).
Table 1: Indicators of economic development by region in Western Australia

<table>
<thead>
<tr>
<th>Region</th>
<th>Gross Regional Product per Capita</th>
<th>Major Contributors to Gross Regional Product</th>
<th>Un-employment rate 2001</th>
<th>Youth Un-employment 2001</th>
<th>Indigenous Un-employment rate (excluding CDEP)</th>
<th>Major Industry of employment</th>
<th>Average wage 2000</th>
<th>% earning less than $399 per week</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gascoyne</td>
<td>$48,448</td>
<td>Fishing, Mining, Agriculture, Transport</td>
<td>7.8%</td>
<td>15-19 yrs 13.9% 20-24 yrs 10.7%</td>
<td>8.3% Agriculture, forestry fishing 16.2%, Retail trade 12.6%</td>
<td>$34,347</td>
<td>57%</td>
<td></td>
</tr>
<tr>
<td>Goldfields/Esperance</td>
<td>$100,084</td>
<td>Mining, Construction, Property</td>
<td>5.2%</td>
<td>15-19 yrs 13.8% 20.24 yrs 9.7%</td>
<td>13.5% Mining 21%, Retail Trade 14%</td>
<td>$38,112</td>
<td>44%</td>
<td></td>
</tr>
<tr>
<td>Great Southern</td>
<td>$29,271</td>
<td>Agriculture, Forestry, Fishing, Manufacturing, Finance and insurance</td>
<td>5.8%</td>
<td>15-19 yrs 16.4% 20-24 yrs 14%</td>
<td>22.1% Agriculture forestry fishing 22.4%, Retail Trade, 14.7%</td>
<td>$27,974</td>
<td>60%</td>
<td></td>
</tr>
<tr>
<td>Kimberley</td>
<td>$38,783</td>
<td>Mining, Health and community services, Transport</td>
<td>14.3%</td>
<td>15-19 yrs 9.7% 20-24 yrs 7.9%</td>
<td>7.8% Government admin., and defence 15.5%, Retail trade 9.9%, Health and community services 9.1%, Agriculture, forestry fishing 9.1%</td>
<td>$37,077</td>
<td>53%</td>
<td></td>
</tr>
<tr>
<td>Mid West</td>
<td>$58,509</td>
<td>Mining, Agriculture, forestry and fishing</td>
<td>8.3%</td>
<td>15-19 yrs 21.1% 20-24 yrs 16.2%</td>
<td>26.6% Agriculture, forestry, fishing 15.2%, Retail trade 14%, Mining 10.9%</td>
<td>$30,872</td>
<td>54%</td>
<td></td>
</tr>
<tr>
<td>Peel</td>
<td>$29,612</td>
<td>Mining, Manufacturing, Construction</td>
<td>7.2%</td>
<td>15-19 yrs 22.1% 20-25 yrs 17.4%</td>
<td>Included in Perth statistic</td>
<td>Retail trade 18.1%, Manufacturing 14.5%, Construction 10.4%</td>
<td>$34,686</td>
<td>61%</td>
</tr>
<tr>
<td>Pilbara</td>
<td>$114,625</td>
<td>Mining, Construction,</td>
<td>4.3%</td>
<td>15-19 yrs 10.8%</td>
<td>22.6% Mining 24%, Construction</td>
<td>$47,558</td>
<td>38%</td>
<td></td>
</tr>
<tr>
<td>Region</td>
<td>Employment Type</td>
<td>15-19 yrs</td>
<td>20-24 yrs</td>
<td>Retail trade</td>
<td>Average Salary</td>
<td>Economic Region</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>South West</td>
<td>Mining,</td>
<td>5.3%</td>
<td>21.7%</td>
<td>15.3%</td>
<td>$33,309</td>
<td>55%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Manufacturing,</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Construction</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wheatbelt</td>
<td>Agriculture,</td>
<td>4.4%</td>
<td>19.2%</td>
<td>34.2%</td>
<td>$28,690</td>
<td>58%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>forestry and</td>
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<tr>
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<td>fishing,</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Regional</td>
<td>Agriculture,</td>
<td>6.2%</td>
<td>15.1%</td>
<td>13.6%</td>
<td>$33,958</td>
<td>54%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>WA Total</td>
<td>forestry</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Perth</td>
<td>Finance and</td>
<td>6.6%</td>
<td>27.5%</td>
<td>15.9%</td>
<td>$35,951</td>
<td>52%</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>Insurance,</td>
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<tr>
<td></td>
<td>Property,</td>
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<tr>
<td></td>
<td>Manufacturing</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>State Total</td>
<td>Agriculture,</td>
<td>6.5%</td>
<td>19.3%</td>
<td>15.2%</td>
<td>$35,406</td>
<td>52%</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>forestry and</td>
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<tr>
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<td>fishing</td>
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</tr>
<tr>
<td></td>
<td>Manufacturing</td>
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</tr>
</tbody>
</table>
Social Indicators in Western Australia

Like Australia as a whole, the key demographic trend affecting Western Australia is a population shift away from smaller towns and some regions, and towards regional centres, Perth, and coastal high amenity areas. Falling populations in some parts of regional Australia, rationalisation of government services, and increases in fly in, fly out workers, particularly mine workers, compound these trends (Dockery 1996). Western Australia is also experiencing the demographic trends of an ageing population and increasing urbanisation. Unlike Australia as a whole, where regions overall are ageing more rapidly than capital cities, Perth has a higher proportion of people aged over 65 (10.9%) than the balance of Western Australia (10%). This is mainly a reflection of the young age structure of remote Western Australia, and rates of population ageing vary throughout Western Australia (Australian Bureau of Statistics 2002a). Further, when the proportion of people aged over 60, rather than 65 is assessed, regional Western Australia has a higher proportion of aged residents (15.8%) than Perth (15.1%) (Department of Local Government and Regional Development 2003), and this suggests that the age balance between regional and capital city Australia is changing. Table 2 presents some of the indicators used to inform the following analysis of population and other social factors in Western Australian regions.

Between 1995 and 1999, the population of Perth grew slightly faster (1.8%) than the rest of Western Australia (1.7%), with the general trend of increasing population in regional centres, and high amenity coastal strips also reflected in Western Australia (Australian Bureau of Statistics 2000). Regions with a higher than state average proportion (15.3%) of residents aged over 60 years included the Gascoyne (27%), Peel (21%), Wheatbelt (20.4%) and Great Southern Regions (17.4%). With the exception of the Peel region, which is known as a lifestyle settlement region for retirees (Peel Development Commission 2002) all these regions have agriculture, forestry and fishing as the major contributor to gross regional product and as the major industry of
employment. This reflects an Australia-wide trend towards ageing of farmers (Hugo 2001).

Regional Western Australia, on average, has a lower proportion of the population aged 15-24 (11.9%) than Perth (15.1%). This is likely to be related to an overall trend for youth to be more city oriented for work and post secondary study opportunities, as well as factors such as high proportions of students completing secondary school outside their region (Department of Local Government and Regional Development 2003). The Wheatbelt and Gascoyne, both agricultural regions had a particularly low proportion of people in the 15-24 year age group, reflecting the decreased attractiveness of farming to young people (Hugo 2001). It is likely that low proportions of young people in these regions at least partially explains the below average youth unemployment that is experienced by these regions. The Wheatbelt, for example, has been identified as experiencing demographic decline at least partly due to lack of youth employment opportunities (Jones and Tonts 1995). Low youth unemployment in this context may reflect a high rate of youth migration out of the region, rather than better than average youth employment opportunities.

The proportion of Indigenous Australians in different regions of Western Australia, ranging from less than 5% in Perth, the Wheatbelt, the South West, Peel and Great Southern regions to around 16% in the Gascoyne and Pilbara and 47% in the Kimberley, is another important consideration for regional sustainability in Western Australia. While issues such as Indigenous employment and economic and community development and Indigenous participation in decision making, are not necessarily more important in regions with higher Indigenous populations, the scale of initiatives in these areas may be much greater where there is a high proportion of Indigenous people. As recognised in the Draft State Sustainability Strategy, a regional approach to Indigenous
sustainability is needed due to the diversity of Indigenous people across the state (Government of Western Australia 2002).

Regional population growth rates were varied between regions. The Pilbara and Goldfields/Esperance regions experienced the greatest population decline (-1.3% and -1.4% respectively). The Peel and Kimberley regions experienced the highest population growth. As the Peel region is both coastal and adjoins Perth, its high growth can be explained by the general trend towards growth on the urban periphery, as well as in lower priced coastal settlements that are attractive to retirees (Department of Local Government and Regional Development 2003).
Table 2: Indicators of social conditions by region in Western Australia

<table>
<thead>
<tr>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Gascoyne</td>
<td>10,232</td>
<td>27%</td>
<td>8.3%</td>
<td>16.9%</td>
<td>1.6%</td>
<td>23.5%</td>
<td>92%</td>
</tr>
<tr>
<td>Goldfields-Esperance</td>
<td>55,255</td>
<td>9.2%</td>
<td>13.2%</td>
<td>10.3%</td>
<td>-1.4%</td>
<td>34%</td>
<td>80%</td>
</tr>
<tr>
<td>Great Southern</td>
<td>53,426</td>
<td>17.4%</td>
<td>11.8%</td>
<td>3.6%</td>
<td>1%</td>
<td>31.5%</td>
<td>0%</td>
</tr>
<tr>
<td>Kimberley</td>
<td>32,700</td>
<td>14.2%</td>
<td>13.1%</td>
<td>47.3%</td>
<td>4.4%</td>
<td>22.8%</td>
<td>99%</td>
</tr>
<tr>
<td>Mid West</td>
<td>50,463</td>
<td>15.5%</td>
<td>12.0%</td>
<td>10.3%</td>
<td>1%</td>
<td>31.9%</td>
<td>75%</td>
</tr>
<tr>
<td>Peel</td>
<td>76,734</td>
<td>21%</td>
<td>11.7%</td>
<td>1.9%</td>
<td>3.2%</td>
<td>31.6%</td>
<td>0%</td>
</tr>
<tr>
<td>Pilbara</td>
<td>39,676</td>
<td>7.9%</td>
<td>12.4%</td>
<td>16.5%</td>
<td>-1.3%</td>
<td>38.7%</td>
<td>97%</td>
</tr>
<tr>
<td>South West</td>
<td>129,925</td>
<td>14.9%</td>
<td>12.6%</td>
<td>2.2%</td>
<td>2.4%</td>
<td>33.1%</td>
<td>0%</td>
</tr>
<tr>
<td>Wheatbelt</td>
<td>72,407</td>
<td>20.4%</td>
<td>9.9%</td>
<td>4.6%</td>
<td>-0.1%</td>
<td>30.7%</td>
<td>12%</td>
</tr>
<tr>
<td>Regional WA</td>
<td>520,818</td>
<td>15.8%</td>
<td>11.9%</td>
<td>4.6%</td>
<td>1.3%</td>
<td>31.8%</td>
<td>-</td>
</tr>
<tr>
<td>Perth</td>
<td>1,339,993 11</td>
<td>15.2%</td>
<td>15.1%</td>
<td>1.5%</td>
<td>-1.3%</td>
<td>43.4%</td>
<td>-</td>
</tr>
<tr>
<td>WA Total</td>
<td>1,906,114</td>
<td>15.3%</td>
<td>14.2%</td>
<td>3.5%</td>
<td>1.5%</td>
<td>40.2%</td>
<td>-</td>
</tr>
</tbody>
</table>

Social capital was discussed in Chapter 2 as fundamental to regional sustainability. “There is a belief in many parts of regional Western Australia that there is a diminishing political will to invest in the means of reversing...decline and overcoming...disadvantage” (Synectics Creative Collaboration and Department of Commerce and Trade 1999:6). This clearly demonstrates a perceived lack of support to manage the negative impact of change in Western Australian regions and is of concern to regional sustainability in Western Australia. Yet as a whole, rural Western Australians had higher social capital scores, as measured by the Social Capital Index in the 2000 Health and Well Being Survey, than their metropolitan counterparts.13

The Living in the Regions Report (Western Australian Regional Development Council 1999) assessed regional community perceptions on a variety of issues. Satisfaction with recreational facilities, perceptions of safety, and community spirit are compared and give a preliminary indication of social capital within Western Australian regions. Overall, results were positive, yet the measures chosen primarily reflect social capital in

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11 Statistic not in the Indicators of Regional Development Report and taken from ABS 2001 Census Basic Community Profile for Perth, Census counts
12 Statistic not in Indicators for Regional Development Report, and taken from ABS 2001 Census Basic Community Profile for Perth, People of Indigenous Origin,
13 This index combines scores for social cohesion and generalised reciprocity, Generalised trust and community identity.
close community networks, rather than trust and networking beyond the close community and with institutions. Research has suggested that these types of social capital are lacking in many non metropolitan communities and challenge their ability to be proactive in directing change (Stone and Hughes 2001). The results of these measures are summarised as follows:

- The lowest proportion of people believed recreational facilities were good in their region in the Kimberley and Goldfields/Esperance regions.
- Perceptions of regional safety compared to Perth were highest in the Great Southern region, and lowest in the Peel and Mid West regions.
- Perception of community as a great place for kids was lowest in Goldfields-Esperance.
- Community spirit, a composite of responses to questions regarding friendliness, division, family stress, privacy and what each region was like for kids, was highest in the Great Southern region and lowest in the Goldfields/Esperance region. When broken down, scores reflected that
  - lowest perception of friendliness occurred in the Mid West,
  - highest division in the Gascoyne,
  - highest family stress in the Pilbara and Goldfields/Esperance regions; and
  - greatest influence of small town on privacy in the Kimberley and Gascoyne.

