REGIONAL SUSTAINABILITY STRATEGIES

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Summary
The State Sustainability Strategy has called for the development of Regional Sustainability Strategies to implement sustainability into the fabric of regional planning. This short paper sets out the overseas experience in developing regional sustainability strategies and what it could mean for Western Australia.

1. INTRODUCTION

Sustainability assessments are now being applied in a number of ways. Environmental impact assessment of proposals is being expanded to sustainability assessment with the addition of social and economic impact assessments (Gibson 2001). Corporate reporting, which historically focussed on financial assessment of company performance, is being expanded to include environmental and social assessments of corporate performance with triple bottom line accounting (Lancaster et al 1998). At the national level, environmental sustainability and social well-being indicators are being added to national economic indicators (World Economic Forum 2002; Environment Australia 2001).

However, a number of recent reviews of how to progress towards sustainability are concluding that the appropriate scale to address sustainability is at the regional or sub-national scale (US National Research Council 2000; World Economic Forum 2002; Asian Development Bank 2001).

The US National Research Council's Board of Sustainable Development study on sustainable development stated:

"The Board concludes that most of the individual environmental problems that have occupied most of the world's attention to date are unlikely in themselves to prevent substantial progress in a transition toward sustainability over the next two generations. Over longer time periods, unmitigated expansion of even these individual problems could pose serious threats to people and the planet's life support systems. Even more troubling in the medium term, however, are environmental threats arising from multiple, cumulative, and interactive stresses, driven by a variety of human activities. 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 an integrated and place-based understanding of such threats and the options for dealing with them is a central challenge for promoting a transition toward sustainability.*" (Emphasis added) (p8)

The World Economic Forum, which has sponsored the annual reporting of national environmental sustainability indices, concluded:

"Environmental sustainability is a function of the interaction of mechanisms that operate at the level of ecosystems, watersheds, firms, households, economic sectors". (p24)

In reviewing the planning for sustainable development the Asian Development Bank observed:

"…throughout Asia, the urgent need to link social, institutional, cultural, political, economic, and environmental issues into a framework for sustainable development has been recognised at the highest levels of governments, international aid agencies, and among concerned community leaders. There appears to be a genuine belief that sustainable development will not be possible without a combination of top-down and bottom-up planning, which not only integrates economic and environmental dimensions, but also takes into account the specific social, cultural, and political context of each country…However, if integrated economic and environmental planning is to be a partial contributor to sustainable development, there appears to be a significant gap or impediment in the planning hierarchy between the policies espoused in the national level sustainable development strategies and the projects that actually implement development practice in Asia. The projects selected normally bear no direct relationship to the national sustainable development strategy and still rely heavily on EIAs to address environmental concerns. The nation state appears to be both too big for the task of devising viable strategies of sustainable development, which can best be developed from the bottom up, and too small for the effective management of global problems. *Plans at the subnational level provide a potentially powerful bridge between national plans and local plans and projects.* (Emphasis added) (p6)

These reviews suggest that regions are an appropriate basis for considering sustainability. Also, the transition to sustainability will require the implementation of proactive strategies and not just reactive assessments of other policies and proposals.

The Western Australian State Sustainability Strategy (Government of Western Australia 2002) includes the development of Regional Sustainability Strategies as one of the priority areas for implementing State Strategy.

This paper outlines an approach to sustainability strategy development for regions. Section 2 summarises approaches taken by others that are considered relevant and the components identified in the State Sustainability Strategy. Section 3 sets out the steps for undertaking regional sustainability strategy development.

2. REGIONAL PLANNING AND SUSTAINABILITY

Precedents for regional sustainability strategies come from the integrated regional development planning adopted by the Organisation of American States (OAS) in the 1980s, the recent United Kingdom requirements for sustainability assessments of regional planning schemes, and the recommendations of the US National Research Council for the development of sustainability science. In addition the components of Regional Sustainability Strategies as set out in the State Sustainability Strategy are summarised.

