Regional Parks for South East Queensland

Greenspace for Recreation

DRAFT

Discussion Paper

30 June 2003

Glen Rock Regional Park

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Executive Summary

Background

Continued rapid population growth and urban sprawl in south east Queensland is leaving a fragmented landscape that is fast losing the ability and opportunity to provide for the environmental, economic, social and cultural needs of the region's population and its visitors. Recent surveys have confirmed that 95% of residents value the natural environment in their area while more than 50% are concerned about urban sprawl affecting the character of south east Queensland. Protection of greenspace has become a major public issue addressed regularly by leading State and local newspapers. Various solutions are being sought to meet the challenges to the region's environmental sustainability and livability.

The concept of regional parks had its genesis a decade ago with the SEQ 2001 project. Since then the concept has evolved through different cycles of the Regional Framework for Growth Management, the primary regional planning strategy for south east Queensland. Under the leadership of the Regional Landscape Strategy Advisory Committee, this discussion paper continues the process of evolving regional parks as a solution to outstanding recreational and open space needs of the region. This paper has been prepared by a working group representing a range of State, local government and community interests. The paper establishes a vision for a network of regional parks and is intended to raise awareness amongst government and community stakeholders of their benefits. Continued discussion and broadening collaboration on achieving a network of regional parks is hoped to follow release of the discussion paper.

Regional parks are a well established concept in other States and other developed western countries protecting natural and cultural resources and offering quality recreational and educational experiences for large urban populations. Regional parks or recreation parks have a specific land tenure in most other states. Further, in Sydney and Melbourne active programs of land acquisition have acquired significant land parcels ahead of urban growth to serve as regional parks. Regional parks fill a niche between larger, natural State reserves and smaller local council parkland.

South east Queensland has lagged behind other States and other developed countries not only in the acquisition of significant parcels of land for outdoor recreation but also in the appraisal of the full environmental, social and economic benefits they can deliver.

What are Regional Parks?

Regional parks are parks for people offering outstanding natural and cultural resource based recreation and education. They can attract large numbers of people, or residents from across the region and outside tourists. A range of regional open space values can be included in regional parks but outdoor recreation is a determinant use. A variety of natural, cultural and scenic landscapes and land uses should also be included in a network of parks eg natural bushland, rural land, pine plantations, rivers, dams and lakes, coastal and bay areas. Regional parks can also transform degraded sites creating valuable greenspaces and can be coordinated with construction of major infrastructure such as roads and dams. Both public and privately owned lands through cooperative agreements can be included in regional parks. A range of outdoor recreation opportunities offering a variety of activities in various settings should be provided, from greenspace settings accessible to large urban populations to larger parks offering outstanding natural landscapes. Regional parks contribute to deficiencies in regional outdoor recreation not provided by State parks (national parks, conservation parks, forest reserves, State forests), lakes and dams and local government parks. Community input is vital to confirm or modify understandings reached on a network of regional parks best serving their needs.

The process of recognising regional parks has been built around multiple criteria which accommodate their recreational value and their contribution to sustaining biodiversity, shaping the urban form of cities or separating urban areas, stimulating rural economies, enhancing community identity and addressing social disadvantage. Regional parks are part of Smart Growth helping to make south east Queensland a more attractive place to live, work and do business. Regional parks are part of an open space system integrated with housing and transportation.

Regional parks can contribute to protection of the region's biodiversity in a number of significant ways. They can inclue and sustainably manage natural areas, attract recreational use away from protected areas, educate residents and visitors on the value of natural ecosystems and offer venues for recreational activities that might be unacceptable in protected areas (eg horse riding, exercising dogs). They can be planned to complement and integrate with significant biodiversity values in reserves and on private land.

The philosophy supporting a network of regional parks is captured by **"green space for re-creation"** and "**helping reconnect people and nature"**.

Benefits of Regional Parks

The scope and magnitude of benefits provided by regional parks are probably larger than have been imagined. These values extend across environmental, social and economic spheres. Better frameworks are needed to encapsulate their significance not only to park visitors, but to the broader community and our natural and urban environments.

Regional parks offer opportunities to reconnect with nature and can influence improvement in all National Health Priority issues. City living involves an extraordinary disengagement of humans from the natural environment that is likely to be detrimental to health and wellbeing. Parks may be the only means of accessing nature in various forms, for the majority of people in urban areas. Planning for parks has been focussed on leisure activities, but research shows a far wider range of benefits beyond improvement in physical health through contact with green nature ie reduction in crime, fostering psychological wellbeing, reducing stress, boosting immunity, enhancing worker productivity and promoting healing. The challenge is to develop a case for regional parks which presents these potential benefits as a solution to many social issues. Developing partnerships with other health and social service providers can assist this process.

Economic valuation methods estimating the benefit to visitors and to rural and regional economies can also assist in capturing the great magnitude and economic significance of benefits involved. These should help build a **business case** supporting the acquisition and management of regional parks.

Parks Victoria has an advanced planning capability based on a decade of visitor research which allows investigation of new parks that offer equitable access to underprovided communities. Further work is establishing the previously undervalued benefits of contact with nature in a park context. Similar research is emerging in Sydney where the annual economic value of recreation in parks or their community use benefit has been determined (eg $23 to $33 million per year and $4 million per year respectively for Centennial Park).

Some significant progress is being made in understanding the economic value of recreation for Queensland's protected areas and their economic benefit to rural and regional economies. The discussion paper presents projections based on this work of the likely economic value of recreation derived from a 40% increase in population. A very conservative estimate of an average of $40 million over the next 20 years might be attributed solely to future growth in regional park recreation over this period. This does not include other environmental, social and economic benefits.

Outdoor Recreation in SEQ

Coordinated planning across various public and private service providers of outdoor recreation in south east Queensland is widely acknowledged as deficient. No single agency has responsibility for all outdoor recreation activity in Queensland. Planning and coordination for regional needs across local government boundaries and State reserves is needed in research and data collection. However, significant initiatives have commenced in inventorying the resource (Outdoor Recreation Inventory System) and determining participation rates (SEQ Outdoor Recreation Demand Studies). Such work should be supported and expanded.

Fundamental issues about how to determine the outdoor recreational requirements of the population are explored in the discussion paper. This is related to determining the role and capacity of regional parks. Determining current participation in activities does not provide an estimate of optimal provision levels as latent demand is not accounted for. Significantly greater participation and community benefits can be realised through for example, greater promotion, better facilities, more or closer parks. Determining optimal level of provision through economic modelling of supply and demand presents significant challenges.

An analysis of available recreation supply and demand information suggests that the provision of opportunities for outdoor recreation in south east Queensland has not kept pace with population growth. State acquisition of public land suitable for outdoor recreation has not been substantial in recent years. Meanwhile the region's population has grown by over half a million in the decade up to 2001 and is expected to increase by a further 1 million by 2021. This represents a 40% increase in outdoor recreation demand (an increase of 70 million visitor days per year by 2021) over the next 20 years assuming participation rates remain unchanged. Local governments in south east Queensland combined, contribute an invaluable $29 million per year (collected through green levies) for the acquisition of environmental areas. These provide some but limited recreational value. The role of State owned lands in providing for increased demand in outdoor recreation is under some uncertainty due to imminent tenure conversions under the SEQ Regional Forest Agreement. Opportunities may be available outside the region but this impacts on travel time, costs, traffic congestion and the potential participation rates and broader health and wellbeing benefits that might accrue to the community. Some activities such as horse riding are proving difficult to accommodate in protected area tenures.

Other trends continue to reduce the availability of natural areas for outdoor recreation including the increasing threat on the region's biodiversity from land clearing, development, pollution and climate variability and the importance being placed on the region's remaining biodiversity. Only 17 percent of the region falls within State owned public open space and 69 percent of the region's regional ecosystems are listed as endangered or of concern. A contracted role in recreation services has resulted for the region's major water storages as a result of the SEQ Water Board becoming a private corporation in 2000. The role of private land owners in public outdoor recreation is being compromised by escalating public liability costs. **Thus the region is facing increasing demand on a diminishing resource.** The region's plentiful beaches, bay and sea as well as its protected forests which provided a quality outdoor lifestyle in the past may not be sufficient to maintain this for future residents and visitors. There is ample evidence of substantial increased visitation at most popular natural recreation sites, particularly at peak weekends and holiday periods where maximum capacities are reached.