Whilst the results for each region were positive, the Goldfields/Esperance region most frequently received the least positive responses. This region is comparatively wealthy and this result suggests that the links between economic prosperity and social sustainability need further investigation.
Environmental problems are well recognised in regional Western Australia. The Western Australian State of the Environment Report (1998) identifies land salinity, maintaining biodiversity and salinity of inland waters as highest priority environmental issues in Western Australia (Government of Western Australia 1998). Environmental degradation has clear negative impact on the social and economic well being of people in some regions. For example, in the Western Australian Wheatbelt region, only 5-15% of natural vegetation remains. This is a huge threat to biodiversity and also threatens the social and economic well being of communities through decreasing farm viability (Jones and Tonts 1995). Table 3 presents indicators used in the following analysis of environmental conditions in Western Australian regions.
<table>
<thead>
<tr>
<th>Region</th>
<th>Landscape stress</th>
<th>% of total state mining area</th>
<th>% land area for agricultural or pastoral use</th>
<th>% land area at risk of shallow water tables 2000(^{14})</th>
<th>% agricultural land requiring treatment for soil acidity</th>
<th>% rangelands in good, fair and poor condition(^{15})</th>
<th>% native vegetation remaining</th>
<th>Level of exploitation of fisheries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gascoyne</td>
<td>Very high</td>
<td>0.1%</td>
<td>Agricultural 0.01% Pastoral 83%</td>
<td>Good 19% Fair 37% Poor 44%(^{16})</td>
<td>70% +</td>
<td></td>
<td></td>
<td>Major commercial species fully exploited</td>
</tr>
<tr>
<td>Goldfields-Esperance</td>
<td>Mainly very low</td>
<td>57.8%</td>
<td>Agricultural 2.1% Pastoral 20%</td>
<td>42% Good 39% Fair 33% Poor 28%</td>
<td>Varies 30% to 70% +</td>
<td></td>
<td></td>
<td>Major commercial species fully exploited</td>
</tr>
<tr>
<td>Great Southern</td>
<td>Mainly very high</td>
<td>1.2%</td>
<td>Agricultural 71.9%</td>
<td>4% 58%</td>
<td></td>
<td>30%-70%</td>
<td></td>
<td>Most commercially targeted species fully exploited</td>
</tr>
<tr>
<td>Kimberley</td>
<td>Lowest – high</td>
<td>1.1%</td>
<td>Agricultural 0.04% Pastoral 54.6%</td>
<td>Good 19% Fair 51% Poor 30%(^{17})</td>
<td>70% +</td>
<td></td>
<td></td>
<td>Most commercially targeted species fully exploited</td>
</tr>
<tr>
<td>Mid West</td>
<td>Predominantly high</td>
<td>24.8%</td>
<td>Agricultural 8.8% Pastoral 59.5%</td>
<td>72% Good 26.5% Fair 43.5% Poor 30%(^{18})</td>
<td>&lt;30% in agricultural areas, 70% elsewhere</td>
<td></td>
<td></td>
<td>Most commercially targeted species fully exploited</td>
</tr>
<tr>
<td>Peel</td>
<td>High – very high</td>
<td>0.4%</td>
<td>Agricultural 11.2%</td>
<td>Minimal 83%</td>
<td></td>
<td>30%- 70%</td>
<td></td>
<td>Most commercially targeted species fully exploited</td>
</tr>
<tr>
<td>Pilbara</td>
<td>Lowest – very high</td>
<td>6%</td>
<td>Pastoral 26.7%</td>
<td>Good 45.5% Fair 30% Poor 24.5%(^{19})</td>
<td>70%+</td>
<td></td>
<td></td>
<td>Most commercially targeted species fully exploited</td>
</tr>
</tbody>
</table>

\(^{14}\) Estimate only as data not collated at regional development commission scale
\(^{15}\) note incomplete results for Kimberley, Pilbara and Goldfields-Esperance
\(^{16}\) Average of Gascoyne and Carnarvon Basin
\(^{17}\) West Kimberley only
\(^{18}\) Average for Murchison and Sandstone Yalgoo
\(^{19}\) Average for Ashburton and Roebourne Plains
Across Western Australian regions, fisheries are close to fully exploited (Department of Local Government and Regional Development 2003). This is one example of the finite nature of natural resources, demonstrating that natural resource dependent economies cannot continue to expand indefinitely. Only three regions in Western Australia retain more than 70% of natural vegetation. These are the predominantly pastoral regions of the Gascoyne, Pilbara and Kimberley and the condition of rangelands varies. Despite a high proportion of natural vegetation, the Gascoyne region is classified as having very high landscape stress.

Substantial proportions of agricultural land in some regions require treatment for soil acidity or are at risk of salinity from rising water tables. Agricultural land in the South West, Peel and Mid West regions, were most likely to be affected by soil acidity. The Mid West, Wheatbelt and Goldfields/Esperance regions were most at risk of salinity. From an analysis of indicators, high landscape stress seemed linked to high utilisation of land for agricultural and pastoral use, particularly where 60% or more of the land in a region was agricultural or pastoral. This supports the assertion by the Natural Heritage Trust that agricultural industries are the highest users and degraders of the natural environment in Australia (National Heritage Trust 2002).

Presence of feral species, representation of bioregions in the reserve system, proportion of available water appropriated for human use and degradation of inland water ways are further areas of variation between and within regions of Western Australia.

- The Peel region, and the agricultural areas of the South-West, Great Southern and Wheatbelt had the highest levels of feral invasion.
- The Pilbara, Kimberley and Mid West regions have the lowest representation of their bioregions in the conservation reserve. This may be of particular concern
in the Mid West region, where landscape stress is classified as predominantly high.

- Perth, the Peel and Wheatbelt regions currently use large amounts of available water resources and as demand increases sustainable management of water supplies is increasingly necessary.
- Degradation of river systems is worst in the Wheatbelt, Mid-West and Great Southern regions, with salination, siltation, loss of riparian vegetation and alteration of river courses being key issues (Department of Local Government and Regional Development 2003).

**Western Australian regions and converging trends in ecological degradation, population loss and economic decline**

Structural adjustment of rural industries, declining terms of trade for natural resources and ecological degradation are enhancing the potential for population loss and economic decline in some regions, creating serious sustainability issues. These issues were discussed in more detail in Chapter 2 with regards to regional Australia in general. To measure these trends across Western Australian regions, an index of decline was created. It reflects a combination of relative indicators for:

- resource dependence or integration into the global economy;
- average regional wage;
- retention, attraction or loss of youth in the region;
- population growth or decline;
- degree of landscape stress; and
- proportion of regional land used for agriculture.

Each region, including the Perth metropolitan region, was ranked according to risk of a combination of negative trends in these areas compounding each other and leading to regional decline.
Methodology

- Choice of Indicators

Six indicators, 2 economic, 2 social and 2 environmental based indicators were chosen to create a broad sustainability measure that also reflects the degree to which each region is experiencing economic, population and ecological decline. Table 4 outlines each indicator that contributes to the index of decline, and the reason(s) that it was chosen.

*Table 4: Choice of indicators for a combined measure of environmental degradation, population loss and economic decline.*

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Reasons for choice of indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average wage</td>
<td>This indicator reflects spatial variation in wealth between regions. It was chosen over per capita gross regional product as in some regions high per capita gross regional product exists alongside comparatively low wages. It measures the degree that each region is experiencing the general trend of increased wealth disparity between capital and non capital city areas.</td>
</tr>
<tr>
<td>Major Industry of employment</td>
<td>This indicator reflects the degree of economic risk to regional residents as a consequence of resource dependence for each region. As global economic trends mean that resource based commodities are receiving declining terms of trade, resource based employment is less secure.</td>
</tr>
<tr>
<td>Population aged 15-24</td>
<td>It has been suggested in this thesis that loss of youth from a region’s population is a key indicator of decline, reflecting lack of employment, educational and entertainment opportunities in a region as well as the attraction of youth to capital cities.</td>
</tr>
<tr>
<td>Population Growth Rate</td>
<td>This indicator measures both attraction and decline of population across regions, reflecting their attractiveness as a place to live. In a global and national context where capital cities and regional centres are attracting increasing proportions of the population, population growth rate is a key indicator of a regions ability to support its population over time.</td>
</tr>
<tr>
<td>Landscape Stress</td>
<td>Ecological degradation is a key factor of regional sustainability, impacting on the long term social and economic viability of a region. This indicator reflects the degree of stress that the natural environment is subject to in each region.</td>
</tr>
<tr>
<td>% land areas used for agricultural or pastoral enterprise</td>
<td>Agricultural and pastoral industries have suffered the most, economically from structural adjustment and have the greatest impact on land and water resources. This is a reflection of the combined influence of these factors.</td>
</tr>
</tbody>
</table>


Complexities created by hidden unemployment and migration, discussed in more detail in chapter 3 meant that unemployment rates were seen as an inaccurate measure of employment opportunity in a region. So despite the importance of employment trends to social and economic sustainability, it was not chosen as part of the index.

- Scoring of Indicators

The four numerical indicators average wage, proportion of population aged 15-24, population growth rate and percent of land used for agriculture were all scored in the same way. Rank and percentiles for each data set were calculated using Microsoft Excel data analysis. Scores between –2 and 2 were then allocated according to the quartile that each region’s indicator score fell in. Positive scores were given for higher average wages, higher proportions of population aged 15-24, higher population growth rates and a lower proportion of land used for agricultural and pastoral purposes.

The two non-numerical indicators, major industry of employment and level of landscape stress were allocated scores between –2 and 2 by the researcher. Table 5 presents and explanation of the scoring for major industry of employment.

Table 5: Scoring for industry of employment in composite indicator on environmental degradation, population loss and economic decline

<table>
<thead>
<tr>
<th>Major Industry of Employment</th>
<th>Score</th>
<th>Reason for Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agriculture, forestry and Fishing</td>
<td>-2</td>
<td>As agricultural industries, in general, are experiencing declining terms of trade in the global economy more than other resource based industries, they were given the lowest score.</td>
</tr>
<tr>
<td>Mining</td>
<td>-1</td>
<td>Despite declining terms of trade for resource based industries, many mining regions perform well economically, both in terms of average wages and per capita contribution to gross regional product. However, closure of spent mines, lack of economic diversity, impact on environment, and long term sustainability all mean that mining regions may lack long term economic security. The score for mining is therefore still negative.</td>
</tr>
<tr>
<td>Government</td>
<td>0</td>
<td>This industry reflects neither resource dependence nor</td>
</tr>
<tr>
<td>Industry</td>
<td>Score</td>
<td>Description</td>
</tr>
<tr>
<td>----------------------------------</td>
<td>-------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>administration and defence</td>
<td></td>
<td>integration with the information economy. It is therefore neutral.</td>
</tr>
<tr>
<td>Retail</td>
<td>1</td>
<td>Retail as the major industry of people employed in retail trade is seen to reflect a more healthy regional economy that is supporting a diverse range of businesses. This industry therefore scores 1.</td>
</tr>
<tr>
<td>Finance and Insurance</td>
<td>2</td>
<td>This industry, reflects higher employment in information based industries, as well as greater integration with global trade systems. It scores 2.</td>
</tr>
</tbody>
</table>

Landscape stress was scored between −2 and 1 depending on the ranking given in the indicators of regional development report, which ranged from mainly very low to very high. Variation in landscape stress within regions is reflected by ambiguity in some descriptions of landscape stress for regions. For example, the Kimberley region was classified as lowest – high landscape stress. There is, therefore unavoidable subjectivity in this indicator. There was no indicator of landscape stress available for the Perth Metropolitan Region. The Perth region was allocated a score of −2 as it was assumed that this region has very high landscape stress due to the high level of human alteration of the human environment.

Tables that show the score for each region and rank regions according to their performance for each individual indicator are presented below.
Table 6 Scoring for average wage

<table>
<thead>
<tr>
<th>Region</th>
<th>Average wage</th>
<th>Rank</th>
<th>Percentile</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pilbara</td>
<td>$47,558</td>
<td>1</td>
<td>100.00%</td>
<td>2</td>
</tr>
<tr>
<td>Goldfields/Esperance</td>
<td>$38,112</td>
<td>2</td>
<td>88.80%</td>
<td>2</td>
</tr>
<tr>
<td>Kimberley</td>
<td>$37,007</td>
<td>3</td>
<td>77.70%</td>
<td>2</td>
</tr>
<tr>
<td>Perth</td>
<td>$35,951</td>
<td>4</td>
<td>66.60%</td>
<td>1</td>
</tr>
<tr>
<td>Peel</td>
<td>$34,686</td>
<td>5</td>
<td>55.50%</td>
<td>1</td>
</tr>
<tr>
<td>Gascoyne</td>
<td>$34,347</td>
<td>6</td>
<td>44.40%</td>
<td>-1</td>
</tr>
<tr>
<td>Southwest</td>
<td>$33,309</td>
<td>7</td>
<td>33.30%</td>
<td>-1</td>
</tr>
<tr>
<td>Midwest</td>
<td>$30,872</td>
<td>8</td>
<td>22.20%</td>
<td>-2</td>
</tr>
<tr>
<td>Wheatbelt</td>
<td>$28,690</td>
<td>9</td>
<td>11.10%</td>
<td>-2</td>
</tr>
<tr>
<td>Great Southern</td>
<td>$27,974</td>
<td>10</td>
<td>0.00%</td>
<td>-2</td>
</tr>
</tbody>
</table>

Table 7 Scoring for proportion of population aged 15-24

<table>
<thead>
<tr>
<th>Region</th>
<th>Population aged 15-24</th>
<th>Rank</th>
<th>Percentile</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perth</td>
<td>15.20%</td>
<td>1</td>
<td>100.00%</td>
<td>2</td>
</tr>
<tr>
<td>Goldfields/Esperance</td>
<td>13.20%</td>
<td>2</td>
<td>88.80%</td>
<td>2</td>
</tr>
<tr>
<td>Kimberley</td>
<td>13.10%</td>
<td>3</td>
<td>77.70%</td>
<td>2</td>
</tr>
<tr>
<td>South West</td>
<td>12.60%</td>
<td>4</td>
<td>66.60%</td>
<td>1</td>
</tr>
<tr>
<td>Pilbara</td>
<td>12.40%</td>
<td>5</td>
<td>55.50%</td>
<td>1</td>
</tr>
<tr>
<td>MidWest</td>
<td>12.00%</td>
<td>6</td>
<td>44.40%</td>
<td>-1</td>
</tr>
<tr>
<td>Great Southern</td>
<td>11.80%</td>
<td>7</td>
<td>33.30%</td>
<td>-1</td>
</tr>
<tr>
<td>Peel</td>
<td>11.70%</td>
<td>8</td>
<td>22.20%</td>
<td>-2</td>
</tr>
<tr>
<td>Wheatbelt</td>
<td>9.90%</td>
<td>9</td>
<td>11.10%</td>
<td>-2</td>
</tr>
<tr>
<td>Gascoyne</td>
<td>8.30%</td>
<td>10</td>
<td>0.00%</td>
<td>-2</td>
</tr>
</tbody>
</table>

Table 8 Scoring for population growth rate 2000-2001

<table>
<thead>
<tr>
<th>Region</th>
<th>Population growth rate 2000-2001</th>
<th>Rank</th>
<th>Percentile</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kimberley</td>
<td>4.40%</td>
<td>1</td>
<td>100.00%</td>
<td>2</td>
</tr>
<tr>
<td>Peel</td>
<td>3.20%</td>
<td>2</td>
<td>88.80%</td>
<td>2</td>
</tr>
<tr>
<td>South West</td>
<td>2.40%</td>
<td>3</td>
<td>77.70%</td>
<td>2</td>
</tr>
<tr>
<td>Gascoyne</td>
<td>1.80%</td>
<td>4</td>
<td>66.60%</td>
<td>1</td>
</tr>
<tr>
<td>Perth</td>
<td>1.40%</td>
<td>5</td>
<td>55.50%</td>
<td>1</td>
</tr>
<tr>
<td>Great Southern</td>
<td>1%</td>
<td>6</td>
<td>33.30%</td>
<td>-1</td>
</tr>
<tr>
<td>MidWest</td>
<td>1%</td>
<td>6</td>
<td>33.30%</td>
<td>-1</td>
</tr>
<tr>
<td>Wheatbelt</td>
<td>-0.10%</td>
<td>8</td>
<td>22.20%</td>
<td>-2</td>
</tr>
<tr>
<td>Pilbara</td>
<td>-1.30%</td>
<td>9</td>
<td>11.10%</td>
<td>-2</td>
</tr>
<tr>
<td>Goldfields/Esperance</td>
<td>1.40%</td>
<td>10</td>
<td>0.00%</td>
<td>-2</td>
</tr>
</tbody>
</table>
Table 9 Scoring for % land area used for agricultural or pastoral enterprise

<table>
<thead>
<tr>
<th>Region</th>
<th>% land area for agricultural or pastoral use</th>
<th>Rank</th>
<th>Percentile</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gascoyne</td>
<td>83.10%</td>
<td>1</td>
<td>100.00%</td>
<td>-2</td>
</tr>
<tr>
<td>Great Southern</td>
<td>71.90%</td>
<td>2</td>
<td>88.80%</td>
<td>-2</td>
</tr>
<tr>
<td>Wheatbelt</td>
<td>69.10%</td>
<td>3</td>
<td>77.70%</td>
<td>-2</td>
</tr>
<tr>
<td>MidWest</td>
<td>67.10%</td>
<td>4</td>
<td>66.60%</td>
<td>-1</td>
</tr>
<tr>
<td>Kimberley</td>
<td>55%</td>
<td>5</td>
<td>55.50%</td>
<td>-1</td>
</tr>
<tr>
<td>South West</td>
<td>47.10%</td>
<td>6</td>
<td>44.40%</td>
<td>1</td>
</tr>
<tr>
<td>Pilbara</td>
<td>26.70%</td>
<td>7</td>
<td>33.30%</td>
<td>1</td>
</tr>
<tr>
<td>Goldfields/Esperance</td>
<td>22.10%</td>
<td>8</td>
<td>22.20%</td>
<td>2</td>
</tr>
<tr>
<td>Peel</td>
<td>11.20%</td>
<td>9</td>
<td>11.10%</td>
<td>2</td>
</tr>
<tr>
<td>Perth</td>
<td>0.00%</td>
<td>10</td>
<td>0.00%</td>
<td>2</td>
</tr>
</tbody>
</table>

- The index of decline and the ranking of regions

Each indicator was weighted evenly in the creation of the composite indicator, which is the result of:

  o Adding the scores for each indicator in each region to give a total score;
  o Calculating a rank and percentile for each region using the data analysis function in Microsoft Excel.
  o Dividing the regions into four groups according to the quartile into which they fell and giving them a score ranging from low risk and below average risk for the first to above average risk and high risk of decline.