2.1 OAS Integrated Regional Development Planning

One of the forerunners of regional sustainability strategies was the 'integrated regional development planning' of the Organisation of American States (OAS, 1984). The OAS planning process is summarised in Table 1. At its core, this process consists of the following steps:

- Comparison of information on natural resource development potential with existing uses of resources;
- Analysis of population growth and projected demands for goods and services;
- Interviews with local people during field studies to identify new project ideas;
- Determining which needs are being fully satisfied by existing natural resources and whether they need to be enhanced or protected;
- Identification of a small number of projects for immediate implementation before the study is completed; and
- Involvement of the private sector as early as possible to facilitate prompt action on promising projects.

	Phase 1 Development Diagnosis	Phase 2 Project Formulation and Preparation of Action Plan
Activities	Diagnosis of Region • Sectoral analysis • Spatial analysis • Institutional • Environmental • Synthesis: needs, problems, potentials, constraints Relation to National Plans, Strategies, Priorities Development Strategies • Formulation and analysis of alternatives • Identification of project ideas	Project Formulation and Evaluation • Production sectors • Support services • Social development • Infrastructure • Urban services • Natural resources management Action Plan Preparation • Project packages • Policies • Incentives • Investment timetable • Funding sources • Training and institutional development
Products	Interim Report • Diagnosis of region • Preliminary development strategy	Final Report • Development strategy • Action plan • Projects • Supporting actions
Time Frame	9 to 12 months	12 to 18 months

TABLE 1: OAS INTEGRATED REGIONAL DEVELOPMENT PLANNING (Source: King et al 2000)

2.2 UK SUSTAINABILITY APPRAISAL IN THE STRATEGIC PLANNING PROCESS

Sustainability appraisal was introduced in the UK planning system at the end of the 1990s with the draft Planning Policy Guidance Note 11: Regional Planning (DETR, 1999) followed by the Good Practice Guide on Sustainability Appraisal of Regional Planning Guidance in 2000 (DETR, 2000).

Sustainability appraisal is defined as:

"a systematic and iterative process undertaken during the preparation of a plan or strategy which identifies and reports on the extent to which implementation of the plan or strategy would achieve the environment, economic and social objectives by which sustainable development can be defined in order that the performance of the strategy and policies is improved" (DETR, 2000).

The key steps in sustainability appraisal are to:

1. Characterise the region
2. Set up sustainability objectives
3. Appraise options
4. Appraise planning objectives
5. Synchronise the policies
6. Appraise policies
7. Report appraisal findings
8. Audit

The linkages to the regional planning process are set out in Figure 1.

2.3 US NATIONAL RESEARCH COUNCIL

In the summary of what is needed for the transition to sustainability the NRC listed the following components:

- Assessment Tools
  - Integrated assessment models which address complex interactions between environment and development;
  - Development scenarios which are summary stories of how the future might unfold
  - Regional information systems which compile scientific knowledge to support policy decisions

- Knowledge of Environmental Threats and Opportunities
  - The comparative rankings of the severity of environmental hazards;
  - Expert assessment of the challenges and opportunities in critical development sectors ie human well being, urban systems, agricultural production, industry, energy and living resources;
  - Evaluation of how the threats and opportunities may change when multiple activities from different sectors interact with complex environmental systems.