A ball park estimate of a projected increase in visitation of about 10 million visitor days per year by 2021 could be required from regional parks. This use would be distributed over three board recreation settings ie

- the more popular and high participation rate activities of walking or nature study, water activities, bicycle riding and picnicking in more accessible regional parks closer to urban population centres, with modified but also more natural landscapes (tending to Recreation Setting Group C)

- additional activities to the above including driving 4 WD vehicles, camping, fishing, sailing, canoeing, water skiing, horse riding, trail bike riding, abseiling and rock climbing depending more on natural and semi-natural landscapes (Recreation Setting Groups A and B)

These are broad generalisations deserving greater study. Data were not available to allow investigation of recreational resource need based on specific activities. Recreation planing is moving towards **benefits based management** which aims to add value to the lives of **customers** while protecting the biophysical resources being managed. Changing community values and trends in outdoor recreation place greater emphasis on establishing an accessible network of sustainable open spaces that can accommodate changing activity and experiential needs over time.

Determining a Network of Regional Parks

A combination of opportunistic and strategic approaches are recognised as important in achieving a network of regional parks. Given the rate of regional growth and loss of critical inter-urban, near urban or coastal greenspace likely within the next 10-15 years, opportunities to secure key parcels should be given priority assessment and not delayed pending an overall strategy. Identifying a regional park network or assessing individual options should be explored by reference to multiple criteria.

Achieving an equitably distributed network of regional and higher order parks has emerged as a key objective for many regional planning authorities. This criterion is analysed in the discussion paper as a demonstration of a more comprehensive process. Other criteria such as the potential to link future sites to public transport (particularly rail) and regional trails eg bikeways and walkways, advances Smart Growth and enhances support of socio-economically disadvantaged areas.

An analysis of the distribution of State reserves and lakes and dams offering recreation sites indicates large distributional inequity of sites relative to existing population centres. **The north side of Brisbane is relatively well provided for with the Gold Coast, Logan City, Redland Shire and the south side of Brisbane relatively poorly provided for in terms of accessible sites particularly within ½ hour travel time.** Future growth is likely to exacerbate these differences. Additional expenditure within existing reserves such as Brisbane Forest Park while meeting growth needs locally will further exacerbate regional inequity without additional land acquisitions serving undersupplied communities. Further analysis may reveal that the region's most disadvantaged socio-economic areas are also underprovided in terms of their access to regional outdoor recreation opportunities.

The GIS analysis methods developed as part of the discussion paper can be used to assess where existing deficiencies lie relative to population numbers as well to test the servicing power of existing or new acquisition sites. Existing State owned sites which rate highly in terms of the numbers of people serviced within ½ hour drive are Daisy Hill forest reserve, Brisbane Forest Park, Lake Samsonvale, Hinze Dam and Numinbah forest reserve and the Beerburrum pine plantations. Many local government sites would also rate highly but data were not available for assessment. Other land use sustainability issues (eg nature conservation, catchment management) need to be overlaid with these emerging priorities. Extending this work to explore new acquisition sites based on multiple criteria and future population areas is strongly recommended.

A number of methods are investigated in the paper which establish the quantity of land resource required to meet the region's outdoor recreation needs. As the best methods rely on community values and inputs, estimates need to be qualified. **Setting a level of service based on a maximum of ½ hour driving time, or less, may be appropriate for some regional parks in the region given the distribution of roads and population centres and the benefits of frequent recreation offered by closer and larger parks suitable for "all day" use**. A level of service approach may not be appropriate for larger natural areas. Levels of service might apply for particular activities (eg horse riding, mountain bikes, trail bikes) and a range of recreation settings.

Achieving a Network of Regional Parks

Achieving a network of regional parks will require alignment of four core sectors

- government, both State and local at political levels
- professional planners, administrators and park mangers in government
- community recreation participants, both informal and organised groups
- private land owners and business involved in public outdoor recreation provision

As no single agency is responsible for all outdoor recreation services, finding leadership or a source for continued coordination is a key factor for progress. The RLSAC has provided this but its role post June

2003 is unclear in relation to regional parks as the EPA assumes responsibility for the RLS from this date.

Given the complexity of relationships, a number of preconditions are suggested that might result in actions being taken towards achieving a network of regional parks. Establishing a vision and defining panning and consultation needs as outlined in this discussion paper should act as important stepping stones. Building a joint approach through pilot projects with other agencies, for example health, transport, regional and urban development, biodiversity, catchment management etc can lead to more formalised and better funded programs.

A number of funding strategies are suggested based on a 50/50 basis with State and local government.

Many other issues deserved consideration in this discussion paper. Nevertheless, it is hoped that the work completed will contribute to achieving a network of much needed regional parks for the people of south east Queensland.

Acknowledgements

Many people have contributed over many years to the realisation of a network of regional parks in south east Queensland. This discussion paper represents one step along that path.

Darryl Low Choy, Chair of the Regional Landscape Strategy Advisory Committee and members of the RLSAC have been the driving force behind this project for many years. Steve MacDonald (Manager, Regional Landscape Unit) has managed the consultation processes and the resources required to develop this discussion paper but also the many preceding developmental and consultative steps involved since 1995.

Community members, government and other stakeholders and presenters at a November 2000 Conference confirmed the need for regional parks and provided the momentum to continue building the case for their realisation. A number of other forums continued this process.

Members of the current Regional Parks Working Group (See Appendix A.1) have had only a short window of opportunity from November 2002 to June 2003 to advance ideas, research and discussion on regional parks for this discussion paper. Their various insights have been invaluable. In particular Dave Batt (Recreation Planning, Sport and Recreation Queensland) has devoted considerable time and expertise. Kathy Kingsford (Queensland Outdoor Recreation Federation) and Rob Hitchcock (National Parks Association of Queensland) have represented community interests on the working group.

Members of a number of working groups provided valuable feedback in the formulation and research stages of the discussion paper. These were the SEQROC Environmental Management Working Group, the SEQROC Planners Working Group and the SEQ Local Government Sport and Recreation Forum. Members of the Queensland branch of Parks and Leisure Australia also contributed to discussions on a number of issues.

A small team of professional officers within EPA researched new GIS based techniques determining the distribution of State managed recreation opportunities within south east Queensland. This team comprised Doug Ward and Steven Howell (Principal Biodiversity Planning Officers), Amy Bortman (Senior Principal Policy Officer, Climate Change and Economics Unit) and Tony Prineas (Senior Planning Officer, Regional Landscape Unit). Rob Bischof (Spatial Information Coordinator, SEQ2021) assisted with supply of GIS data and analysis.

Past and present members of the Regional Landscape Unit and members of previous working groups on this topic have contributed to an evolution in understanding of regional parks. Ben Orford (Student, School of Environmental Planning, Griffith University) carried out internet and other research on regional parks as part of a practicum placement with EPA.

Tony Prineas was the principal researcher and author of this discussion paper.

1. Background

1.1 Purpose of Discussion Paper

Over the last decade, the concept of regional parks for south east Queensland has been raised in government and community regional planning forums. While regional parks are better developed in Sydney, Melbourne and other parts of the developed world, progress in south east Queensland has been limited because of lack of a responsible agency and uncertain objectives. Meanwhile continued rapid growth in the region has maintained pressure on open space. The purpose of this discussion paper is:

- to establish a vision for regional parks in south east Queensland meeting the expected needs of the regional population by 2021
- to raise awareness amongst government, community, recreation groups and business interests of the need for and potential benefits of regional parks
- to suggest how a network of regional parks might be achieved

Supporting the vision are layers of analysis and insight which progressivel refine the regional park concept and a way forward for their implementation. This continues a process already commenced and provides a basis for further consultation and development .

1.2 Mandate for Discussion Paper

The Regional Landscape Strategy Advisory Committee (RLSAC) convened the Regional Parks Working Group (RPWG) to undertake preparation of this discussion paper. The RPWG has representation from State and local government agencies as well as recreation and community interests (See Appendix A.1). The RLSAC advises the Regional Coordination Committee and previously advised the Minister for Environment on issues of public interest in the implementation of the Regional Landscape Strategy (RLS). The RLS is one of 16 major objectives of the SEQ Regional Framework for Growth Management (RFGM), the primary regional planning strategy for south east Queensland. The RLS seeks "to protect through equitable processes, the regionally significant open space of south east Queensland for present and future generations".

The RPWG commenced work on this discussion paper in November 2002. From June 2003, the responsibility for implementing the "Priority Actions" supporting the RLS Principles incorporated in Section 5 of the SEQ RFGM 2000 will be incorporated into the core business of the Environmental Protection Agency (EPA) and ongoing resourcing of this project is uncertain. Accordingly, the RLSAC has decided to limit the scope of development of this discussion paper to allow completion by June 2003.