Criticism of Index

It is recognised that this index of comparative ecological degradation, population loss and economic decline provides only a generalised comparison of the regions according to a particular syndrome identified in some areas of regional Australia, particularly by authors such as Gray and Lawrence (2001). Table 13 provides a summary of some possible criticisms of this indicator, and the assumptions that it makes. Reflection on

20 This score is assumed as the amount of agriculture in the Perth metropolitan region is negligible
the potential problems with each indicator chosen to contribute to the composite indicators, as well as general problems and assumptions are included.
### Table 10: Critique of Index of Decline

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Potential problems and assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Average wage</strong></td>
<td>This indicator provides no measure of the wealth disparity within each region, so high wealth disparity within a region may mask intra-regional poverty issues. For example, whilst the Kimberley had a comparatively high average wage, there was also a comparatively high proportion of residents earning below $399 per week.</td>
</tr>
<tr>
<td><strong>Major Industry of employment</strong></td>
<td>There are several potential problems with this indicator. Overall, the diversity of industries within each classification, their relative employment value, and their growth potential is not measured. It is assumed that agriculture is the major component of employment in the classification agriculture, forestry and fishing, and that all forms of agriculture, forestry and fishing and mining are associated with decline. This is unlikely to be the case, yet given the results of research undertaken and presented in chapter 2, this indicator is still considered worthwhile.</td>
</tr>
<tr>
<td><strong>Population aged 15-24</strong></td>
<td>This is seen as an accurate and useful measure of youth population dynamics.</td>
</tr>
<tr>
<td><strong>Population Growth Rate</strong></td>
<td>This is seen as an accurate and useful measure of overall population dynamics.</td>
</tr>
<tr>
<td><strong>Landscape Stress</strong></td>
<td>As described in the <em>Indicators for Regional Development Report</em> (Department of Local Government and Regional Development 2003), degree of landscape stress was assessed by bioregion and then approximated for each region from this. The classification used to create the composite indicator further influences the sensitivity of this measure. It is a general indication only, yet still considered useful.</td>
</tr>
<tr>
<td><strong>% land area used for agricultural or pastoral enterprise</strong></td>
<td>Like the indicator that reflects industry of employment, choosing this as a negative indicator assumes that agricultural and pastoral land uses have negative environmental and economic implications. There is no measure of the relative environmental and economic implications of different agricultural and pastoral industries or properties.</td>
</tr>
<tr>
<td><strong>General assumptions and criticisms</strong></td>
<td>• Each indicator is given equal weighting, yet in each region the relative importance of each indicator may vary.</td>
</tr>
<tr>
<td></td>
<td>• The indicators do not measure the particular reasons for each negative or positive condition.</td>
</tr>
<tr>
<td></td>
<td>• The indicator is designed to measure relative disadvantage from and outside perspective. As such, it is framed negatively, and it has been created with little consideration for on the ground sustainability issues, particularly from the perspective of locals. This is antithetical to ideals of community participation and control.</td>
</tr>
<tr>
<td></td>
<td>• Inclusion of Perth within a data set that is essentially designed to measure rural issues has potential to skew the final ranking of regions according to risk of decline. However, it is useful to measure the accuracy of the indicator. Perth is of least risk of decline, and this is expected.</td>
</tr>
</tbody>
</table>
• Regions are compared against each other only, not against a standard that reflects actual presence or absence of decline.
• Indicators that reflect trends over time, such as population growth rates over a five or ten year period would have incorporated an longer term view into the index.
• The influence of fly-in fly-out workers is not quantified but may be particularly marked in mining regions.

Despite the above criticisms, the indicator may provide a useful tool for measuring the degree to which each region is at risk of decline.

**Results**

Table 11 presents the results of this indicator for each region. This measure clearly demonstrates interregional differences in risk of decline.

**Table 11 Rank and risk of decline by region in Western Australia**

<table>
<thead>
<tr>
<th>Region</th>
<th>Total Score</th>
<th>Rank</th>
<th>Percentile</th>
<th>Quartile</th>
<th>Risk of Decline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perth</td>
<td>6</td>
<td>1</td>
<td>100.00%</td>
<td>1</td>
<td>Low Risk</td>
</tr>
<tr>
<td>Kimberley</td>
<td>5</td>
<td>2</td>
<td>88.80%</td>
<td>1</td>
<td>Low Risk</td>
</tr>
<tr>
<td>Goldfields/Esperance</td>
<td>4</td>
<td>3</td>
<td>66.60%</td>
<td>2</td>
<td>Below Average Risk</td>
</tr>
<tr>
<td>SouthWest</td>
<td>4</td>
<td>3</td>
<td>66.60%</td>
<td>2</td>
<td>Below Average Risk</td>
</tr>
<tr>
<td>Peel</td>
<td>3</td>
<td>5</td>
<td>55.50%</td>
<td>2</td>
<td>Below Average Risk</td>
</tr>
<tr>
<td>Pilbara</td>
<td>1</td>
<td>6</td>
<td>44.40%</td>
<td>3</td>
<td>Above average Risk</td>
</tr>
<tr>
<td>Gascoyne</td>
<td>-8</td>
<td>7</td>
<td>22.20%</td>
<td>4</td>
<td>High Risk</td>
</tr>
<tr>
<td>MidWest</td>
<td>-8</td>
<td>7</td>
<td>22.20%</td>
<td>4</td>
<td>High Risk</td>
</tr>
<tr>
<td>Great Southern</td>
<td>-9</td>
<td>9</td>
<td>11.10%</td>
<td>4</td>
<td>High Risk</td>
</tr>
<tr>
<td>Wheatbelt</td>
<td>-12</td>
<td>10</td>
<td>.00%</td>
<td>4</td>
<td>High Risk</td>
</tr>
</tbody>
</table>

**Discussion and conclusions**

A brief analysis of inter-regional differences between selected economic, social and ecological indicators demonstrates that some of the general trends identified in Chapter 2 as challenges for regional Australia’s future sustainability are present, to differing degrees in Western Australia’s regions. These include:

• relative resource dependence;
• general wealth disparity between capital city and non capital city areas,
• population decline or decreased population growth and loss of youth in agricultural regions; and
• ecological degradation.

However there were several exceptions to these general trends. For example:
• Residents of resource rich regions like the Pilbara and Goldfields Esperance on average earned higher wages than Perth residents; and
• The regions of the Peel and Kimberley achieved higher population growth than Perth.

All non capital city regions in Western Australia were more natural resource dependent than Perth when the relative importance of mining and agriculture in gross regional product and as an industry of employment is considered.

A key association that can be made from analysis of ecological, social and economic indicators for regional Western Australia is that in regions of high landscape stress, a high percentage of land is used for agriculture or pastoral uses, a high proportion of people are employed in the agriculture forestry and fisheries industry sector, and wages are lower than state average. This is the case for the Gascoyne, Great Southern and Wheatbelt Regions. To a varying extent, these regions are at the centre of converging trends in environmental degradation and global and national markets, where declining terms of trade and declining environmental wellbeing are compounded and have negative regional socio-economic consequences. This is further reflected in the indicator of relative risk of decline, where these three regions are all classified as at high risk of decline. Lawrence (1993) argues that as farmers manage Australia’s agricultural productivity, and their activities have a clear influence over ecological sustainability, there may be a special case for intervention to facilitate a transition to more sustainable agriculture. Given the above associations, this may be an important consideration for regional sustainability strategies in Western Australia.
Regions where mining is the major contributor to the regional economy, and gross regional product per capita and average wages are high are not necessarily associated with better social or demographic indicators. This reflects Australian research that shows increases in wealth coexisting with increased perceptions of inequality and decreased quality of life. The links between economic prosperity and social well being are not always clear (Cox 1998; Australian Bureau of Statistics 2002b). For example, residents of the Goldfields/Esperance region had the least positive results of all regions for satisfaction with recreational facilities, perception of the region as a great place for kids and for community spirit. This region was also experiencing the greatest population decline of all regions. Yet average wages, and gross regional product per capita in this region were second only to the Pilbara region and measures of environmental degradation were relatively low. This region was classified as at below average risk of decline. However a deeper analysis suggests that negative social indicators may be a key concern for regional sustainability.

It has been suggested that economic diversity may be essential to future success, particularly for resource dependent economies. This may be the case for mining regions as well as agricultural regions which are more likely to be experiencing economic decline. Social capital is strongly linked to the ability of a community to be proactive in directing the change that it is experiencing (Stone and Hughes 2001). So despite relative wealth, lower social capital in resource rich regions like the Goldfields/Esperance may have potential to threaten future viability, through threatening the ability of the regional community to create a more diverse regional economy. Conversely, relatively high levels of social capital in regions with declining economies, such as the Great Southern region may indicate a strong ability create positive vision for the future of the region, if processes that facilitate community control
of futures planning are enabled. The links between social capital and economic sustainability in Western Australian regions need further investigation.

The index of decline that has been presented demonstrates that there are some regions that are experiencing, or at risk of experiencing compounding trends in declining population, environment and economy. This is the case particularly in the Wheatbelt and Great Southern regions and to a lesser extent, the Gascoyne and Mid West Regions. Research undertaken in the Wheatbelt region confirms this result (Jones and Tonts 1995). It may be the case, however, that this index measures a set of trends that are related to agricultural regions in particular and are less relevant to non agricultural regions or those regions where agriculture is not a major land use or contributor to regional employment and economy. The above discussion has pointed out that social capital may be lower in some resource rich regions, which are also at risk, economically, in a global economy where natural resources are declining, in terms of trade. This is not measured in this index of decline. So this index neglects some of the positives that may be present in these so called declining regions, and fails to pick up some of the potential negatives in resource rich regions.

Overall, the analysis of different regions within Western Australia demonstrates the diversity in conditions that occur as a result of local circumstances, national trends and issues and global pressures. There are regions in Western Australia at particular risk of converging trends in economic, population and ecological decline and there is a particular need to facilitate sustainable change in these regions. It is also demonstrated that further research into sustainability at a regional level, particularly for resource rich regions, is imperative. Therefore, if this chapter suggests nothing else, it suggests that the experience of sustainability, or unsustainability in Western Australia is spatially diverse and requires regionally relevant mechanisms, that use regionally specific information, for planning change.
Chapter 4: Regional policy and regional development in Australia and Western Australia

Introduction

To this point, this thesis has developed a background context and argument for a regional approach to sustainability planning in Western Australia. It moves now to investigate potential mechanisms for enabling this to occur. There is no mechanism for regional governance in Australia (Stilwell 2000), yet this thesis presents an argument for the regional coordination of sustainability planning. Strategic regional development is essential to sustainability in regional Australia. Despite the rhetoric that asserts that national governments are no longer key players in national economies in an increasingly integrated globe, the spatial implications of globalisation and the imperative of sustainability require strong government to:

- ensure recognition of the regional spatial implications of globalisation;
- develop indicators for sustainability;
- ensure social justice and ecological sustainability are not sacrificed for economic development: and
- to ensure the long term resilience of whole state and national economies (Wiseman 1998; Douglass 2001)

Currently this does not occur in Australia, and regional sustainability strategies may be able to increase the integration of these concerns.

Trends and issues in regional policy and development

Essentially, regional policy in Australia has evolved from post World War II regional policy initiatives aimed at decentralising development to non-capital city regions. Regional planning in Australia and other countries began as a centralised, top down process of planning of decentralised growth poles through which more equitable spatial
development was to be promoted (Beer 1999; Douglass 2001). This has been applied through regionalisation of the functions of government departments as a mechanism to address spatial inequality across Australia. It has been designed to address disadvantage that occurs through uneven development, or change in industry structure creating, for example, regions of high unemployment. This approach has evolved from a centralised approach to regional development to one that increasingly views regions as part of a national and global context, with local stakeholders being viewed as best placed to know their region’s strengths and weaknesses, and to facilitate longer term change (Garlick 1999).

Regional policy and development ideology increasingly recognises the importance of locally driven development, particularly economic development that results from local innovation, entrepreneurialism, and the development of local industry clusters interacting with global markets (Beer 2000). This reflects global trends already discussed in economic development, and the need to integrate with the global economy. Since the 1990s, increasing recognition of the spatial dimensions of economic change, from a government policy perspective but also environmental degradation and social well-being particularly among researchers, has created a political and academic climate that is conducive to regional policy development and analysis, and possibly the development of regional governance organisations (Dore and Woodhill 1999a; Beer 2000; Kumsaa and McGee 2001).

The nature of government in Australia means that State and Commonwealth Governments share the government’s portion of responsibility for regional development, with Local Governments and regional organisations of Local Government also being important players. The Commonwealth Government has more access to revenue than State Governments. Funding is redistributed to states according to Commonwealth policy. Any planning for regional sustainability requires coordination of
Local, State and Commonwealth Government initiatives in regions as well as coordination of government and non-government and community initiatives (Dore and Woodhill 1999a).