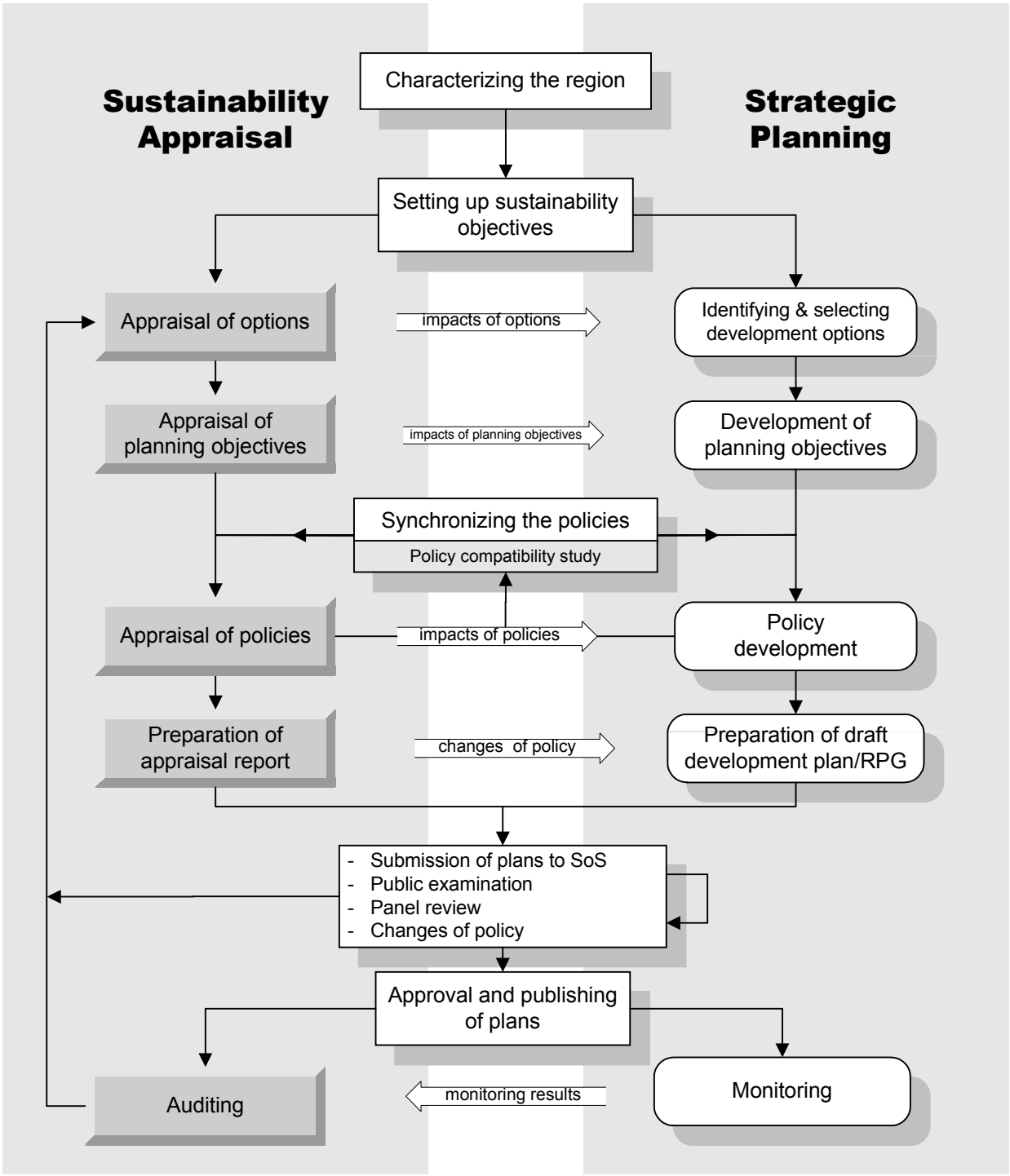

Figure 1 **Procedural integration of appraisal practice with strategic planning process**

- Indicators of the Transition to Sustainability
  - Multiple indicators to chart progress for meeting human needs, preserving life support systems and the efficacy of actions being taken.

- Integration of Knowledge and Action
  - The design of strategies and institutions to integrate knowledge and action into programs of adaptive management and social learning;
  - Developing a research framework to shape a 'place-based' understanding of the interactions between environment and society;
  - Integrating the lessons from the past and the projected needs and know-how for the future with policy actions that can move society along a positive pathway, and indicators that can monitor progress.

2.4 STATE SUSTAINABILTY STRATEGY

As set out in the State Sustainability Strategy (p58), the Strategy –

"…encourages the pursuit of sustainability at the regional scale through the development of Regional Sustainability Strategies. These strategies will provide an opportunity to apply the broad framework of the State Sustainability Strategy working with groups of local government…"

Furthermore, "many other government processes can also feed into the strategies, for example the Regional Natural Resource Management Strategies being prepared by Regional Natural Resource management Groups. However, the Regional Sustainability Strategies have a rationale of their own – to tell regional 'stories'. The strategies can produce a regional 'sense of place' document to facilitate a shared understanding of the past, and a shared vision of sustainability for each region's future." (p58)

As stated in the Strategy:

"Regional Sustainability Strategies will:

- Provide an integrated application of the State Sustainability Strategy as it applies to the region,
- Build on the regional natural management strategies currently in preparation,
- Incorporate the social element through sense of place stories incorporating Aboriginal stories, the natural history and the local history,
- Link to broad, non-government organisation processes in the regions to pursue regional visions, for example, Eco Region South West and CSIRO Healthy Country,
- Incorporate indigenous regional sustainability strategies,
- Provide a broad set of goals for the future from this process." (p59)

3. REGIONAL SUSTAINABILITY STRATEGY: A SUGGESTED APPROACH

3.1 INTRODUCTION

The OAS, UK and NRC approaches provide some of the key considerations for developing an integrated approach to regional sustainability strategy development. The OAS approach was developed prior to the adoption of sustainability frameworks

but highlights the integrated regional approach to strategy development. The UK approach emphasises the sustainability assessment component with the strategy development through the regional planning process – it is structured more as two parallel processes of strategy development and sustainability assessment rather than an integrated approach for regional sustainability strategy development (refer Figure 1). The NRC recommendations emphasise the techniques and scientific inputs needed to progress sustainability. The State Sustainability Strategy highlights the need for integration at the regional level and the prime importance of the cultural and social dimensions as a key input to establishing the sustainability goals and strategies for the region.

3.2 DEFINITION OF A REGION

One of the areas of debate in regional analysis is the definition of regional boundaries. The preference is for boundaries to match economic, social, environmental and administrative criteria for coherence as a region. However it is rare for all reasonable criteria to be spatially aligned.

In Western Australia, the administrative boundaries can be defined by the boundaries of the Regional Development Commissions. While these have some social coherence, they are not always compatible with catchment boundaries, bioregions and other regional criteria. The 1998 State of Environment Report defined 15 terrestrial and 8 marine regions broadly based on the Interim Biogeographic Regionalisation of Australia (IBRA).

Whatever boundaries are used for regional analysis, consideration needs to be given to the flows across the boundaries and the interrelationship of the region with surrounding regions.

3.3 RECOMMENDED APPROACH TO REGIONAL SUSTAINABILITY STRATEGIES

Based on the OAS, UK, NRC and State Sustainability Strategy descriptions, an approach to regional sustainability strategy development is described below. The generalised scheme is set out in Figure 2, comprising the following major components:

1. Assessment Models and Baseline Information

The starting point for regional sustainability assessment and strategy development is understanding the current situation and the interactions between critical parameters. This involves:

- The compilation of economic, social and environmental data to establish the regional baseline information;
- The development of models that describe the environment-society interactions with the capability to predict the response to change.

2. Cultural History and Aspirations

Sustainability is culturally as well as biophysically defined. The sustainability objectives and strategies need to reflect the cultural history and aspirations for the region. The basis for this will come from:

- The 'story' for each region including the indigenous stories and history, natural history and local history.