1.3 Readership

This paper is expected to interest a range of stakeholders ie State and local government agencies, planners, consultants, recreation and nature conservation groups, recreation industry, private land owners and other business interests as well as the broader community. An extended summary is offered at the beginning which contains the essential messages.

Greater technical detail is provided for those interested within striped bordered boxes that can be skipped over without losing the major themes or messages of the paper.

1.4 History of Regional Parks in SEQ

In south east Queensland the concept of regional parks had its genesis in 1993 through the Queensland government's SEQ 2001 project. Since then the term has changed and evolved through different cycles of the Regional Framework for Growth Management for SEQ. A summary of this history up to the present time is provided in Appendix B.

During this period regional parks proved difficult to define beyond an elementary level. This related to a number of factors.

i. There was an equal or overriding desire to protect regionally significant open space for a variety of purposes (not just for recreation) and lack of an encapsulating concept by which to do it. Hence the ROSS Committee 1995 definition of a Regional Park allowed for protection of multiple open space values without priority being given to outdoor recreation. No similar concept to *regional landscape areas* encompassing multiple open space values was conceived or developed at this time.

ii. RECTAG (Recreation Technical Advisory Group) addressed an outstanding need for better coordinated planning and management of State and local government lands within close proximity as a determinant of regional park status. The degree to which regional recreational needs could be achieved was not given priority or not made explicit in this process. More emphasis was given to stakeholder consent and mechanisms to achieve coordination than addressing underlying needs and benefits.

iii. The lack of research and consultation into quantifying regional recreation opportunities and identifying a means to determine needs and deficiencies. This should be based on community values. Much has been assumed and not investigated

The RLSAC clarification that recreational use be the overriding determinant for the definition and significance of regional parks gives greater clarity for this discussion paper. This is supported by the RLSAC advocacy of a broader concept of regional landscape areas for the recognition and protection of other regional open space. Further development of the concept of regional parks and regional landscape areas is provided in Section 2.

2. What are Regional Parks? – A Summary

Considerable uncertainty has surrounded the concept of regional parks, at least in south east Queensland. In a similar project, "A Regional Trails Network for South East Queensland, 2001" public response to the discussion paper called for a clear definition of a regional trail or iconic trail. Hence the issue of "what are regional parks?" has been given attention in this discussion paper.

The following vision, definition, guiding principles and understandings are derived from the body of this discussion paper but introduced here to cue in reader appreciation of a concept of regional parks. These have been endorsed by the RLSAC to encourage feedback and subsequent evolution of clearer definitions. They are not final and require further consideration and development.

Section 3 provides a more detailed discussion on issues surrounding definition of regional parks.

An overview of regional park definitions and examples developed in Australia and overseas is provided in Appendix B. While regional parks are well established in other States and in other parts of the world, understandably the term "regional park" is used in different ways. Significant departures from the understandings offered in this paper are highlighted

The context of land tenures and statutory measures for nature conservation is a major determinant of the regional park concept adopted. This context is provided for the Australian States.

2.1 The Case for More Recreational Open Space

South east Queensland continues to be the fastest growing metropolitan region in Australia. Since 1991 the region's population grew by over half a million to a population of 2.46 million in 2001 and is expected to increase by a further 1 million people by 2021 (SEQ 2021, PM Report 2001). The Courier Mail has recently featured community concerns on the loss of open space in south east Queensland. "The Gold Coast and Brisbane metropolitan areas have effectively merged, with no discernable urban break between the two, as the outer limits of Sunshine Coast and northern Brisbane march inexorably towards each other" (CM, 13 June 03). While 95% of people in south east Queensland value the natural environment in their area, more than 50% are concerned that urban sprawl is affecting the character of south east Queensland (SEQ Issues and Values Survey, 2003). In Brisbane, two thirds of park visitors were concerned about the loss of open space in south east Queensland (DNR, BCC Survey, 2001).

Given this growth, a number of factors heighten concerns that a diversity of outdoor recreation opportunities may not meet existing and future needs of the population:

- Conversion of many State forests, Timber and Land Act reserves to protected area tenures under the SEQ Forest Agreement is expected over the next five years. Even if current recreation opportunities are retained after tenure changes, serious questions remain about how these publicly owned reserves can accommodate a potential 40% growth in outdoor recreation demand over the next 20 years.

- Only 17% of SEQ is public open space secured in State reserves. The State government is not acquiring or protecting additional public open space specifically for outdoor recreation.

- SEQ is one of the richest parts of Australia for flora and fauna, but this natural heritage is under threat from clearing, development, pollution and increased climate variability. Much of the region's biodiversity is found outside the protected area system. Clearing of natural vegetation for land development is displacing recreational activities eg orienteering. The management of remaining natural areas for their biodiversity and ecosystem service function will receive greater recognition potentially competing with recreational uses in remaining natural areas.

- The existing and future role of private landowners in providing outdoor recreation opportunities is compromised by escalating public liability costs.

This background introduces the concept of regional parks and their unique and complementary roles in addressing concerns about loss of open space and outdoor recreation opportunities in south east Queensland.

2.2 A Vision for Regional Parks

An SEQ 2021 visioning workshop determined that a vision statement would include not only a philosophical statement and a set of core values and principles, but also be supported by an expression of the outcomes which will give the vision substance. A number of vision statements were considered. Option 1 is the preferred vision recommended by the RPWG.

Option 1
South east Queensland has a wide range of opportunities for outdoor recreation provided through an integrated system of open space areas which is controlled by both public and private sector landholders and includes national parks, State forests, marine parks, regional parks and local government parks.

Option 2
A network of diverse and equitably accessible greenspaces for recreation on public and private lands managed through co-operative partnerships for the enjoyment and wellbeing of south east Queensland residents and visitors, that define the form of our cities, protect our natural, cultural and scenic landscapes, contribute to rural and regional economies and secure these benefits for generations to come. Regional parks help reconnect people and nature.

Option 3
The south east Queensland community reconnected and sustained by a diverse network of recreational greenspaces on public and private lands managed through co-operative partnerships for generations to come.

Option 3 (Submitted by Brisbane City Council)
A network of diverse and accessible green spaces/parks providing a range of outdoor recreation opportunities for the current and future south east Queensland population and its visitors.

Comment Sought:
What are the key issues and how should they be expressed in a vision for regional parks?
Do you have a preference for any option or an alternative?

2.3 Definition

Regional parks are:
- parks for people,
- offering outstanding opportunities for natural and cultural resource based recreation and education,
- which may also conserve significant natural, scenic and cultural heritage values,
- in natural, man-modified greenspace or water-based settings,
- attracting large numbers of people, or residents from across south east Queensland or visitors from outside the region

2.4 Guiding Principles

The 2000 RFGM supported the principles of Ecologically Sustainable Development (ESD) and Social Justice (See Appendix A.3) These are also the *primary guiding principles* supporting regional parks.

There are a number of legal definitions of sustainability and an agreed definition of regional sustainability is being explored as part of SEQ2021 (see SEQ 2021 A Sustainable Future – Issues and Options for Sustainability Indicators, Draft 2, 8 April 03). The sense of sustainability referred to in this paper relates to integrating environmental, social and economic considerations as defined under the Integrated Planning Act 1997.

The ***supplementary guiding principles*** for regional parks are:

- Regional parks should provide a variety of recreational opportunities which are most needed regionally and which are most appropriately provided for in such areas.
- Regional parks complement the outdoor recreation role provided by State forests, protected areas, storage reservoirs, marine parks, local government parks and private landholdings.
- The siting, development and management of regional parks should aim where possible to reduce recreation related impacts on national parks and other protected areas under visitation pressure.
- Not all recreation opportunities of a regional nature need be provided in regional parks.
- A network of regional parks should represent a range of landscape types including natural and man modified settings and collectively offer a range of experiences.
- Access to regional parks should be socially equitable.
- Some regional parks should be close to large urban centres.
- Opportunities to secure regional parks offering sustainable water-based recreation should be given priority.
- Local and regional communities should be involved in and empowered through cooperative planning and management processes.
- A regional cross-agency and landholder approach to planning and implementation will achieve greater efficiencies in service delivery and community benefit. Collective responsibility should be encouraged.
- Both strategic and opportunistic approaches are important to achieve an integrated and diverse network of regional parks but also allow for innovation and change. Better research and information will assist better planning and decision-making.