Australia’s system of cooperative federalism means that Commonwealth, State and Local Governments will all influence regional sustainability outcomes. Yet it has also tended to mean that no level of government takes full responsibility for ensuring a coordinated and well thought out approach from government to regional initiatives (Alexandra 1999). For example, The Commonwealth has the access to funding necessary to implement regional development programs, yet often claims that there is no constitutional mandate for it to do so. At the State level, concentration of political power in capital cities and reluctance to devolve responsibility has obstructed regional autonomy. Local Governments may have large responsibilities in many areas of regional development, yet lack funding to fulfil them (Beer 2000). Local Governments and regional associations of Local Government come closest to regional governance mechanisms (Gray and Lawrence 2001), yet the Local Government sphere has the least capacity to act independently, or to raise revenue out of all the spheres of government in Australia (Gerritsen 2000).

Until 2000, when State, Federal and Local Governments developed a Framework for Cooperation on Regional Development (Department of Transport and Regional Services 2002), there was no clear delineation of responsibility between the three spheres of government. As a result of this history, definition of jurisdiction and boundaries for regional governance organisations, the roles the regional organisations play in relation to central State or Commonwealth Governments, accountability mechanisms, and the provision of resources in proportion to the tasks required of regional organisations, have been ongoing issues (Alexandra 1999).
The Framework for Cooperation on Regional Development states a commitment from all spheres of government to regional development that promotes ecological, social, cultural and economic well being, through cooperation between spheres of government, and with regions. Developing capacity to adjust to change, to develop and retain business and enhance economic diversity and to provide essential infrastructure and investment for development are key areas of cooperation. Specific responsibilities are set for Federal and State Governments in regional development, and the role of Local Governments is acknowledged. Minimising overlap between government programs, empowerment of regional communities through capacity building and leadership development, cooperation between government and private sectors, building on existing programs for government service delivery, increasing competitive and comparative advantage in regional areas and consultation between spheres of government on decisions and to share best practice are all set as principles for cooperation in regional development (Department of Transport and Regional Services 2002).

The key role established for the Federal government is to create a sound economic climate with macro and micro economic policy that is in the broad national interest, with targeted assistance programs where they are also in the national interest. Primary responsibility for regional development is allocated to State and Territory governments, who can develop programs and policies on a range of issues to facilitate a positive economy and business environment, service delivery, and environmental management in an appropriate way. The role of Local Governments and Regional Associations of Local Governments in partnerships between spheres of government and with business or community, and as key players on the ground in regional development activities is recognised, however Local Governments are not allocated a specific role in regional development (Department of Transport and Regional Services 2002). This reflects the fact that in Australia, Local Governments essentially have no powers beyond those
established by State legislation. They also have minimal funding, particularly where the population and therefore the rates base is low (as is frequently the case in regional Western Australia) outside that provided and tied by State and Commonwealth grants (Daly 2000).

**Commonwealth Government regional policy**

The influence of the Commonwealth Government on regional policy goes further than the key roles it is allocated in the Intergovernmental Framework for Cooperation on Regional Development. As the Commonwealth Government has higher access to tax monies that it redistributes to the states, it can influence the level of funding for, and therefore the direction that regional initiatives in the States take. The Commonwealth has a strong influence on economic issues in the regions, through its control over funding and international and interstate trade. It also has an influence over issues relating to international agreements through its external affairs powers. Most Commonwealth portfolios influence regional development in some way and in addition there are a number of non-government and advisory bodies that feed into the Commonwealth policy making process, such as the CSIRO and the Australian and New Zealand Environment and Conservation Council (Dore and Woodhill 1999b). Commonwealth Government policy as well as these national agencies will influence regional sustainability in Western Australia.

In Australia, since the late 1980s there has been a rising number of regional organisations and increased funding for regional activity from Commonwealth Governments (Dore and Woodhill 1999a). Overall, however, there has been a fragmented approach to regional development, with changes in government bringing changes in policy and structural organisation. A complex network of regional organisations that are either facilitated by current government decisions, or left over from spent government policy exists with professionals, government workers and
communities all confused with regards to relevant funding, programs and organisations (Beer 1999). Regional issues have been seen as important at the Commonwealth level, and have become influential at election times. At the 1998 Federal election, there was an increase in regional support for Independent regional candidates, the One Nation Party and in some areas the Greens or Labour, where National or Liberal party candidates once were comfortable (McManus and Pritchard 2001).

The Commonwealth Government has responded to pressure from the electorate through regional policy development, that has focused primarily on market mechanisms with some restructuring of service delivery (Garlick 1999). This response is viewed by McManus and Pritchard (2001) as inadequate in solving regional issues. From a sustainability perspective, it fails to integrate social and environmental issues within the policy arena. To reflect on the discussion on global and national trends, if regional fortunes are varied amid an overall trend for increased investment and economic dominance of capital cities, then relying on market forces only for regional development is unlikely to prevent continued decline. Regions require time to adjust to changing economic climates as well as acknowledgement of the spatial elements of change affecting each region, including ecological, socio-cultural and economic dimensions (McManus and Pritchard 2001). Further, if regional policy is developed as a reaction to high profile issues, like drought, at election time, it fails to be proactive for sustainability or to account for the spatial variations in social, economic and ecological issues to evolve into regional policy that is likely to have a long term positive impact (Alexandra 1999; McManus and Pritchard 2001).

Recent Commonwealth Government policy for regional development is presented under the Stronger Regions Program, which consists of:
• The Sustainable Regions Programme which claims to be a planned and integrated approach to structural adjustment, addressing social economic and environmental challenges;
• A reduction in charges for agricultural exporters;
• A Regional Business Development Analysis;
• An Access to Government Information Program.

This program aims to promote community leadership to develop local solutions to economic, social and environment change (Anderson 2001). Its major elements are broad and include creating a conducive economic climate, provision of sectoral funding as well as some targeted assistance programs, and is in line with its commitments through the Intergovernmental Framework for Cooperation on Regional Development (Department of Transport and Regional Services 2002). Gray and Lawrence (2001) are critical of any approach that overemphasises leadership. It is suggested that leadership promotion can often result in elitism, and may be antithetical to enabling broad participation. From a sustainability perspective, while there is some sustainability jargon included in the Commonwealth policy, even the Sustainable Regions Program focuses primarily on economic development options, with social and environmental issues given secondary priority.

Many authors are critical of an approach to regional development that relies on broad, macroeconomic policies to create an economic climate, under which regions should thrive, if they are innovative enough or produce the right leadership (see, for example Alexandra 1999; Gray and Lawrence 2001; McManus and Pritchard 2001; Latham 2001a). For regions in decline, decreased community viability may threaten the ability of a region to respond to change in an innovative way (Gray and Lawrence 2001). Yet Commonwealth special assistance programs are particularly designed to assist regions that are proactive and innovative in their development. Such an approach fails to
ensure strategic development at the regional level to better enable all regional communities to direct the regional experience of change.

Essentially the Commonwealth policy aims to establish an “economic and social environment for Australians that encourages job creation and growth” (Commonwealth of Australia 2001:5). In addition to this broad aim, it claims to be supportive of local communities developing local solutions. In many ways this can be seen as a positive move for devolving decision-making power to regional areas (Commonwealth of Australia 2001). However, an alternative view is that it denies structural inequalities and the real influence of economic globalisation on regions, as if the right community, or the right community leader, could change all of this from within the region itself. This is described by Gray and Lawrence (2001) as a tendency for neoliberalism to destroy the social capacity on which it relies. For those communities that can overcome structural inequalities and interact positively with the forces of economic globalisation, social capacity can be enhanced. For other communities, that are unable to do so, social capacity is reduced.

Many authors argue that the Commonwealth Government has key responsibilities for regional development and regional policy formulation (see for example, Dore and Woodhill 1999a; Stilwell 2000; Douglass 2001). There is, however, an overall trend for conservative governments, such as the current coalition government, to interpret the constitution as giving power for regional development to the States. This was supported in 1996 by the National Commission of Audit (Beer 2000) and is clearly set out in the Intergovernmental Framework for Cooperation on Regional Development (Department of Transport and Regional Services 2002).

State and Local Governments tend to assert their authority over regional issues, and hence resent overt Commonwealth interference in regional development (Garlick
However, the structural nature of some of the factors that influence regional sustainability, particularly the interrelationship between global economic forces, national economic policies and regional economic well being mean that Commonwealth Government policy will remain a key influence on regional sustainability. At a sub-national level, action undertaken by regional communities, local and state governments and other stakeholders will also influence the national approach to regional policy.

**Regional policy and regional governance structures in Western Australia**

While there are mechanisms at the Local, State and Commonwealth Government levels that may help facilitate regional sustainability, there is currently no clear governance mechanism for the development of regional sustainability strategies in Western Australia. These structures are important, even if it is regional communities that are driving regional sustainability initiatives to provide a foundation upon which governments can partner with regional communities to enact sustainable change. Given the level of responsibility delegated to State Governments in the Framework for Cooperation on Regional Development and the commitment of the current State Government to sustainability in general, and regional sustainability in particular, there is clearly a place for enhancing regional governance mechanisms through the development of regional sustainability strategies in Western Australia. Beer and Maude (1996) identify the large land mass, large distance between population centres and concentration of population in Perth as key influences on Western Australian regional policy.

Commonwealth policy and programs, Western Australian State Government policies and programs, the activities of Regional Development Commissions, local councils and in some places, regional organisations of local councils all influence regional governance mechanisms in Western Australia. Like regional policy at the
Commonwealth level, regional policy in Western Australia is impacted on by a number of different government departments. The Department of Commerce and Trade, The Regional Development Council, the Department of Local Government and Regional Development, the Department of Planning and Infrastructure and the Western Australian Planning Commission, however, all have key influences on overall policy development, within a framework that recognises the impact of the whole of government on regional policy and of regional policy on all government agencies. There is also some acknowledgement, at the State Government level, that national and global trends have diverse regional impact (Synectics Creative Collaboration and Department of Commerce and Trade 1999).

The current Western Australian State Government released a Draft Regional Policy Statement in November 2002. This statement acknowledges that:

- the State Government has an important role in ensuring service and infrastructure provision in regional Western Australia;
- development should be driven from within regions through a partnership approach between community, industry and government; and
- there are a range of social, economic and environmental issues that are important in Western Australia’s region, and to regional Western Australians (Department of Local Government and Regional Development 2002).

Based on a concept of strong and vibrant regions, the underpinning principles of the current regional policy are stated as:

- Honest, accountable and inclusive government;
- Sound financial management;
- A growing and diversified economy;
- Strong and vibrant regions;
• Safe, healthy and supportive communities;
• An educated and skilled future for all Western Australians;
• A valued and protected environment;
• A just relationship with Indigenous Western Australians; and
• Intergenerational equity.

Particular acknowledgement of the importance of the State Sustainability Strategy is given within the draft policy statement, and this demonstrates an in principle commitment at least to regional sustainability through regional policy in Western Australia.

It is difficult to assess the relative integration of social, economic and environmental priorities into a policy, as it is expressed more through funding and the enactment of programs. However, it is notable that in a speech to the Regional Chambers of Commerce conference, the Western Australian Premier Geoff Gallop focused on investment in capital works such as the controversial development of the Burrup Peninsula Industrial Estate, port upgrades, improvement of road conditions for heavy haulage and regional investment funds for building of infrastructure to attract business in his statement of regional policy. These were the only types of regional projects that were noted as receiving funding. Sustainability was discussed as an important issue for regional development, yet no key programs or funding were identified in this speech (Gallop 2002). Whilst difficult to ascertain, it seems that while the current State Government is keen to implement sustainability, particularly at a regional level, its funding remains focussed on economic development, and there is a need for clear articulation of a process for regional sustainability. This may then lead to the attraction of funding for regional sustainability projects.
From a governance perspective there are two types of regional organisations that exist in Western Australia. They are regional organisations of Local Government councils, and Regional Development Commissions. Both have the potential to be developed as vehicles for regional sustainability strategies. Regional organisations of local councils have been formed for a range of purposes that require integration across Local Government areas, including waste management and natural resource management (Western Australian Local Government Association no date-a). Regional Development Commissions were created by the Regional Development Commissions Act 1993 and have the function of promoting economic development in each region (Western Australian Regional Development Council no date). The North East Wheatbelt Regional Organisation of Councils is discussed as an example of a voluntary association of Local Government working towards sustainability. The Peel Development Commission is presented as an example of a Regional Development Commission that is actively pursuing sustainability.

The North Eastern Wheatbelt Regional Organisation of Councils (NEWROC) coordinates natural resource management initiatives for the seven councils of Mt Marshall, Koorda, Mukanbudin, Nungarin, Trayning, Westonia and Wyalkatchem in the North Eastern Wheatbelt. Following a growing trend that recognises regional partnerships as necessary for success in natural resource management issues, the councils involved in NEWROC acknowledge that a healthy natural environment is fundamental to rural futures. They recognise salinity as a particular problem in the North Eastern Wheatbelt area that affects ecological and economic sustainability and are investigating innovative solutions, like using saline water for electricity generation as well as seeking ways to desalinate land for the benefit of the community (Local Government Focus 2002). NEWROC is also piloting Local Government incentives for farmers to widen roadside vegetation reserves and conserve biodiversity on their properties. There is potential for the project to indicate areas for reform in Local
Government process through exploring and expanding the role of Local Government in Natural Resource Management (Local Government Sustainability News 2001). NEWROC received a commendation in the National Awards for Local Government, for proactive and innovative natural resource management and biodiversity conservation, and has received funding from a number of regional, state, and national organisations for its work (National Organisation of Local Government 2002).

A model of regional delivery of natural resource management is supported by the Natural Heritage Trust, as well as other Government and non-government organisations. The NEWROC approach, that facilitates coordination of Local Government areas, and establishes Local Governments as key players in sustainability at the regional level is important. This organisation also has a demonstrated ability to attract funding. A coordinated approach to all aspects of sustainability, including natural resource management, through regional organisations of Local Government is a potential vehicle for the implementation of regional sustainability strategies. Regional organisations of local councils also have the benefit of having developed from the bottom up and therefore may be more likely to achieve local acceptance and ownership (Schwitzer 2002). While NEWROC promotes activities that will make an important contribution to regional sustainability in the North East Wheatbelt, its focus on natural resource management, possibly to the exclusion of social, economic and cultural issues, means that it does not, alone, constitute a mechanism for achieving regional sustainability.

Whilst there are no regional statutory governing bodies in Western Australia, 9 Regional Development Commissions are designed to play a coordinating role, and facilitate communication between different agencies on regional development, with the state-wide Regional Development Council advocating and advising on regional development and reporting to the Minister for Regional Development (Department of
Local Government and Regional Development 2003). The Regional Development Council promotes regional development through proposing development policies and assisting Regional Commissions and relevant Government agencies to work together on regional issues. Regional Development Commissions are, when compared to regional structures in other states, well funded. Board members of are made up of community members, members of constituent Local Governments and ministerial appointees (Beer 2000). Each Regional Development Commission aims to:

- improve employment opportunities,
- enhance the regional economic base,
- identify infrastructure needs,
- develop the regional potential for investment,
- work towards comparable service delivery with metropolitan Western Australia; and
- facilitate coordination of government activities in their region

(Western Australian Regional Development Council no date).