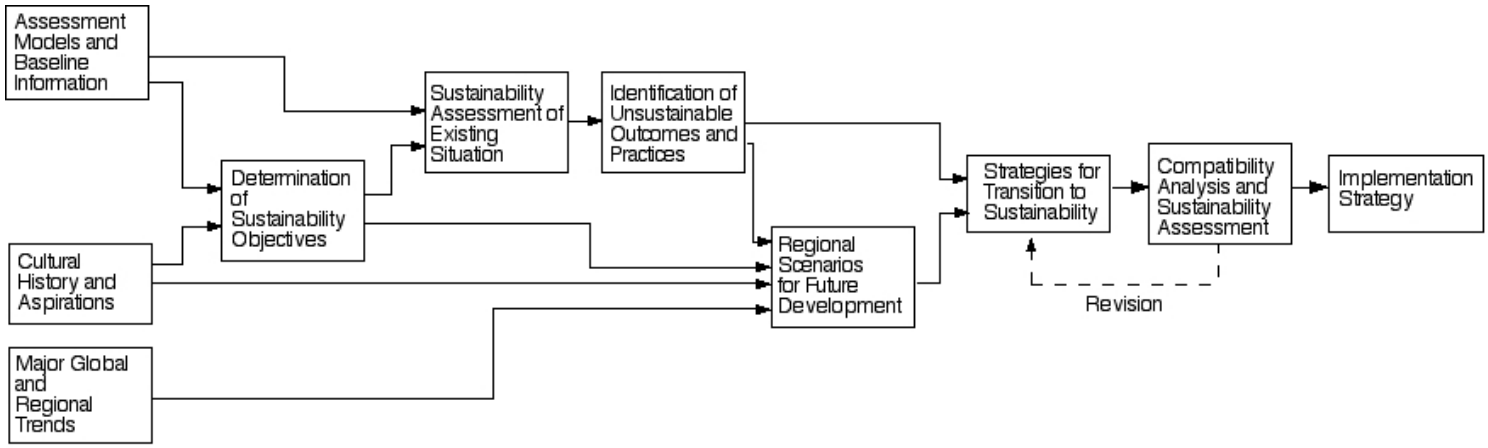

Figure 2: Regional Sustainability Strategy Development

3. Identifying Major Global and Regional Trends

In developing strategies for sustainability, it is relevant to not only consider the present problems associated with achieving sustainability that strategies need to address, but also the projected trends and changes that strategies need to accommodate and where possible create opportunities for progressing sustainability. This involves:

- Consideration of the global and regional trends in relation to people and markets, technological innovation, natural capital, social and technical networks, and institutional roles and responsibilities.

4. Determination of Sustainability Objectives

In order to define the way forward, there is a need to have objectives defined for sustainability relevant to the region and its communities. This involves:

- From the general principles of sustainability relating to economic viability, social well-being, and maintenance of environmental integrity, as well as the regional biophysical and cultural characteristics, a set of sustainability objectives are defined for the region;
- From the objectives, a set of indicators are devised that provide the basis for assessing current levels of sustainability, evaluating proposed strategies, and monitoring progress on the transition towards sustainability.

5. Sustainability Assessment of the Existing Situation

In order to provide the baseline of current sustainability issues in the region requiring attention, the following tasks are required:

- Identification of the most critical sustainability concerns for the purpose of resource allocation decisions in strategic planning;

- Analysis of the threats to sustainability and identification of vulnerabilities with respect to economic viability, social well-being and environmental integrity.

6. Identification of Unsustainable Outcomes and Practices

The next level of assessment is finding the underlying causes of unsustainable outcomes. This involves:

- Identification of the practices and processes that are the cause of unsustainable outcomes from the sustainability assessment.

7. Regional Scenarios for Future Development

In order to frame strategies relevant to the future, there is a need to depict the likely alternative futures. This involves:

- Characterisation of the current situation to define issues and problems;
- Definition of the critical dimensions, driving forces, strategic invariant elements and critical uncertainties;
- Assessment of the logic of the system;
- Developing alternative, qualitatively different images of the future including continuation of present trends, exacerbation of negative trends, and, transition to more positive futures.

8. Strategies for Transition to Sustainability

This is the creative part of the regional sustainability assessment and strategy development: it involves –

- Identifying strategies to take advantage of the opportunities created by the future trends;
- Identifying strategies to address the problems of unsustainable practices or alternative practices to replace unsustainable practices.

9. Compatibility Analysis and Sustainability Assessment

For a package of strategies to be developed, there is a need to ensure integration of the various strategy proposals and their contribution to sustainability. This involves:

- The analysis of each strategy against other strategies for compatibility, with modifications made where potential conflicts are identified;
- The evaluation of expected outcomes of the package of strategies against the sustainability objectives to test if the strategy package represents the basis for a plan to progress the transition to sustainability.

10. Implementation Strategy

The final output is an implementation strategy. This involves:

- The development of a package of strategies is into a series of programs, and the outcomes expected compiled;
- The identification of the means of funding and the timetable for implementation;

- The development of the institutional arrangements required for implementing the strategy and where necessary the creation of new institutions or making modifications to existing institutions;
- The documentation of performance criteria for evaluation of the programs as well as the means of monitoring the program implementation and outcomes;
- The establishment of an audit process to determine if the actual outcomes lead to the achievement of the sustainability objectives;
- The implementation of adaptive management where sustainability objectives are not achieved.

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