2.5 Understandings

The following "understandings" help define and identify existing and potential regional parks. These may evolve into objectives, outcomes and guidelines based on feedback to the discussion paper and further research. These understandings also underpin criteria for recognition of regional parks (Section 5) which provide a more rigorous platform from which to investigate a desired network of regional parks.

Management

- The term ‘regional parks’ does not have a legislative basis in Queensland. It is a label rather than a land tenure.
- Regional parks could constitute single or multi tenures under public or private ownership (with owner’s consent).
- Regional parks can be managed by a single agency (State or local government) or a co-ordinated group of agencies and private landowners. Generally public lands will constitute most of the area.
- Regional parks might include freehold land with voluntary agreement of the landowner.
- Regional park identity can provide a means of achieving greater recreational use and co-ordinated management across a number of publicly owned or private lands with natural, open space or greenspace landscapes.
- Regional parks may collect fees for recreational, tourist and interpretive services provided.

A Range of Values and Uses

- Regional parks are areas of open space which accommodate a focus on outdoor recreation.
- Regional parks also include areas with important open space values eg for nature conservation, catchment management, scenic amenity, cultural heritage or social significance. Regional parks may also buffer urban settlement.
- A range of landscapes might be included in regional park ie natural areas where conservation values are higher, to rural lands or pine plantations, to more ornamental parkland settings. Land and water (lake, dam, stream, estuary or sea) areas may be included.
- Regional parks may foster multiple use of some or the entire site eg for grazing, timber production, apiculture, wild flower or wild food collection as well as recreation.

Recreational Use

- Regional parks attract or have the potential to attract:
    - large numbers of people, or
    - residents from across south east Queensland and visitors from outside the region
- Regional parks respond to deficiencies in the provision of regional outdoor recreation opportunities and emerging trends in leisure and recreation.
- Regional parks might accommodate recreational activities excluded from particular areas because those activities are inconsistent with the statutory obligations of the landholder or incompatible with the primary values of those areas.
- Not all regional recreation need be provided for in regional parks eg much regional recreation occurs on public beaches or in national parks/ State forests where regional park status would not improve the current management.
- Regional parks are different from commercially motivated feature or amusement parks which provide education or recreation experiences in outdoor settings eg Lone Pine Koala Sanctuary, Seaworld, Australia Zoo.
- Regional parks are different from other public parks attracting significant numbers or proportion of visitors (or tourists) from the State, interstate or overseas eg South Bank, Gold Coast Beaches. Such parks might be considered as significant at a State or higher level.
- Regional parks will emphasise outdoor recreation, cultural and educational experiences where these are to some degree dependent on a natural or greenspace setting.

- Parks primarily managed for intensive field sports will generally be excluded.
- Regional parks should give priority to sites offering access to water bodies suitable for sustainable recreational uses.
- Regional parks have sufficient land area to support many outdoor recreational opportunities, preserve or restore the natural or desired green space character, protect sensitive sites and provide adequate buffering between activity areas. As a range of regional park types is recognised, sizes may vary. Regional parks would be a minimum of 250 ha, and desirably much larger. Smaller areas may be acceptable if the quality or rarity of the resource provides adequate justification.
- Recreational activities could include trail uses (walking, cycling, horse-riding), nature study, picnicking, camping, swimming, canoeing, boating, fishing and use of off-road motorised vehicles.
- Regional parks generally accommodate multi-recreational activities. However, single use sites attracting recreational use from across the region might also be accommodated for specific activities eg hang gliding, trail bikes.

3. Issues Defining Regional Parks

Section 3 provides a more detailed discussion of issues surrounding the definition of regional parks.

3.1 Regional Sustainability and Livability

Regional parks should be defined as key open space areas contributing to the environmental, social and economic sustainability of the region. Even though a major theme of the recreation related benefits emerges in this discussion paper, the wider context of their contribution to regional sustainability and livability needs to be embraced as a starting point for their definition. Recognition of this wider context is substantial and expanding.

From an environmental perspective regional parks as a network of sizeable portions of open space can contribute to the conservation of regional biodiversity (including the maintenance of ecological processes and viability of ecosystems). Sixty nine percent of all regional ecosystems in SEQ are listed as endangered or of concern. The SEQ 2021 Performance Monitoring Report, February 2002 recommends considering means of strengthening protection of these elements in the region. Regional parks can meet this need in a number of ways (see Sect. 3.3). This includes improving or slowing the decline in ecosystem health in many waterways, which is one of the region's major environmental concerns. Regional parks as natural or greenspace areas can provide important benefits for catchments including maintaining water quality runoff, enhancing aquifer recharge, filtering sediment in stream flow, and reducing storm water peak discharges. They can contribute to sustaining productive use of rural lands via land owner agreements.

In other parts of the world, the role of regional parks and regional open space is broadening to include containment of urban sprawl, achieving a more compact and efficient city, attracting regional economic investment, encouraging pedestrian cycle and public transport use and other "smart growth" initiatives. In the US, 30 of the nation's largest metropolitan areas have developed or are in the process of developing regional greenspace plans (Hollis and Fulton, 2002). The idea that open space of all kinds should be consciously used to shape urban form is being widely promoted and explored. This complements other measures to contain urban growth and protect farmland, eg through purchase of development rights. The US Twin Cities with a nationally renowned system of regional parks acquired over 25 years, phrased this role in the following terms.

> *"The concept of a regional park system is a foundation of the concept of **Smart Growth**. Regional parks make the region a more attractive place to live, work and do business. In a high technology economy that provides business and workers with unprecedented mobility, amenities that add measurably to the quality of life, such as parks and natural open space, create powerful draw for economic development.*
>
> *The new challenge posed by a broader concept of Smart Growth is for the regional park system to become a more integrated component of the region's park and open space system and integrated with housing and transportation."* (Regional Recreation Open Space Policy Plan, Twin Cities, 2001).

In south east Queensland, the role of regional parks in shaping urban form and achieving other smart growth outcomes is significant but yet to be fully envisaged or realised. This deserves far greater consideration beyond this discussion paper.

Open space should not only accommodate the socially marginalised but its role as a means of redressing social inequality and the marked polarisation between rich and poor is receiving attention. At least in the US the way in which outdoor recreation needs have been researched and managed by public land agencies is claimed by some to support a bias against lower income groups (More, 2002). New patterns of open space networks are being conceptualised which reflect new scientific and cultural understandings (Thompson, 2002). Aboriginal people have much to contribute to this evolution in understanding. “The practice of culture by Indigenous Traditional Owners and their efforts to reclaim language, dance, stories and connections to country enriches the community as a whole and adds to the region’s identity, cultural values and economic wellbeing” (Principle 13.4, RFGM 2000).

Adopting such a wide or holistic context for regional parks presents far more formidable challenges than simply a recreational focus, which is substantial in its own right. Cross linkage with other key themes under SEQ 2021 (Transport, Economic Development, Centres for Residential Development, Energy and Greenhouse, Natural Resource Management Strategy, Social Justice and Human Services etc) has commenced but SEQ 2021 represents only one dimension of cross agenda planning and consultation required. Other regional strategies will need to be addressed including:

- the Regional Nature Conservation Strategy for SEQ,
- SEQ Regional Management Plans,
- SEQ Regional Coastal Management Plan and Moreton Bay Waterways and Catchments Partnership processes.

An understanding of a full range of national, state, regional and local programs affecting open space and how mutual benefits might be forged is being pursued by the Regional Landscape Strategy Advisory Committee. However, the need to formulate a more holistic or strategic framework which can spatially designate all regional open space and how this contributes to a sustainable region contributes to uncertainties around regional parks. The SEQ 2021 Performance Monitoring Report confirms this ie

> *“There is no clear agreement about the areas of regionally significant open space, and consequently there is no map showing the location and extent of these areas. There is no clear and accepted process for determining the extent of these lands, and whether the degree of protection is adequate”.*

Achieving integrated planning outcomes for regional parks with other programs, particularly those not normally associated with open space requires substantial evolution. The challenge is to formulate biodiversity based solutions that include maintenance of ecosystem functions for farming systems and set limits for urban land use patterns. CSIRO scientists Williams and Saunders, 2003 suggest that the natural sciences have established the overall strategy to be followed, but ask if investment in social capital can be marshalled to achieve a sustainable future. Achieving such an approach will be an ongoing task.

Need for Caution
The need for regional ‘recreation’ parks has been overshadowed by possibly greater concern about the loss of open space within the region due to urban expansion. This certainly influenced earlier definition of regional parks to encompass broader regional open space priorities. This leads to a cautionary note.