There is a statutory obligation for the Commissions to fulfil these functions (Beer and Maude 1996).

Beer and Maude assess the relative strengths of Regional Development Commissions in Western Australia, when compared to other state based regional economic development institutions as:

- legitimacy from statutory authority and longevity facilitated by bipartisan support;
- existence of direct communication channels with the deputy premier and cabinet, and directors that have the status to communicate directly with regional managers and heads of government departments and agencies;
- a collective influence through the State Regional Council;
existence of mechanisms for community input through each Commission’s board; and

stable funding and staffing that enables functions such as research, development of project proposals, assistance to Local Governments and community groups and the potential to fulfil a strategic planning role.

However, the Commissions were criticised for:

- not representing regional interests effectively, with the potential to be perceived as top-down instruments of centralised state policy;
- covering areas that were too large to be workable planning units; and
- not incorporating Commonwealth representatives as the Commonwealth Government has an important role in regional development.

Through a case study analysis of community sustainability projects in regional Australia, Stocker and Pollard (1994) make some recommendations for improving the ability of Regional Development Commissions to facilitate sustainability. These are:

- providing training for community organisations in management and communication as well as specific skills, such as computers and networking and to sponsor participation in training;
- facilitating planning and implementation of regional Ecologically Sustainable Development planning in a way that includes community participation and community perceptions;
- training bureaucrats on opportunities and needs to support community groups; and
- organising conferences to facilitate networking between community and government and to link senior public servants in diverse departments with regional community aspirations.
The Regional Development Council and the Regional Development Commissions have a strong economic and administrative focus and as such do not promote sustainability. Clear statutory delineation of responsibilities may mean that a change in legislation is required for these Commissions to take a genuine role in sustainability planning. Further, they have no mandate to integrate ecological and social issues. Establishing this as a role for these institutions could help to promote regional sustainability in Western Australia. In some regions of Western Australia, such as the Peel region, this is already occurring and the Peel Development Commission released the Peel Sustainable Development Strategy 2020 in November 2002. This strategy acknowledges the need for integration of environmental economic and socio-cultural priorities through principles such as ensuring population growth does not have negative impact on the environment, attracting environmentally friendly business to increase job prospects and providing adequate and appropriate accommodation and social services. Whilst coordinated by the Peel Development Commission, there is also a cooperation agreement between the Local Government areas that make up the Peel region. Like NEWROC there is a voluntary association of Local Government councils in the Peel region that aim to jointly facilitate sustainability (Peel Development Commission 2002).

The Strategy emphasises acknowledging and evolving with existing local knowledge and action as well as taking into consideration relevant State, Commonwealth and Local policies and strategies, particularly the State Sustainability Strategy (Peel Development Commission 2002). It was developed through working groups in social, economic and environmental sectors that consulted with relevant community groups and was finalised after a period of public consultation. Essentially the strategy outlines and prioritises sustainability issues, across a broad range of areas (such as priorities for children, the aged and Indigenous people, transport, governance and biodiversity) and the actions required to address them. There is minimal integration between issues,
and the strategy is in many ways reactive to unsustainable conditions that are in existence in the region. This is, however, acknowledged in the strategy and there is a commitment to thinking more deeply about sustainability and integrating action beyond specific priorities and projects (Peel Development Commission 2002). The process of integrating the Regional Development Commission with an agreement between Local Government councils, consultation and partnership with community and business, and is one potential model for the organisation of regional sustainability strategies. Additionally, the Western Australian Planning Commission, which has recently affirmed its involvement in the regional sustainability process through regional planning has agreed to recognise the Peel Sustainable Development Strategy as the regional plan for Peel (Newman 2003).

The Western Australian Planning Commissions is the statutory decision making body for land use planning in Western Australia. Its role is to plan for the housing, industry and infrastructure needs of rural and urban Western Australia. Local Governments have important planning functions on the ground. Through regional planning strategies cooperative action between local and State Governments on planning can be achieved (Government of Western Australia 1999). The Department of Planning and Infrastructure supports the statutory function of the Western Australian Planning Commission through consultative services. It also supports the development of regional and local plans in non metropolitan areas to promote economic and social development (Department of Planning and Infrastructure 2002). As the key bodies for implementing the planning system, these bodies are essential to planning regional sustainability.

Whilst States clearly have an integral role in coordinating state-wide programs for regional sustainability, and ensuring that the whole State of Western Australia moves towards a more sustainable future, devolution of power for planning sustainability strategies in each region to a regional level will allow for greater stakeholder
participation, and attention to important local issues. Through regional planning, the planning system has a key role here. Local Government is the closest level of government to people’s lives, and is most likely to know what is happening on the ground in a local area. It can provide a forum for local community, business and non-government organisations to argue and negotiate on local issues. For these reasons, Local Governments should have an important role in regional governance mechanisms that promote sustainability. However, the nature of Local Government throughout Australia limits its potential to be reflexive and adaptive to local sustainability issues without increased support from, and cooperation with, the State Government.

The derivation of power from the state creates dependency, which constrains responsiveness to local situations, particularly with regards to funding. Further,

> the geographical and functional incoherence of Local Government breeds a preoccupation with localism as the scale of intervention for issues that may derive, or are best responded to, at larger scales” (Gray and Lawrence 2001:197).

Beer and Maude (1996) also cite at least two opposing perceptions among regional development practitioners with regards to the role of Local Government in regional development in Western Australia. There is the view that Local Government is

> too small, too changeable, too parochial, insufficiently professional and insufficiently representative to be able to be a lead agency in regional development

but also the view that

> Local Government was the only body representing local community views and that the State Government had not yet found the best way to incorporate it into the Development Commissions and Regional Development Organisations (Beer and Maude 1996).
Increased support for local governance, through regional associations of Local Government is a more obvious vehicle for the development of regional sustainability strategies in Western Australia, with 4-6 Local Government areas being seen as optimal for the development of regional strategies (Newman 2003) A State-Local Government partnership agreement that currently exists as the State-Local Government roundtable and will be formalised when the State Sustainability Strategy is finalised, will facilitate the development of regional councils of Local Government for sustainability (Government of Western Australia 2002). It is likely that this Sustainability roundtable, in conjunction with the Western Australian Planning Commission and its regional planning processes will be instrumental in developing a methodology for regional sustainability strategy development (Newman 2003).

**Conclusion**

It is possible that an integrated approach to pursuing social, economic and ecological sustainability from a regional level will better enable communities to cope with change and to manage the spatial implications of globalisation more positively. The nature of government in Australia means that regional policy and development requires cooperation between Local, State and Commonwealth Governments. However, a Western Australian framework for regional sustainability, that is implemented either through regional associations of Local Government, Regional Development Commissions, the Western Australian Planning Commission regional planning function, or, ideally, all three working cooperatively, has the potential to enable the development of regional sustainability strategies from within regions with State Government support. Commonwealth Government policy and regional initiatives may also be considered from this level. This will, however, require some changes to the current structure of regional governance in Western Australia. It will also require consideration of the types of processes that can enable regional communities to define sustainability for their
region, to plan for its implementation, and to ensure that regional participation is integrated into regional and State Government decisions.
Chapter 5 Government policy for enabling regional sustainability

Introduction

Integration of social, economic and ecological trends into development is a challenge to governments worldwide. Policy makers are increasingly required to address issues relating to economic globalisation and changing trade patterns, global warming, sustainable development and changing population demographics all in a way that is appropriate to changing social values (Western Australian Technology and Industry Advisory Council 2000). An increasingly active citizenry, which appreciates the need to change and want action, challenges the legitimacy of centralised bureaucratic structures, which are unable to respond to diversity in place and community by being reflexive in their decisions (McGrath, Armstrong et al. 2003). Decision making contexts are increasing in complexity. Current institutional frameworks are insufficient to meet the demand to be proactive and reflexive, and to incorporate local or regional issues to facilitate sustainable change (Shephard 1998). This is seen through an analysis of regional policy and development in Australia, and particularly in Western Australia where latent potential to enable regional sustainability process exists, and is supported by evidence of diverse sustainability issues experienced in different Australian and Western Australian regions. This chapter investigates the types of governance policy and process that may facilitate regional sustainability strategy development.

Governance for regional sustainability

Achieving regional sustainability in Australia requires change in government structure and process to facilitate integration of sustainability into decision-making. Good governance is identified by the United Nations as essential to sustainability. Equitable participation, transparency, responsibility, accountability and responsiveness are elements of good governance that are fundamental to sustainable human development (United Nations Commission on Human Rights no date). The World Summit for
Sustainable Development in Johannesburg, 2002, reaffirmed the importance of good governance to sustainability through:

- increasing government capacity to integrate sustainability considerations at all spatial scales;
- partnering with community and business;
- cooperation between government departments and spheres on sustainability issues,
- strengthened legal frameworks to promote sustainability; and
- ensuring responsiveness to community need and equitable participation in decision making.

(Gardiner 2002).

**Regional sustainability and the influence of economic rationalism**

In Australia, pursuit of economic rationalism, and neo-liberal ideals by Commonwealth Governments throughout the 1990s has occurred at the expense of social and environmental spheres. Factors such as increasing gaps between rich and poor Australians, declining terms of trade for the Australian economy, persistent unemployment and environmental degradation all indicate stress in the Australian political economy (Stilwell 2000). Increasing recognition of the spatial variation in the effects of these factors suggests the need for regional governance processes that are sensitive to each region’s particular situation. “With globalisation must come a refocus on regionalisation, local identities and the politics of place making and space… local politics emerges as a key site of negotiating differences” (Hogan 1997:65).

Economic rationalism maintains the superiority of the free market over state intervention in economies as free markets maximise competition and therefore efficiency (Webster 1995; Stilwell 2000). Recurring problems in free market oriented
policies such as economic insecurity, (on a macro level through recurrence of recession and a micro level through, for example, increasing casualisation of the workforce), increasing wealth disparity, and neglect of social and environmental goals challenge the sustainability of economic rationalist policy. Since the 1970s, Australia has moved from being one of the most egalitarian industrialised countries to one of the least (Webster 1995). This is at least partially a reflection of economic rationalist policy. Reliance on market forces may ensure short term economic efficiency but it compromises long term viability of social and environmental and economic systems (Stilwell 2000:41). This has been clearly demonstrated in this thesis through presentation of the spatial variations in economic, ecological and social well being throughout regional Australia and Western Australia.

Economic rationalism is linked to broader neo-liberal ideology which combines free market ideals with an emphasis on consumer freedom, withdrawal from government provision of welfare and social services and conservative and authoritarian social policy, particularly in relation to ‘minority’ groups, like Indigenous peoples (Kenny 1999; Stilwell 2000). Neoliberal policies have progressed under the current Coalition government, where free market economic policies, smaller government and international corporate competitiveness are seen as primary objectives, and increases in individual, family and community responsibility are increasingly required to replace the Australian welfare safety net (Wiseman 1998). Governments, however, can choose their policy response to globalisation forces, and the analysis presented in this thesis so far suggests that economic rationalism and neoliberalism are not sufficient for good economic policy in Australia. This is particularly the case for regional Australia where spatial inequality is a key challenge to neoliberal and economic rationalist policies (Gerritsen 2000).
Good regional policy requires more than a free market orientation. Further, overemphasising the power of national economic restructuring and global economic forces on regions “potentially disables communities from responding to social and economic change, limiting the possibilities for new and different regional futures” (Gibson, Cameron et al. 1999:33). Coordinated, long term strategic planning, that values regional culture and regional visions may conflict, at times, with short term economic sense, yet be necessary for positive social, economic and ecological outcomes in the long term (Gibson, Cameron et al. 1999; Stilwell 2000). It is noted that Commonwealth economic policies are an important influence in this regard for Western Australian regions.

**Regional governance mechanisms for regional sustainability strategies?**

Beer (2000:184) states that according to the principle of subsidiarity, “the roles and responsibilities of government should be vested with the lowest tier of government able to perform that function”. This is because lower tiers of government are more likely to be in touch with local needs, thus enabling good governance at a grass roots level, particularly through enabling equitable participation and responsiveness to local need. In Western Australia, land mass and comparatively low population density mean that neither local nor State Governments operate at a scale that is appropriate to sustainability. Further, the distribution of power between state and Local Governments is such that Local Government is constrained. This is supported by Beer (2000) who states that

> Regionalism in Australia has suffered from the strength of State Governments on the one hand and the weakness of Local Government on the other (Beer 2000 cites Mal Logan 1978:23).

Shephard (1998) notes that in order to be effective in rural areas, central governments will be required to restructure. This may include:
• decentralising of the functions of government;
• organisational change that enables decentralised arms of government as well as community and business to participate in strategic management;
• ceding real power to Local Government and non government organisations;

These are key considerations for government in regional Western Australia, and the State Government alone is unlikely to be an effective vehicle for regional sustainability. It is suggested that local organisations with strong local representation should be empowered to work in partnership with government for a local community (Shephard 1998). Further, the State Government will be required to forego traditional reluctance to devolve power and resources to regional areas (Beer 2000).

Local Government may be most appropriate level of government that currently exists, to facilitate genuine participation in development decisions. Problems and opportunities for local governance in regional development and sustainability in Australia and Western Australia were outlined in the previous chapter. Through an analysis of international experience, Shephard (1998) also identifies inadequate resources, and lack of central government support as problems faced by Local Governments. A strong commitment by central government to supporting Local Government, increased devolution of resources and increased autonomy are identified as key features of Local Government in countries where it does play a strong role in rural development. Whilst local government exists may therefore be currently available for the promotion of regional sustainability in Western Australia, a number of issues would need to be addressed, such as:

• The potential for local governments to have a parochial view and to ignore broader structural issues;
• The potential for local government to foster elitism, rather that genuine representativeness and participation; and
Limited access to funds, and limited power to make decisions
(Gray and Lawrence 2001, Beer 2000).

Dore and Woodhill (1999b) describe two trends towards a regional scale for governance in Australia: regionalism and regionalisation. Both have potential as vehicles for enabling regional sustainability to emerge. Regionalism is the trend towards

regional communities having greater influence over and participating more directly in the decision making that impacts their regions and their futures; the phenomena of increased attention to the regional scale and consequent regional initiatives, and the general trend towards greater stakeholder participation, often resulting in partnerships between the community, industry and governments (Dore and Woodhill 1999a:vi).

Regionalism forms part of the underlying ideology of this thesis. Regionalisation refers to government creating administrative regions to facilitate more effective or efficient program delivery. Whilst regionalism is considered central to this thesis, and regionalisation is not, these two approaches are not necessarily mutually exclusive. Regionalisation may be seen as a top-down process, and regionalism as emerging from the bottom up. Yet where regionalisation does not threaten an ideal of regionalism, a combination of both processes may enable broad participation in regional sustainability planning whilst fulfilling a requirement for accountability at the state level and ensuring that regional planning is consistent with the broader state and national interest (Dore and Woodhill 1999b). As discussed in the previous chapter, a combination of Regional Development Commissions, regional associations of Local Government and the Western Australian Planning Commission are currently being put forward as appropriate places within the Western Australian State government to facilitate sustainability planning. This could be seen as an attempt to regionalise state based sustainability planning, in order to facilitate regionalism.
In the context of the Western Australian State Sustainability Strategy, there is an argument for the regionalisation of sustainability planning in Western Australia, as it is recognised that sustainability planning needs to be pursued at an appropriate scale for relevant on the ground action (Government of Western Australia 2002). However, the ideals of regionalism are much more consistent with a need to promote integrated sustainability planning at an appropriate scale that is based on equitable community participation. Regionalisation of sustainability planning needs to be undertaken in order to enable regional communities to participate. To ensure that this process is not controlled from a centralised state level and that it involves genuine participation, requires consideration of governance process that may better enable genuine community participation and community-government partnerships to emerge.

Enabling governance processes at both State and Local or Government levels will be necessary for participation in regional sustainability processes, and for these processes to affect the way that decisions are made. Shepherd (1998) suggests a model of polycentric government, where Local Government is part of a government network that includes decentralised arms of central government, and where government and community are actors of equal status that share decision making.

**Enabling government**

Latham (2001a:34) states that “the true social democratic principle of our time is the dispersal of economic, social and political power”. This requires transformation of government from a passive provider of services to facilitation of community led projects and outcomes (Latham 2001b). Principles of enabling government include:

- A strategic role for government in creating spatial policies for a new economic geography;
- dispersal of power to communities and the electorate,
• devolution of service delivery to a community level; and
• facilitating enabling processes for citizen participation in government

(Latham 2001a).

The ideal of enabling government requires that central government remain an important source of social support, but that communities, rather than the bureaucracy have an increased role in defining, delivering and managing social services. Services are not withdrawn, but capacity for their provision at a community level is enabled by the state in partnership with community (Blunkett 2000; Botsman 2001). “Government funding and bureaucracies become servants of communities, not masters” (Botsman 2001:4). Enabling government requires a change towards a partnership approach to government, particularly between communities and government. This needs to be different to the rhetoric of self reliance and individualism that is central to neoliberalism, and has the potential to threaten community capacity to cope with change (Gray and Lawrence 2001).

Wyn and Wierenga et al (2003) assess applicability of Botsman’s principles of an enabling state to youth service delivery. These suggest that enabling governance for youth services requires:

• A change of focus from negative, problem based policy to positive advocacy, prevention and capacity building;
• Long term community based funding to replace short term tied funds for specific purposes
• A holistic approach rather than one that is reactive to topical issues.

Similar recommendations may be required for enabling regional sustainability. Gibson et al (Gibson, Cameron et al. 1999) point out that framing particular regional issues, such as the implications of economic restructuring, negatively, may impair the ability of
a community to respond positively in the face of change. Short term tied funding has been identified as an impediment for regional organisations and Local Governments in Australia (Dore and Woodhill 1999b; Fulop and Brennan 1999; Beer 2000; Daly 2000). The need for a holistic and proactive approach to regional sustainability rather than reactive decision making has also been identified as a key concern in regional Australia (Beer 2000; Jenkins, Annadale et al. 2003).

Whilst the concept of enabling government in Australia has developed around a critique of the Welfare state (see Botsman and Latham 2001 for more detail) these ideas provide ground for exploration to enable sustainability and regional sustainability. Newman (2001) identifies four key concepts that will need to guide the incorporation of sustainability into governance. They are:

- Not all growth is sustainable development;
- Sustainability requires integrative approaches;
- All growth needs to be defined in terms of a new set of indicators and assessments;
- Sustainability and participation cannot be separated.

Governments may be able to ensure that these first three principles become a part of government. Yet community participation in all these processes as well as in defining sustainability in different places is at the core of sustainability and therefore community participation in planning is fundamental to regional sustainability. This will require innovative approaches to enabling participation and developing the capacity to participate at a regional level. It will also require ensuring that governments are able to incorporate a participatory approach within their processes. This is consistent with the idea of an enabling state, that is increasingly viewed as necessary by politicians and policy makers (Western Australian Technology and Industry Advisory Council 2000; Latham 2001b; Wyn, Wierenga et al. 2003).
Western Australian Premier Geoff Gallop states that "Pro-active citizens are the essence of a truly inclusive and dynamic society, where individuals and groups are empowered to participate in determining the nature of the world in which they live" (cited in Government of Western Australia 2003a). The Citizens and Civics Unit in the Department of the Premier and Cabinet aims to facilitate a stronger, more participatory civil society through:

- Promoting active citizenship;
- Engaging in community – government dialogue
- Encouraging a participatory and partnership approach to government
- Valuing diversity in citizenship

(Government of Western Australia 2003a).

Enabling greater citizen participation in government is therefore an ideal of the current Western Australian State Government that is consistent with participatory process in the development of regional sustainability strategies.

**Participatory process**

Increasing participation in civic life is essential to creating a shared vision for a sustainable future in Western Australia as a whole and in its regions. This is particularly the case in Western Australian regions where the pace of change as a result of converging environmental, economic and social trends threatens sustainability.

Sarkissan et al (2003) identify numerous factors that are combining to increase the requirement for genuine community participation in government, including:

- the speed of social change;
- social diversity;
- anxiety about the future resulting from economic issues, including unemployment;
the impact of information technology and an increasingly informed citizens;
mistrust in ‘professional’ judgement; and
frustration with tokenistic consultation that demands time, but leads to no change in government practice.

As sustainability requires both community participation and community action, processes that enable greater participation in government, are essential to guide government, which is increasingly pressured to plan for sustainability (World Resource Institute, United Nations Environment Program et al. 2002; Department of the Premier and Cabinet 2003).

The concept of social capital was introduced in Chapters 2 and 3, where it was noted that many regional communities have strong internal social capital yet have lower levels of trust and networks, with people and organisations outside their immediate community, and with government. This has the potential to threaten their ability to adapt and respond to changes positively (Synectics Creative Collaboration and Department of Commerce and Trade 1999; Stone and Hughes 2001). Davis (2001) cites evidence for an overall trend, both in Australia and the United States, for a decline in both trust in government and participation in civic life. It is suggested that declining social capital and declining citizen participation are linked. To enable greater participation in decision-making requires government process that enables participation as well as processes to facilitate social capital formation. Further, enabling greater participation in decision making processes at a regional level has the potential to build trust in government over time in an area where social capital is more likely to be lacking.

Blackburn and Holland (1998:1) asserts that “Sustainability in policy-making demands that those in power disempower themselves”. Participation can take many forms,
ranging from community consultation that includes information flow between governments and communities to genuine community participation where community has an active role in decision making and some control over it (Sarkissian, Hirst et al. 2003). Different participation processes may be required for different types of decisions and there is a need to ensure that participatory process evolves with community capacity to participate, and is effective (Blackburn and Holland 1998).

Citizens and Civics Unit at the Department of the Premier and Cabinet has produced a handbook entitled *Consulting Citizens: Planning for Success* (Government of Western Australia 2003b) that outlines process for citizen participation in government. The importance of a reflexive approach to participation, that involves planning a participatory process, implementing it and reviewing its success for future learning is established. A useful distinction is also made between citizens and stakeholders in the participatory process. Stakeholders may be engaged as representatives of a particular group for a particular purpose, for example, pastoralists or Indigenous traditional owners. Citizens are engaged to represent the interests of the community in general (Government of Western Australia 2003b). With regards to regional sustainability strategies, stakeholder representation, in the case of diverse interests groups in resource management, as well as citizen participation are important. Community Cabinets, Citizens Juries and Citizens Advisory Committees are examples of potential mechanisms to facilitate greater participation in governance that are mentioned in the Consulting Citizens Handbook (Government of Western Australia 2003b).

*Community Cabinets* enable discussion and conflict resolution between community and government through a local forum enabling community members and groups to meet and discuss issues of concern with the government Premier and Ministers. A Community cabinet meeting includes:

- question and answer session with the Premier and Ministers;
• an informal session where community members can line up to present issues in person to the Premier and Ministers who separate to tables;

• a session where community members and groups can present formal deputations, for which they have previously submitted a brief, including seeking money for community purposes; and

• visits to interested groups, offices and locals by Ministers.

Issues raised in a community cabinet are followed up with letters that answer unresolved queries, formally respond to all deputations and outline government response. Ideally, Community Cabinets allow equal access to all community groups and members, however a profile of attendance in Queensland shows that well connected, well educated community members are most likely to attend, and may reinforce established power structures within a community. Increasing social capital through access to participation in decision making is complex and may require more innovative solutions than Community Cabinets to enable equitable and broad participation (Davis 2001).

Citizens Juries consist of a random selection of individuals from the public who are presented with diverse expert evidence on a policy issue or a set of policy options. Once informed about that issue, the jury is required to make judgements and recommendations on that policy issue. Citizens Juries may be particularly useful where the general community is unlikely to be well informed about a particular issue. They may also be more likely to represent a non biased cross section of the community than participatory methods that do not involve a random sample of participants (Sarkissian, Hirst et al. 2003). Findings from a Citizens Jury are available to the public as well as policy makers. There is also the potential to provide participant funding to members of the jury, which may help overcome difficulties that some community members have in participating in community forums.
Citizens Advisory Committees are made up of selected individuals whose role is to represent the views and interests of different groups within society. They aim to reconcile conflicting values that are held within a community. Whilst these bodies make community consultation a simpler process for government, they are unlikely to promote social capital formation across a broad section of a community (Hill and Zammit 2000). Further the committee may not be representative, its output may be open to manipulation by government, and committees may not represent minority interests effectively (Sarkissian, Hirst et al. 2003).

Participatory process is fundamental to the development of regional sustainability strategies. Some principals, constraints and potential tools to overcome constraints for participation are summarised in Table 12.

Table 12 Principles, constraints and tools for community participation in government

<table>
<thead>
<tr>
<th>Principles for effective participation</th>
<th>Constraints to participation</th>
<th>Potential tools to address constraints to participation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation to be timed appropriately to allow genuine integration into decision making process</td>
<td>Short term, election based priorities that prevent attention to longer term concerns</td>
<td>Provide skilled facilitators that can promote consensus making and think strategically, not reactively</td>
</tr>
<tr>
<td>Participants to represent a broad selection of the relevant community.</td>
<td>Legislative and regulative restraints that complicate implementation of results of participation</td>
<td>Train bureaucrats in participatory methods, to increase the chance of the results of participation influencing decisions.</td>
</tr>
<tr>
<td>Outcomes of participation to be community focused.</td>
<td>Poor design of the participatory process</td>
<td>Design appropriate methods to each purpose</td>
</tr>
<tr>
<td>Participatory process to be interactive and deliberative process that allows all concerns and questions of participants to be aired.</td>
<td>Problems with Government process and the interaction between tiers of government that prevent integration of results of participation</td>
<td>Facilitate networking between tiers of government, government departments, stakeholders and communities to allow integration of community participation</td>
</tr>
<tr>
<td>The aim of participation should be consensual decision making.</td>
<td>Lack of a culture of participation</td>
<td>Ensure willingness by decision makers to share power and not predetermine decisions</td>
</tr>
<tr>
<td>There should be a high chance of adoption of recommendations from participation.</td>
<td>Inability in government or community to understand complex issues, or to hypothesise about future possibilities</td>
<td>Maintain an ongoing commitment to increasing the capacity of all community groups to participate in decision making.</td>
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<tr>
<td>Participatory processes should be open and fair and undergo reflexive evaluation.</td>
<td>Prejudice and inflexibility in judgement of community or government</td>
<td></td>
</tr>
<tr>
<td>Facilitation of participation should be undertaken by an independent party</td>
<td>Strong personalities, especially in community leaders or government bureaucracies can influence participatory process</td>
<td></td>
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</table>

(Shephard 1998; Blackburn and Holland 1998a; Botsman and Latham 2001; Sarkissian, Hirst et al. 2003)

Latham (Latham 2001b:248) describes an enabling government as “a facilitator of community projects and social outcomes …the enabling state is interested in the public sphere as a process, as a way of encouraging communities of interest and mutual forms of political action”. As innovative solutions to community challenges most frequently emerge out of community and from social practitioners and entrepreneurs that are based in a particular place and set of community interactions, this requires enabling community processes rather than designing top down, one size fits all, processes and solutions. Concepts of community participation and the idea that that the power to create change must be within the sight and sphere of interest of people experiencing sustainability problems, are seen as fundamental to a process for regional sustainability strategy development.

**Conclusion**

The Western Australian State Sustainability Strategy Consultation Draft (Government of Western Australia 2002) envisages a partnership approach between State and Local Government, civil society and industry to implement sustainability, which it defines as “meeting the needs of current and future generations through simultaneous environmental, social and economic improvement” (Government of Western Australia
Planning processes are to be developed to achieve local and regional sustainability visions. Genuine implementation of the strategy requires an alternative to the domination of decision making by economic processes and a vision of enabling governance that incorporates sustainability principles, is sensitive to spatial variations in sustainability and governance needs and is based on participatory process. This requires enabling governance, where the state provides funding and an enabling environment for community led solutions to emerge out of place (Latham 2001b).

Goodall & Lucas (1997) assert that actions towards sustainability will be based upon the different beliefs or worldviews of diverse regional communities. The attitudes that people hold towards diverse factors like landscapes, lifestyle, social networks and individual identity inform their conception of sustainability. What sustainability is, and how it will be achieved, will therefore be dependent on the worldviews of the residents in different regions: it will emerge out of place. Enabling sustainability planning to emerge out of place, and the ideals and visions of regional communities requires further devolution of power from the State Government level, acknowledging that the opportunities and activities that create more sustainable practice often emerge from the bottom up (Barns 1997), through enabling community participation. Engaging regional communities in decisions that affect them, such that they can influence those decisions, is an essential strategy (Stone and Hughes 2001).

Satisfaction of present need in a way that facilitates transformation to a better future is essential to a political strategy for change (Stilwell 2000). Fulfilling the need for sustainability planning at a regional level in Western Australia whilst facilitating transformation to a better future is a worthwhile challenge for Regional Sustainability Strategies. For this to occur, a considered approach to the process of developing Regional Sustainability Strategies, that recognises innovative methods to engage community participation, is essential.
Chapter 6: Insight into a process for facilitating regional sustainability:  
Case studies in regional natural resource management

Introduction

Natural resource management initiatives have been at the forefront of regional strategies for sustainability. In contrast to government policy formulation on regional policy, natural resource management at the regional or catchment level has, in many ways, emerged from the bottom up. As such, regional natural resource management initiatives may offer further insight into the types of processes required for regional sustainability strategies to emerge from regional communities rather than as imposed from the state level. Regional or catchment level challenges, ranging from salinity to eutrophication of waterways, that need regional solutions have driven regional responses. Yet at the same time, these natural resource management issues are increasingly seen as of national concern and attract Commonwealth funding (Cullen 1999). National strategies for natural resource management have not been seen as effective without local action (Alexandra 1999).