While regional parks are proposed as a mechanism to achieve a variety of benefits, some care is needed to ensure their unique benefits relating to outdoor recreation are not supplanted in responding to other needs for which more appropriate mechanisms are not yet developed.

3.2 A Regional Open Space Values Perspective

A range of landscape or open space values have been used to identify regional open space. Regional parks should be appreciated as but one component of regional open space and one mechanism to protect, manage and benefit from it.

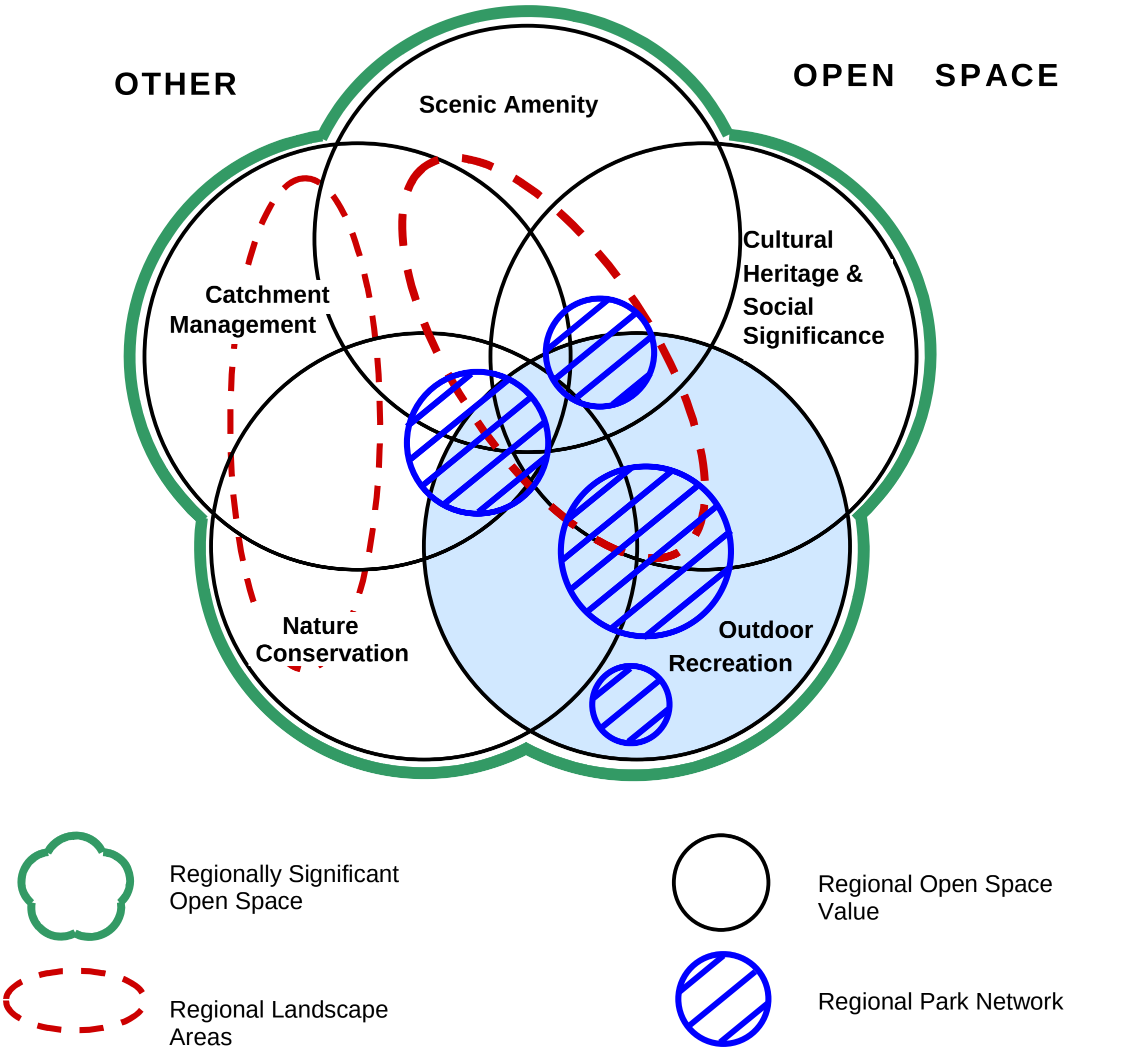
The SEQ RFGM 2000 Principle 5.5, in relation to the Regional Landscape Strategy provides direction for identifying open space lands of regional significance ie

Principle 5.5 Local Government Planning Schemes will incorporate regional landscape strategy lands and protect land having regional significance for:

- broad nature conservation
- high land and water conservation
- high scenic amenity
- cultural heritage and social significance to a community
- sustainable nature-based recreation
- separation of urban areas
- linking open space lands
- outdoor recreation

Although some changes are proposed to this list of open space values (SEQ2021 Regional Landscape Strategy, Draft Discussion Paper, April 2003) it can still serve a contextual role for regional parks. Figure 3.1 below suggests reinforcing but different roles for regional parks and regional landscape areas in the protection of five core regional open space values.

Fig. 3.1 Relationship of Regional Parks and Regional Landscape Areas – An Open Space Values Perspective



Although community surveys classifying the major values people place on open space have yet to be implemented in SEQ, such surveys implemented elsewhere (eg Berry, 1976) confirm some alignment with these five values of open space. These five core values are proposed as incorporating the regional significance issues of separation of urban areas and linking open space lands listed under Principle 5.5 above.

Linkage with a broader framework elaborated under Section 3.1 is required.

Regional landscape areas potentially identify open space lands of regional significance based on a single value or combination of values, without any value being necessarily included. *Regional landscape areas* would include prominent and distinctive landscapes as recognised by a consensus of the regional community. Suggested areas in SE Queensland include Mt Tamborine, Blackall Range (Maleny- Mapleton) and the Glasshouse Mountains. Representative landscape types might also be included eg the North Coast cane lands. *Regional landscape areas* would complement other mechanisms protecting other regional open space values eg Biodiversity protected in National Parks, Declared Catchment Areas).

Regional parks identify lands providing outdoor recreation opportunities of regional significance. Other open space values may be included to protect, buffer or preserve the character or lands primarily offering the recreational experience. *Regional landscape areas* might include areas without any significant recreational value or use. *Regional landscape areas* may include regional parks, but not vice versa.

An example of this might be the *regional park* within the Greenbank Flinders Green Space System near Ipswich. The regional park comprises a compact core area (approx. 9 000ha) of high recreation value predominantly in public ownership. Conservation values are also high within this core area (Greenbank Flinders Green Space Study, 1998). This is surrounded by a larger green space system representing other regionally significant open space comprising other peaks, creeks, forested lands and semi-cleared valleys used for grazing and rural pursuits – which equates to a *regional landscape area*.

3.3 Land Tenure

Both regional landscape areas and regional parks are labels, not tenures. Both can be defined to mean whatever the relevant public agencies (and landowners) want them to mean (Regional Landscape Areas, 2001). Preliminary work on distinguishing these concepts by the RLSAC suggest:

Regional park features:

- single tenure or multi-tenured lands, including publicly (National Park, State Forest etc) and privately owned open space (private open space only included with the owner's consent)
- public lands provide the focus or major area component of the park
- public access for recreation is provided on publicly or privately owned land
- an overlay identity on existing land tenures

Regional landscape area features:

- single tenured or multi-tenured lands, including publicly and privately owned open space
- private open space may be included through a variety of mechanisms eg Planning schemes, Coordinated Conservation Areas, Covenants
- public access to private or publicly owned open space for recreation may be excluded

Historically, large areas of open space have never been acquired specifically for outdoor recreation in Queensland. Appendix C.1 provides an overview of what public agencies are involved with and what types of public lands and waters might permit outdoor recreation in South East Queensland. This indicates that outdoor recreation is subordinate to other resource values for major State government agencies and no land tenure designated primarily for this purpose.

While regional parks are proposed to involve single or multi-tenured lands as an overlay identity, there remains the potential for lands to be acquired or designated primarily to serve as a regional park.

Coordinating and management mechanisms for regional parks are dealt with further in Section 7. The RLSAC recognises that regional landscape areas are still in their formative stage and much further work is required to develop this concept.