The National Heritage Trust, the Landcare movement and Greening Australia form part of an Australia-wide natural resource management network that is matched at the local and regional level by catchment and basin level management groups. An overview of the roles of, and insights gained from these bodies is presented. Additionally, there are some particular resource management projects that can offer insight into regional sustainability. These projects, Rangeways, the Central Highlands Regional Resource Use Planning Project and Ecoregion Southwest are discussed in detail as case studies that may offer insight into an appropriate process for regional sustainability. While lessons can be learned from the experience of natural resource management for regional sustainability strategies, regional natural resource management itself, due to its environmental focus, will not equate to regional sustainability.
Regional natural resource management networks

The National Heritage Trust (NHT) is a Commonwealth Government initiative through Environment Australia and Agriculture, Fisheries and Forestry Australia, which aims to promote and support environmental responsibility through partnerships between individuals, communities and governments addressing environmental problems where they occur. It does this through funding initiatives at the state, local and regional level (National Heritage Trust 2003a). The NHT acknowledges that a regional focus is often most effective when tackling environmental problems. Whilst it is acknowledged that economic, social and cultural factors are also important at a regional level, the NHT only funds environmental initiatives.

Support for regional strategies is given on the basis that it:

- enables public funds to be directed towards the highest priorities in a region or catchment, as defined by regional stakeholders;
- can save money by avoiding duplication of activities;
- ensures that sustainable natural resource management occurs through a regionally coordinated network, rather than through smaller, ad-hoc activities; and
- enables overall improvement of the regional environment (National Heritage Trust 1998).

As such, the Natural Heritage Trust supports regionalisation of the Commonwealth Government’s commitment to natural resource management and channels needed funds to communities with land degradation problems. It has also recently released a National Land and Water Resources Audit (National Heritage Trust 2002) which provides valuable environmental data and analysis for sustainability research. The data
is available online, at various geographic levels from local to national through the Australian Natural Resources Atlas (National Heritage Trust 2003b).

The National Landcare Program is supported by the Natural Heritage Trust, and has facilitated the development of over 4000 Landcare groups and a Landcare movement that aims to foster an ethic of stewardship towards the natural environment in regional Australia. A broad range of community environmental conservation activities that are undertaken through local Landcare, Bushcare, Coastcare and Rivercare groups have brought major environmental improvements in regional Australia (Landcare Australia 2001). The interplay between Landcare and the National Heritage Trust demonstrates the strong partnership between government and non-government natural resource management initiatives at a regional level. Whilst Landcare has a strong ecological focus, recent evidence suggests a move towards broadening its focus to encompass a more integrated approach to rural development and change (National Natural Resource Management Taskforce 1999).

While the National Landcare movement has been credited with fostering grassroots change in land management practices and ideologies and in developing community-government agency partnerships for resource management, several problems have been identified with the landcare movement. These include:

- transferral of responsibility for land degradation from government to voluntary action in local communities;
- inability to effect landscape scale change;
- valuing agricultural productivity over biodiversity conservation as the basis for Landcare; and
- issues of group process such as inadequate leadership and gender stereotyping.
Additionally, Curtis and Lockwood (2000:61) identify some critical issues for enabling participation in natural resource initiatives gained through an analysis of Landcare. These are

• “separating the roles of regional planning bodies and local organisations;
• effectively linking regional bodies and local groups;
• establishing robust, productive agency-community partnerships;
• adopting benefit based cost sharing mechanisms for public investment on private property; and
• designing flexible policy packages, including economic incentives for landholders to maintain the supply of public benefits”

Gray and Lawrence (2001) describe a real life example of a farmer who had been strongly involved in a Landcare group and initiated sustainable land management changes on his property. After coming upon economic hardship, he withdrew from the Landcare group, partially due to time constraints. He also recommenced what he recognised as short term, unsustainable grazing practices in his paddocks to keep his farm economically viable in the short term. This example demonstrates that while Landcare is a positive movement that can encourage sustainable change, it is unable to stand alone, without integration with social and economic policies that support ecologically sustainable land management practices. This is supported by research from the National Heritage Trust, who state that farmers are more likely to practice sustainable land management when they are economically secure, have the necessary skills and knowledge, where there are economic or other advantages and when the practices entail low risk and are easily managed. It is also acknowledged that this requires community and government support for private land managers (National
Heritage Trust 2002). In this context, it is easy to see that natural resource management issues are sustainability issues with clear economic and social dimensions, requiring more than what Landcare alone can provide.

At a sub-national level in Western Australia there are 5 regional Natural resource management groups in the South West Corner of the state. These are further divided into basin and catchment level groups. Discussions on regions for the purpose of sustainability strategy development, between State and Local Governments, have concluded that the natural resource management regions in Western Australia are too large for regional sustainability processes. Regions made up of four to six local government areas, a size that confers more closely with the sub-catchment or bioregions level, is seen as optimal for regional sustainability strategy development (Newman 2003).

Whilst varied in their approach, natural resource management groups all bring together community, local State and Commonwealth Governments, business and non-government organisations at a regional level as partners in coordinating natural resource management (State Salinity Council 2001). The Blackwood Basin Group and the South Coast Regional Initiative Planning Team are presented as case studies of the types of activities that these groups engage in.

The Blackwood Basin Group, part of the South West Catchment Council, formed in 1992 as a community initiative to ensure appropriate land and water resource management in the Blackwood river catchment. The Blackwood Basin covers 19 Local Government Authorities, and there are 150 Catchment groups coordinated by the Blackwood basin Group. The group’s interests have evolved to include confronting important regional issues such as social decline, economic hardship and natural
resource degradation, from the broader perspective of sustainable natural resource management (Blackwood Basin Group 2001).

Key functions of the Blackwood Basin Group include:

- sourcing, distributing and managing funds for natural resource management in the Blackwood basin, including attraction of National Heritage Trust funding;
- linking community members to the process of policy making through forums with government and government agencies;
- coordinating smaller scale initiatives to maximise their broader impact; and
- Integrating environmental sustainability with a sustainable economy in the region (Blackwood Basin Group 2001).

One example of the innovative way that the Blackwood Basin Group is responding to natural resource management issues is through Zone Action Planning. Zones are defined by natural, and to some extent social factors and boundaries. Each zone devises its own zone action plan with extensive community consultation that leads to on the ground action. These zones then provide an efficient land management unit to facilitate integrated catchment management across the Blackwood Basin (Ecker and Chadwick 1999). Although the Blackwood Basin Group is community based, it gives input into cross agency forums, and can in this way influence policy making.

The South Coast Regional Initiative Planning Team coordinates community and government activities to facilitate sustainable natural resource management at a regional level. It cites its core objective as bringing people, organisations and information together so that it is the South Coast regional community that drives sustainable management of natural resources within the region in a way that promotes positive social and economic outcomes. It is supported by government and relies on
the National Heritage Trust, other natural resource management organisations, Local Government, community groups and individuals for funding. SCRIPT has an important role in the development of the Southern Prospects Regional Strategy, that focuses on regional natural resource management and is being developed in conjunction with State Natural Resource Management Agencies (South Coast Regional Initiative Planning Team 2003). The team also endeavours to integrate regional conservation and sustainable use of natural resources through integrated planning with community development objectives. Sustainable population, development of economic, educational, recreational and employment opportunities, improving community skills and leadership qualities, and integration of cultural, heritage and Indigenous interests into natural resource management are all considered by the SCRIPT group (Department of Agriculture 2003). In this way, it demonstrates that some regional natural resource management initiatives are developing a broader sustainability perspective in their operations.

Key functions of SCRIPT include:

- Development of a regional strategy for natural resource management, and sourcing funds for its implementation
- Advocating regional issues at the State and Commonwealth Government levels
- Development of information and communication networks, and coordination of community and government activities.

Regional natural resource management networks are fundamental to regional sustainability, particularly through facilitating integration of ecological considerations into agricultural practice. The framework that extends from a national through to a very local level that supports these networks, as well as the functions of these groups, offers
insight into potential process and organisation for regional sustainability strategies. In particular, the following insights are gained:

- The importance of a collaborative process, or organisation that connects, community organisations, individuals and government. This was particularly seen in the SCRIPT case study where the planning team sees one of its roles as creating networks and facilitating collaboration between the diverse stakeholders in the regional planning process. This is supported by Curtis and Lockwood (2000), who emphasise the importance of linking regional bodies to local groups who maintain their independence; and establishing partnerships between government agencies and communities for Landcare.

- The need to integrate natural resource management programs with social and economic sustainability concerns. The idea of integration of these circles of concern has been fundamental in the development of this thesis. It is noted that this is increasingly recognised in regional natural resource management processes, where economic and social sustainability are seen as fundamental to sustainable ecosystems. This is reflected in National Heritage Trust publications, as well as the by the activities of groups such as SCRIPT and the Blackwood Basin Group.

- The need for a regional organisation to advocate regional concerns to the State and Commonwealth Government. This is seen as a role of both the SCRIPT and the BBG. This has two potential implications for the development of regional sustainability strategies that need investigation. A broader regional sustainability organisation may have the role of advocating regional concerns that emerge from a sustainability planning process to
State and Commonwealth Governments. Also, regional natural resource management organisations within Western Australian regions may have insight into particular regional concerns.

- Integration of local and community led plans into broader regional strategies.

Regional coordination combined with community led, local initiatives is demonstrated through the Zone Action Planning of the Blackwood Basin Group. The diversity of spatial scales, issues, and stakeholders\(^{21}\) that are involved in sustainability means that this may be a key method for community participation and empowerment through regional sustainability strategies. This is supported by the ideas of participation and enabling governance presented in Chapter 5.

In addition to the regional natural resource management process that has evolved in Australia over the last decade, and demonstrated key insights into potential process for regional sustainability strategies, a case study of the Ecoregion Southwest initiative is presented. This case study demonstrates the combination of some of the above factors that have been suggested as key insights from regional natural resource management initiatives.

**Ecoregion Southwest**

An Ecoregional Approach to facilitation of Sustainable Agricultural Landscapes in the South-west of Western Australia is currently being promoted through a partnership between the World Wide Fund for Nature and Local Government and community interests. It has its roots in the Global 200 initiative of the World Wildlife Fund (WWF). In recognition of the number of ecosystems that are in need of conservation globally and that funds for conservation are limited, the Global 200 has identified 233 ecoregions worldwide that are outstanding examples of the world’s diverse ecosystems.

\(^{21}\) The issue of diversity in stakeholders is developed further in case studies that follow.
environments, and in urgent need of conservation. Through prioritising conservation efforts, it is hoped that the maximum conservation benefit can be achieved strategically from available funds. The global 200 approach demonstrates that protection of biodiversity requires protection of habitats, ecosystem processes, evolutionary phenomena and the adaptation of species to their environment. Whilst it takes a whole system approach to conservation, smaller, fine-grained analysis and local strategies are also recognised as important (Olson, Dinerstein et al. 2000).

The South-west ecoregion is one of the 233 ecoregions identified in the Global 200 as an outstanding example of the world’s diverse ecosystems in urgent need for conservation. It is world renowned for its biodiversity, and includes a minimum of 4000 species of endemic plants, and 100 endemic vertebrates. It is also recognised that due to exceptional loss of habitat, the biodiversity of this region is severely threatened. Maintenance of biodiversity and hence ecological integrity of the south-west ecoregion is fundamental to its future sustainability.

Creating a shared vision with regional stakeholders for the future of the south-west ecoregion is a key feature of the ecoregional approach. This fits well with the idea of enhancing regional sense of place in Western Australia’s regions that is identified as an important element of regional sustainability in the Draft State Sustainability Strategy (World Wildlife Fund Australia 2002). Whilst continuing to be developed, the vision for the initiative currently is

* A diverse and continuous mosaic of natural landscape features distributed across the landscape, interspersed with a diversity of socially and economically productive land uses, which support the natural diversity and natural functioning of that landscape (Southwest Australian Ecoregion Steering Committee 2003).
Developing at around the same time as the Draft State Sustainability Strategy, the initiative acknowledges that it is biodiversity focused with recognition of the important links between biodiversity conservation and socio-economic wellbeing. It views the process of the State Sustainability Strategy as important in providing a truly integrated approach to regional sustainability (Southwest Australian Ecoregion Steering Committee 2003).

In its terms of reference, the Southwest Australian Ecoregion Steering Committee states its aim as “to catalyse the development and implementation of a biodiversity conservation strategy for the Southwest Australia Ecoregion” (Southwest Australian Ecoregion Steering Committee 2003) through:

1. “providing a forum for interaction, influence and collaboration between partnering organisations;
2. facilitating the engagement of networks and organisations outside the partner groups;
3. promoting consistency and linkages with other policy processes and initiatives including regional and local strategies and plans;
4. raising the profile, maintaining support and influence for the conservation of the SAE, within the State, nationally and internationally;
5. developing a mechanism to endorse the strategy and to implement actions under partnering organisation responsibilities;
6. identifying an implementation framework incorporating actions, priorities and investment frameworks for the strategy; and
7. developing a process for acquiring the funds necessary to develop the strategy.”

(Southwest Australian Ecoregion Steering Committee 2003)
It is clear that the group sees itself in a facilitating, coordinating, networking and advocating role for smaller scale initiatives, such as those of regional catchment groups in a way that adds value to and promotes the framework of natural resource management that is already in existence in the southwest of Western Australia. This view of a regional organisation as one that facilitates diverse networks and links between different stakeholders at different spatial scale was also reflected in the discussion of Australia’s regional natural resource management frameworks. It is further seen that adding value to current regional and local initiatives is an important part of any regional process for sustainability. Like the Ecoregion Southwest, the State Sustainability Strategy also emphasises the need for a shared regional vision to enable a positive and longer term view of change.

**Sub-national natural resource management research projects**

While community oriented catchment management groups and the broader regional natural resource management frameworks have an integral role in regional sustainability, the complexity of resource management at a regional level has also led to research projects sponsored by organisations such as the Land and Water Resources Research and Development Corporation (LWRRDC), and the Commonwealth Scientific and Industrial Research Organisation (CSIRO) to investigate community and stakeholder led conflict resolution and negotiation for sustainable land use change. Conflicting interests in land between sectors such as conservation, mining, agriculture and pastoralism, Indigenous Native Title and tourism lead to a need for regional conflict resolution models to facilitate change that is acceptable to the community and for sustainability.

*Conflicting pressures to jump at every economic opportunity, to shift to sustainable production systems and to reconcile the historical displacement of Indigenous people have set the pace of change well ahead of pace experience in the bush (Dale 2000:1).*
Two research projects, Rangeways in the North East Goldfields region and the Central Highlands Regional Resource Use Planning Project in Central Queensland offer insight into the processes through which conflicting land users may negotiate change.

**Rangeways**

Rangeways was a research program commissioned by the LWRDRC and undertaken between 1995-2000 that sought ways to manage and plan for better use of Western Australia’s rangelands. The study area was in the North East Goldfields, and included the shire of Leonora and parts of Laverton, Menzies, Sandstone and Wiluna shires. Improvements in community well being and the regional environment were central to the Rangeways project (Friedel, Holm et al. 1997). It was argued that increasing numbers of users and uses for rangelands required regional resource use management planning to resolve conflict among competing users and to achieve social, economic and ecological sustainability. This fact, combined with a recognition of the need for community to be involved in the decision making process were driving forces behind the Rangeways research (Holm, Friedel et al. 2002).

The stated objectives of Rangeways were:

- "Researching an evolving, dynamic, community led and owned planning process for managing change and conflict at the regional and local scale;"
- Providing mechanisms for communities to cooperate in resolving competing land uses in a just and equitable way;
- Opening direct channels from the community to decision makers, politicians and policy planners and fostering better communication and coordination between all levels of government to ensure that agreed action is implemented;
- Ensuring the integrated, best possible use of rangelands and the protection of high value landscapes at a regional scale” (Rangeways 2002).
• Around 70% of Australia is defined as Rangelands. This project sought new, community based ways to reconcile competing land uses and ensure conservation of biodiversity in Western Australia’s rangelands through acknowledgement of social and economic opportunities and their links to sustainable natural resource use management (Holm, Friedel et al. 2002; Rangeways 2002). Equitable participation in the project was sought from seven sector groups: Aboriginal interests; conservation and heritage; those who sought to diversify land uses, mining groups, pastoralists, prospectors and tourism and recreation interests. Although it was concluded that the Rangeways model was ineffective in gaining institutional support from government (Holm, Friedel et al. 2002), its results provide insight into some of the complexities involved in community led regional planning processes. Recommendations for community led planning emerged in four key areas from the program. These key areas, and their corresponding recommendations are summarised following.

1. “Establishing a knowledge base to determine the long term requirements for resource use and management” (Holm, Friedel et al. 2002:45)

It is noted that while knowledge and data was generally already available, smaller scale, regional and local level data, particularly on Aboriginal land uses was lacking. The Rangeways project was able to use Geographic Information Systems (GIS) to assist planning at a broad regional scale, however, fine grained information required for specific plans at a very local level was at times lacking. It was recommended the purpose, and scale of influence of the planning process be determined prior to data collection so that only appropriate information is sought, and that realistic expectations are held.

2. “Application of technically sound and innovative environmental, economic and social assessment methods to underpin decision making and negotiations” (Holm, Friedel et al. 2002:45)
Whilst affirming the importance of general participation in assessment, it was recommended that options and alternatives be presented to community, and that community members be separated from the technical aspects of planning as in many cases, community members lack the “patience or skills to manipulate the numerous guidelines to achieve desired outcomes” (Holm, Friedel et al. 2002:iii). This may have been particularly important for Rangeways, as social, environmental and economic information was spatially mapped through the LUPIS GIS mapping tool. Tools such as interactive testing of alternative scenarios on the ground, with the community and analysis of alternative regional land use planning according to economic, ecological and social criteria were also recommended (Holm, Friedel et al. 2002: 47-49).

3. “Mechanisms to establish the planning group (i.e. principles for participation) and enhance consultation and communication with and participation of stakeholders at all levels” (Holm, Friedel et al. 2002:47)

In general, the regional community opposed the involvement of government and of community interests from outside the project region. Participation of government agencies that have the power to enact broad changes in land use and land allocation was, however, recommended for future regional resource use planning projects, even if these agencies did not have the power to influence final decisions. The wider community, including conservation interests, and members of sector groups, as well as the Rangeways research team also were seen by the project coordinators as having legitimate interest in the sustainable management of the region, even though they did not reside in the region.

4. “Institution and support arrangements to facilitate negotiation, resolution of conflict and decision making” (Holm, Friedel et al. 2002:49)

Facilitating a supportive and cooperative relationship between community natural resource management groups, and government agencies is identified as particularly important. That is, a partnership approach between community and government is fundamental to achieving results, and community driven processes that actively
exclude government are unlikely to achieve results. Developing an integrated approach to resource management within and between government departments, that is conducive to community participation, is also necessary. Interestingly, the Rangeways project found that a community based approach to planning for change was more likely to support the status quo and to avoid change. In general, mining, pastoral and prospecting sector groups had negative attitudes towards the project, which they viewed as a threat to their activities. Indigenous groups and conservation and heritage groups, as well as those that sought diversification of land use in the region, were supportive of the process and it is these sector groups that are least likely to have sufficient land for their needs currently (Holm, Friedel et al. 2002).

The Central Highlands Regional Resource Use Planning Project (CHRRUPP)

CHRRUPP sought to develop effective approaches to sustainable resource management in Queensland’s Central Highlands. A focus in this project was building capacity within Central Highland communities to enable them to do their own planning, and to diminish the need for external assistance. CHRRUPP involved partnerships between a number of stakeholders. These included: the five Local Governments of the region; the Fitzroy Basin Association; pastoralists; grain growers; irrigators; economic development organisations; the sector of human services; the mining industry; conservationists; Indigenous communities, the Central Queensland University; and state and Commonwealth agencies (Dale, Bellamy et al. 2000). It sought to improve sustainable management of the areas natural resources through providing better information to all regional stakeholders on regional resource management issues. It would then go on to support these stakeholders to undertake their own regional planning through supporting structured negotiation for solutions to common problems and undertaking research on techniques and processes to suit communicative planning in the context of diverse regional interests (Dale, Bellamy et al. 2000).
Planning, support and research and development were undertaken in such a way as to empower the local communities. Each stakeholder group was encouraged to undertake planning activities and to negotiate with other stakeholders on these planning activities through a yearly regional priorities forum. Support functions including facilitation, coordination and technical and information support were designed to assist this process. Stakeholders were also encouraged to support themselves. Research and development was undertaken with a view to disseminate important information from this study to as wide a range of stakeholders in regional sustainability, from within and outside the study region, as possible.

Dale and Bellamy et al (2000) developed a list of “research needs” through an evaluation of the first year of this project, and a national review of regional resource use planning. Some of these are summarised below as important considerations for regional sustainability strategies

- Planning has evolved to include much greater stakeholder participation. Programs that facilitate equitable negotiation between stakeholders need to be encouraged, and where legal and administrative processes constrain this there, is a case for reform. Issues such as how to facilitate equitable cross-stakeholder negotiation and how to ensure community representativeness need further research.

- Institutional arrangements that encourage regional approaches exist throughout Australia. However, these institutions generally have a ‘top-down’ focus, and are not integrated across sustainability themes. That is, they are economic or environmental or social in their focus. Evaluation of the benefits/problems with current approaches is needed, and institutional reform may be necessary.

- Natural and human systems need to be integrated more effectively in planning to develop a better understanding of the complexity of these relationships and
respond to them in a flexible and adaptive way. Understanding the socio-
political and historical circumstances from which these relationships have
evolved is central to creating positive change.

- Integration of stakeholder perspectives in the monitoring and evaluation of
  regional initiatives in a way that feeds back into planning activities, and
  challenges institutions and resource managers to modify their behaviour, is
  necessary. Development of context appropriate indicators with regional
  stakeholders will assist this process.

- Recognition of conflicting values, interests and expectations within and between
  regions as well as equitable access to good knowledge and expertise is
  important to facilitate open communication and learning between stakeholders.

- Understanding of the social and cultural processes that drive different regional
  economies is needed to plan for social, economic and ecological sustainability
  at a regional level.

- Further research into the economic viability of regions needs to be context
  dependent and to take a systems approach. This includes taking into
  consideration regional determinants of enterprise viability, regional economic
  welfare issues and an analysis of regional natural resource management
  issues.

Dale and Bellamy et al. (2000) also identify four essential elements for regional
strategies. These include sound social, economic and ecological assessment methods
that inform the negotiation process, an institutional environment that enables
participation and negotiation at a regional level in regional planning and clear
mechanisms to develop stakeholder capacity to participate. These latter two elements
are central to the argument of this thesis.
Conclusion

Regional natural resource management organisations and research projects show some clear insights into potential process and structure for regional sustainability strategies in Western Australia. As organisations that are already working on the ground in Western Australian regions, particularly in the Southwest of the State, they are also likely to have important input into any regional sustainability strategy development process. An expansion of the roles of some regional natural resource management initiatives to include social and economic concerns demonstrates that social, environmental and economic concerns are increasingly recognised as linked in regions.

The processes that they have developed to facilitate regional natural resource management offer some key insights into regional sustainability process. In particular, they demonstrate the importance of collaborative process through connecting community groups, individuals, business and government at a regional level for regional planning, and demonstrate that regional organisations can be effective in advocating regional concerns at State and Commonwealth Government levels. They can also coordinate grass roots activities for wider regional benefits. Facilitating regional processes for sustainability, promoting networking between intra and extra regional stakeholders, coordinating sub regional initiatives and advocating regional concerns in wider forums may be key roles of regional sustainability strategies and any regional structure that enables their development.

Conflict resolution is a key concern for regional sustainability, as the different values held within regional communities, define and determine the process of regional sustainability. The Rangeways and CHRRUPP projects demonstrate some of the complexities that may be involved in regional sustainability issues, and support a participatory approach to conflict resolution that is supported through enabling
institutions. They also conclude that institutional change, and cooperation between government and community may be required for regional conflict resolution processes to succeed. Additionally, the need for a regional knowledge or information base that can interpret regional social, cultural, economic and ecological processes and the interrelationships between these, including a historical perspective, is affirmed as necessary. This supports the idea of regional sustainability strategies, and also regional sustainability assessment.
Chapter 7: Conclusion

Conclusions

Regional sustainability strategies in Western Australia have the potential to address a range of sustainability issues at a scale that is appropriate for environmental, social and economic reasons. Western Australian regions are experiencing the effects of global and national economic, social, political and environmental trends that increasingly require a regional response. They also experience different sustainability issues, resulting from different regional economies, regional social conditions and history, and regional environment issues. The interplay between external and internal issues at a regional level provides strong support for the idea of regional sustainability strategies in Western Australia. Networks that enhance the relationships between inter and intra regional spatial differentiations like the catchment and the bioregion, or the economy of a regional town and the economy of a whole region, are a critical factor to consider for regional sustainability strategies (Arndt, Gowron et al. 2000), requiring a depth of understanding of the term region that encompasses more than just regional boundaries.

Particular trends and issues that support a regional approach to sustainability include:

- A requirement for an appropriate spatial scale to implement the global sustainability imperative on the ground, through the integration of social, economic and ecological spheres in decision making and planning.

- A likelihood of regional variations in the economic and ecological implications of climate change that require a regional response.

- The need to incorporate Indigenous rights, Indigenous stories and Indigenous perspectives in sustainability planning.

- The influence of economic globalisation on sub-national economies, that includes:
o Increased exposure of sub-national regions to global economic competition;

o A trend towards increased political influence of sub-national regions;

o Diverse regional impact from changes in the global economy, particularly the trend from a resource based to a knowledge based economy. This is resulting in economic decline in some resource dependent regions, particularly agricultural regions.

• The socio-economic and demographic implications of global and national economic trends on regions that include;
  
  o Changing population dynamics, particularly population decline, loss of youth, and population ageing in agricultural regions;
  
  o A requirement to change or diversify regional economies;
  
  o The potential for declining social capital as population and economies decline in some regions; and
  
  o The potential for negative economic, population and environmental trends to compound each other in some regions.

• The existence of regionally specific natural resource management issues that are best managed at a regional level.

These issues, and others, combine at regional levels to create unique sustainability challenges, that are best addressed from within regions through a participatory approach. Regional variation in social, economic and ecological issues in Western Australia is clearly demonstrated and this supports the more general analysis of trends affecting sub-national regions to support the idea of regional sustainability strategies in Western Australia.

In Western Australia, diverse factors contribute to inter-regional differences in sustainability issues. Economically, the primary industry of a region influences
employment and wage rates and these in turn influence demographic trends, such as ageing and loss of youth from a population. Locational factors, such as proximity to the coast or capital city also influence these trends. Ecological degradation has an impact on regional economies, particularly where agricultural and tourism industries are strong. There is clear variation in the degree to which regions are experiencing compounding trends in economic, population and ecological decline. In the Wheatbelt and Great Southern regions there is strong evidence that this is occurring and it is a key consideration for regional sustainability in Western Australia. However, remote and resource rich regions in Western Australia also experience sustainability issues, including high Indigenous unemployment, comparatively low social capital and resource dependence. Decline in agricultural regions of Australia is well documented, but sustainability issues in remote resource rich regions of Western Australia may need further investigation. This emphasises the need for integration of social concerns, through story telling and other processes into regional sustainability.

There is clearly a case for the development of regional sustainability strategies in Western Australia. This is supported through the Draft State Sustainability Strategy, and, at a general level, through Western Australian regional policy. However, lack of regional governance arrangements and the complicated nature of regional policy and development in Australia, that requires cooperation between State, Local and Commonwealth Governments, complicates implementation of a framework or structure to facilitate this process. A State-wide framework to facilitate regional sustainability from a regional level will need to consider the potential positive and negative impact of Commonwealth policy on regional sustainability. At a regional level, processes to increase regional understanding of the broader processes and structures that influence regional sustainability, and that can coordinate regional input into the National and State policy agenda will increase regional influences over broader policy settings in the longer term.
In Western Australia Regional Development Commissions and Regional Associations of Local Government have potential to become vehicles for regional sustainability strategy development. Assuming that a consistent structure for the implementation of regional sustainability strategies is required, State Local Government partnership through regional associations of Local Government, or, if Regional Development Commissions are to be involved, establishing sustainability as a clear function for these organisations would be necessary. Cooperation between a Regional Development Commission, a regional association of Local Governments, and the Western Australian Planning Commission, through its regional planning activities, as occurs in the Peel region, is probably the best model. Any governance structure through which regional sustainability strategies are to developed needs to be supported by a clear articulation of process.

At a general level, regional sustainability strategies will require broad regional community participation, enabling government processes, and mechanisms for conflict resolution between the diverse stakeholders that exist within regions. Enabling governance and participatory process are fundamental to allowing Regional Sustainability Strategies to emerge out particular places. This will require a commitment by government to allow community to direct the process, as well as investigation and identification of appropriate participatory methods for community participation. Literature on enabling governance, participatory methods, the experience of regional natural resource management initiatives and research into resolving land use conflicts all offer insight into the types of processes that can enable these to occur.

From this research, it can be seen that a regional body that facilitates regional sustainability strategy development may need to perform an advocating, networking, coordinating and facilitating role for regional sustainability processes, rather that take
on the role as a top-down sustainability planning body. This will require a partnership approach between community, business and government, institutionalisation of participatory process and a commitment to regional conflict resolution to facilitate long-term sustainability. This is a challenge to both State and Commonwealth regional structures which have not yet demonstrated an ability to do this.

**Areas for further research**

This thesis has provided an overview of an argument for regional sustainability in Western Australia and a perspective on some of the processes that may enable regional sustainability strategies to develop. Some areas for further research are identified below.

1. Investigation of trends and issues at a regional level to see how this research relates sustainability in Western Australian regions on the ground.

2. Further research into regional sustainability assessment, particularly the methodology suggested for Regional Sustainability Strategy development by Professor Brian Jenkins and briefly mentioned in Chapter 1.

3. Development and trials of participation models within regional institutions and communities.

4. Further articulation of how to incorporate social issues into environmental and economic planning that is more likely to be occurring currently at a regional level.

5. Deeper research into sustainability concerns of Indigenous people in Western Australian regions, and effective ways to incorporate this.

6. Research that identifies appropriate scales and regions for develop in regional sustainability strategy development in Western Australia.

As community participation has been identified as essential to regional strategy development, qualitative, regionally specific research into many of these areas that
actively seeks the views of a diverse range of regional community members may be required.
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