3.4 Regional Parks and Nature Conservation

Regional parks can contribute to the protection of biodiversity in a number of significant ways:

- Regional parks provide another management estate containing significant natural areas such as bushland, wetlands, estuaries, streams and beaches, which can complement the formal protected area estate.
- Regional parks will require a management presence for recreation purposes. This will deliver expertise and infrastructure to help sustainably mange any natural areas for their conservation values along with their recreational and other benefits. Natural areas would constitute a major attraction in any regional park and would be managed to sustain those values.
- Regional parks can be strategically sited to maximise their contribution to other protected areas such as by providing links within bioregional corridors or providing upstream catchment management benefits. Conversely, early planning can avoid conflict with sensitive or high nature conservation significance sites.
- A multiple use management presence may deliver protection from fire, weeds, feral animals and unauthorised activities that may not otherwise be afforded.
- Regional parks can be sited to buffer adjoining protected areas.
- Recreational and other uses of regional parks are varied and can be adapted to ensure compatibility with sensitive environmental values or areas.
- Regional parks can be sited to attract recreational use away from existing protected areas or accommodate growth in recreation demand generally as a result of population increase.
- Activities that are not compatible in protected areas might be accommodated in regional parks (eg exercising dogs, horse riding) relieving this pressure from protected areas.
- Regional parks will connect urban residents with wildlife, fauna and natural ecosystems offering important educational experiences of why and how these values should be managed sustainably.
- Regional parks can act as demonstration areas of sustainable management practices for some rural land uses eg grazing.
- Regional park status over multiple land tenures can stimulate coordinated management amongst landowners resulting in better outcomes for environmental values.

Regional parks might be considered by some as detracting from nature conservation resources in that limited government resources might be diverted away from this priority. However, the same argument could apply to any government service provision such as for schools, police, health, pollution monitoring, feral animal control and transport. Each service should be considered in terms of its environmental, social and economic benefits and costs with complementary benefits far more likely to be realised between regional parks and nature conservation.

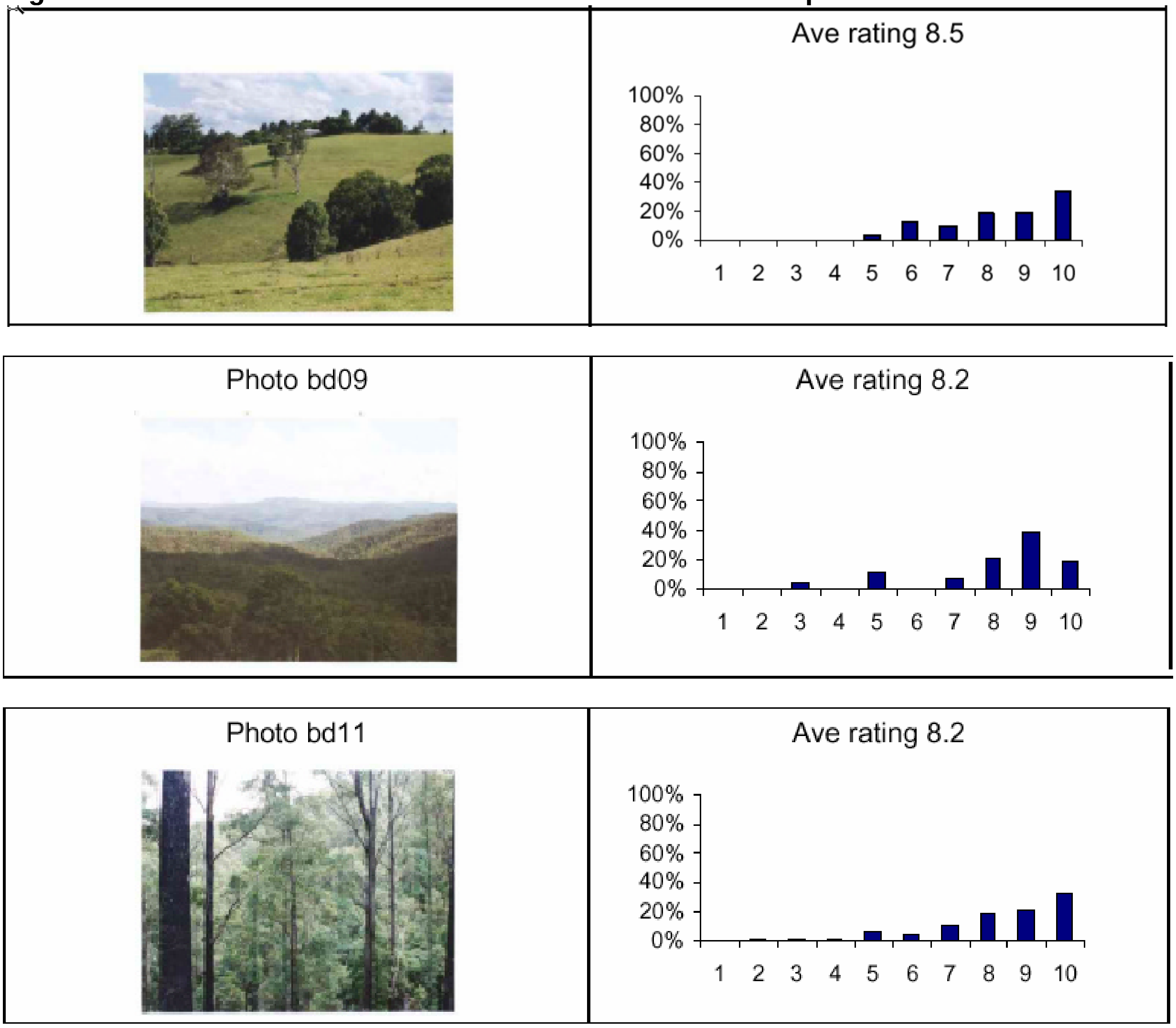
There is substantial potential the region's Common Nature Classification System for determining nature conservation significance and catchment management planning to be strategically coordinated to identify complementary outcomes for regional parks. Such a process can also flag potential conflicts early and allow exploration of alternative outcomes.

3.5 A Range of Land Uses and Landscapes

While natural areas (primarily bushland) remain important there is significant research testifying to the value of other greenspace settings in providing valuable recreational and cultural opportunities. (See Section 4).

Recent community based methods of determining the scenic amenity of open space in SEQ have shown that some rural lands and productive farmland are at least equally preferred and sometimes more preferred scenically than some bushland areas. Fig 3.2 presents images from the Caboolture Shire scenic amenity study (Scenic Amenity Consortium, 2003). These show that the average community preference score for a rural landscape (top image) can be higher than that for more natural forested landscape (bottom two images) within the same study area. While this is not an assessment of *recreational* preference, evidence is emerging that rural or man made green landscapes can deliver significant outdoor recreational benefits. (See Section 4).

Figure 3.2 Scenic Preference Scores for Three Landscapes in Caboolture Shire

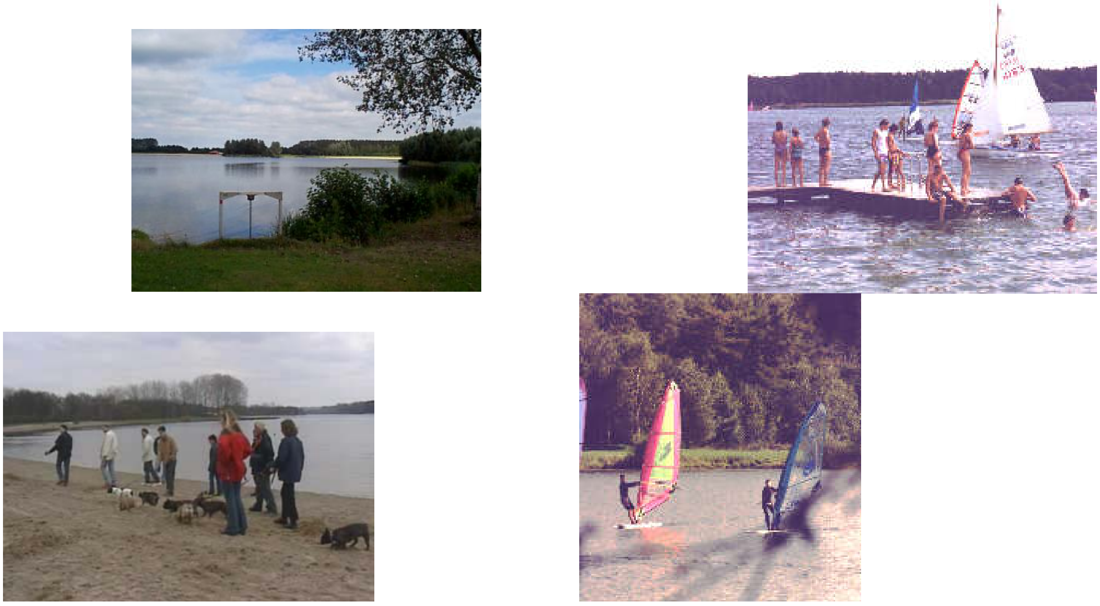


Contact with nature and its benefits need to be interpreted in its broadest sense as many people perceive green but heavily modified landscapes as "natural". Timber plantations and water storage dams provide significant recreational opportunities with recreational settings almost entirely created by man. Rural properties sustaining some agricultural uses may provide an important cultural experience for urban based visitors, maintain attractive rural landscape, provide revenue for management of the regional park and demonstrate sustainable agricultural management (Glen Rock Regional Park near Gatton allows grazing for these purposes).

Further, sites such as gravel extraction pits or degraded farmland in readily accessible locations can be rehabilitated to sustain intensive outdoor recreational uses which might not be appropriate in more natural areas. Regional parks can transform unattractive landscapes into valuable green spaces including recreational water features. Coordinating construction of major infrastructure and utilisation of extractive resource sites with development of regional parks could realise significant cost savings.

An example of such an innovative project is the Bussloo recreation area in the Netherlands located in rural land and serving three nearby urban centres. Highway construction requiring significant road base material was coordinated with excavation of a quarry to supply the road base and subsequently transform the degraded site into a 100 ha greenspace setting of forests, shrublands, fields and a large fresh-water lake. Activity opportunities created are diverse including walking, jogging, cycling, horse-riding, dog exercising, sailing, wind surfing, fishing, underwater diving, swimming, ice skating in winter, nature education at a formal centre, nude bathing and organised night sky watching.

Fig 3.3 A Rehabilitated Landscape at Bussloo Recreation Park, the Netherlands



Sites offering access to water for recreational use, particularly beaches, estuaries and rivers should receive priority treatment because of their high attraction for a variety of recreational users and their declining availability and escalating price due to development pressure.

A similar approach has been used in Auckland, NZ where regional parks have been purchased to protect and make accessible countryside for the enjoyment of the public. Bush, beach and farmland are the primary themes for these regional parks (Auckland Regional Parks, 1998).

A multiple land use approach may also allow activities not permitted in conservation areas eg horse riding, exercising dogs. There is significant research confirming the benefit to people from contact with their pets (See Section 4).

3.6 Outdoor Recreation

Definitions of *leisure, recreation, outdoor recreation* and *sport* can vary depending on the purpose of definition. Use of the term *nature-based recreation* is avoided in this paper as it is encompassed by *outdoor recreation*.

Outdoor recreation is the preferred term for the purposes of this paper. It is defined as:

- **free time activities that are participated in for their own sake and where the experience is enhanced because of interaction with an element of nature (based on Ibrahim and Cordes, 1993).**

Outdoor recreation is a subset of leisure. Leisure may include indoor activities as well as sport.

Field, hard-court or arena-based sports would be excluded from outdoor recreation because interaction with an element of nature is of minimal importance to the experience. Activities are not excluded simply because they are competitive. Activities such as orienteering and rogaining are included.

While outdoor recreation can occur in one's own back yard, the focus of this paper is on public opportunities provided by local and State government agencies as well as by private landowners.

The need to provide a wide diversity of outdoor recreation opportunities is given high priority as a goal in SEQ recreation planning (see SEQ 2021, Recreation and Sport Issues and Options, Draft April 2003; Outdoor Recreation in Queensland – The Big Issues, 2002). There remains a need to express the nature and extent of opportunities required at a regional or sub-regional scale, or how these might be determined. While this latter question is considered in Section 4, a conceptual case is first developed for regional parks contributing *a variety of recreational opportunities which are most needed regionally and which are most appropriately provided for in such areas.*

Regional parks in SEQ should ultimately be integrated with a range of existing parks of varying scale and function serving the outdoor recreation needs of residents and visitors. Planning for regional parks cannot occur effectively in isolation. An understanding of current planning for outdoor recreation generally across the region is a necessary prelude to defining a complementary role for regional parks.

Management of outdoor recreation opportunities in south east Queensland have been largely polarised into two major spheres – that of local Governments concerned with a broad range of urban sporting, ornamental and bushland park types and public beaches and Sate government agencies managing natural reserves, timber plantations, marine park and water storages. Planning between and within these spheres is well recognised as deficient ie

> *The absence of reliable and accepted inter-agency planning processes and management frameworks effectively limits the delivery of recreation and land, infrastructure and services to those that can be delivered by one agency without cooperation from other agencies (between Local Governments; between Local Government and State agencies; between State agencies) and across jurisdictional boundaries.* (SEQ2021 Sport and Recreation Draft Discussion Paper, April 2003).

A big part of this deficiency is the need to build understanding around how components managed by some 20 plus agencies and other parties can contribute to a complementary approach. Regional parks and regional trails are emerging as areas of overlapping interest between the local and State government spheres. Hence the recreation planning paradigms dominant in each sphere need to be merged to suggest the focus and complementary role of regional parks. This is explored further in Section 5.

3.7 A Range of Recreation Opportunity Settings

Recent planning initiative across local and State government managed lands attempted to inventory current outdoor recreation opportunities ie what activities are currently occurring and in what settings they occur. Nine landscape settings were defined to cover a spectrum from Wild Natural Remote (Landscape Class 1) to Urban Developed Built (Landscape Class 9). A fuller explanation of the Outdoor

Recreation Inventory System (ORIS) and the Landscape Classification System can be found at www.quorf.org.au and in The SEQ Outdoor Recreation Demand Study, 2001.

Regional parks could potentially deliver recreation opportunities across this spectrum of landscape settings. These settings are defined through a combination of the naturalness of the landscape, the degree of social contact experienced by visitors and the degree of management presence. Fig. 3.4 illustrates the spectrum of landscape settings with three "regional" park reference points from south east Queensland. Importantly, regional parks would provide recreational opportunities which complement or meet deficiencies offered on State and local government managed land as well as private land. For simplicity and latter purposes in this paper, these nine landscape settings have been aggregated into three Recreation Setting Groups, A, B and C.

Figure 3.4 Typical Recreation Opportunity Settings Provided by Regional Parks

ORIS Landscape Settings	Recreation Setting Groups
1 Wild Natural Remote 2 3	**A Natural**
4 5 6	**B Semi Natural**
7 8 9 Urban	**C Modified**

Brisbane Forest Park - bushwalking

Glen Rock Regional Park – multiple uses: camping, picnicking, 4 WD, walking, nature conservation, grazing

Typical setting of an urban regional park – this park is not currently recognised as a SEQ regional park.

Somerset Dam - water skiing, camping

3.8 *Regional* Recreation Catchments

The complementary role of regional parks with other State and local government reserves and parks can also be interpreted in terms of where visitors come from. For parkland involving more modified landscapes (mainly classes 7, 8 and 9, or Group C), local government planners often distinguish parkland types based on a hierarchical distribution of visitor travel distances. This hierarchy reflects different willingness' of people to travel for different levels of service or facilities or unique opportunities provided. It achieves distributional equity for populations and delivery of standards and efficiencies for managers. Greater expenditure and infrastructure are usually provided in individual parks higher in the hierarchy.

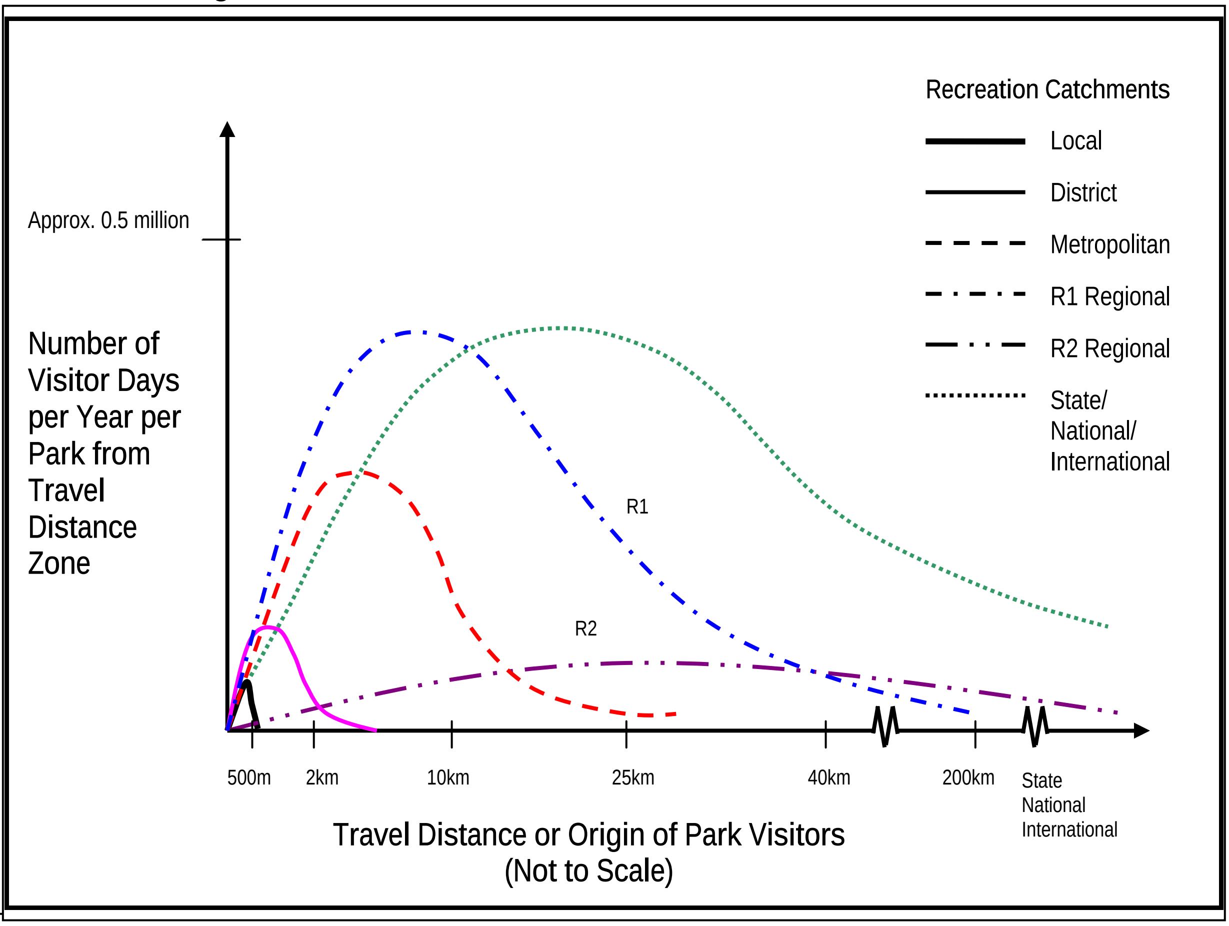
An example of such a hierarchy comes from the Draft Brisbane City Council Park Network Planning Guidelines ie

- o Metropolitan parks – serve or benefit all people within Brisbane city boundaries or generally within 25km radius of the park
- o Regional parks – serve or benefit people generally within a 10 km radius of the park, particularly residents or workers (NB The term "Regional" here refers to a sub-metropolitan level. It is understood BCC is reviewing this terminology to ensure "regional" is used to reflect a South East Queensland context).
- o District parks – serve or benefit people within a 2 km radius of the park, particularly residents and workers
- o Local parks – serve or benefit people within a 500m radius of the park, particularly residents and workers

.

This hierarchy of recreation catchment sizes can be extended over the south east Queensland region. The number of visitors attracted to a park and the proportion of visitors from increasing travel distances or origins can be used to distinguish different park types, from smaller local parks, through regional, to higher levels eg State, national, international. Additionally, equitable distribution of regional parks based on minimum travel times and service of population numbers can be determined and become a desired outcome in the same way as distributional equity standards are set for lower level parks. Figure 3.5 represents a hypothetical hierarchy of typical park visitation based on increasing catchment size from local to state/national/international. This is a "best guess" based on very limited data. It is primarily intended to demonstrate a concept which might be later benchmarked for the region using actual visitor information and community input on preferences. Total number of visitor days for a park are derived by cumulating visitation over different travel distance zones. Significant variation may occur around each typical curve depicted.

Fig. 3.5 Hypothetical Hierarchy of Park Visitation relative to Travel Distance or Origin of Park Visitors



Two types of regional parks are suggested:

R1 Regional parks located closer to large urban settlement, emphasising popular day use activities (walking, nature study, water activities, bicycle riding, picnicking, cultural education) in modified, natural and cultural landscape settings, attracting the greater proportion of frequent visitors from nearby urban populations. Total visitor days could be in the order of 1 million per year or greater.

R2 Regional parks located to take advantage of unique or outstanding natural settings (eg for bushwalking, camping) or specific recreational settings offering opportunity for activities with more exacting site needs (eg for mountain bikes, hang gliding, canoeing, water skiing). These would not necessarily be close to larger urban centres. Significant proportions of visitors would be attracted from across the region, or beyond including national and international tourists. Overall visitor numbers would depend on the quality of the setting, participation rates in the particular activity and to some degree, proximity to population. Total visitor days per year would vary considerably between parks.

Lower level catchments (local, district, metropolitan) have less relevance to planning the recreational use of State forests and national parks where the establishment of these reserves primarily reflected other resource priorities and far less management intention was devoted to equitably serving the recreational needs of surrounding populations. Recognising lower level recreation catchments for parks with Recreation Setting Group’s A and B (ie natural and semi-natural) has lower relevance for planning.

Under the Integrated Planning Act, 1997 local councils have been required to develop planning schemes and recreation strategies for their communities and determine desired standards of service for public recreation land. These standards determine the level of infrastructure (land and facilities) to be provided and hence allow contributions from developers to be calculated and charged. Local government’s have generally limited park scales to reflect catchment sizes contained within their local government area. However, regional scale parkland has not been considered by local or State government in terms of setting desired standards of service. Individually, local councils have been reluctant to ascribe responsibility for their provision given that significant numbers of users would come from beyond local government boundaries and their own ratepayer base would meet acquisition, development management costs. Park users pay little attention to local authority boundaries in deciding where to recreate.

There is currently insufficient information on visitors to parks representing the spectrum of landscape settings and the hierarchy of catchments. Accurate information associating visitor origin and the different park types is best determined through “on site” surveys where the landscape of the park is visible to people being surveyed. Telephone based interview surveys (such as used for the SEQ ORDS) lead to different interpretations of meaning of words and are less reliable for establishing usage patterns attached to different park types.

Setting visitor number ranges and travel origin proportions could provide a means of defining regional parks and lead to a more equitably distributed and efficiently equipped network of parks across all levels. Further, this could facilitate discussion and understanding amongst local and State government agencies on equitable means to fund regional parks.

3.9 A Range of Regional Parks

Recognising a range of regional parks based on varying emphasis on recreation, nature conservation and landscape/cultural resource protection might also serve the needs of the region. Appendix C.6 presents examples particularly from the USA where a range of regional park or reserve types are designated (see in particular the East Bay Regional Parks). A key refinement is the nomination of the typical size of different parks and the proportion of the total area that might be impacted by recreational infrastructure.

In this approach there is undoubtedly some overlap with the concept of regional landscape areas outlined earlier in this paper and regional trails. However, are Regional Shorelines (eg sectors of Pumicestone Passage shoreline), Greenways or Regional Urban Parks possible as variants within a regional park network or sufficiently different to be regarded outside the scope of regional parks?

3.10 Community Needs and Values

Despite considerable work over the last decade in south east Queensland on the subject of regional parks, there has been little research on how the regional community values open space and whether regional "recreation" parks offer the best response. Community consultation has tended to involve specific interest groups (eg 4WD, mountain bikes), be site specific or enquire about current use and not about a preferred hierarchy of recreational open space. The attitudes of the large majority of informal visitors not aligned with any particular interest group has yet to be determined on this issue.

For example, is a network of smaller, linked open space areas that are highly accessible to urban centres more important than larger, fewer but more remote open space areas? No doubt both are important as together they provide a fuller spectrum of opportunities but where does the balance lie? There is a need for research across the spectrum of community interests to establish preferred levels of open space provision through the continuum of local, district, metropolitan, regional and State levels or to check that such a notion offers the best outcome across a range of benefits provided by parks. Much has been assumed and accepted as convention without adequate justification. Even this project has been initiated on assumed widespread community support for regional parks.

Local government require research based approaches to set desired standards for recreational open space. Small variations in standards set for public recreation land can result in variations ranging in the order of tens of millions of dollars for the provision and subsequent management of parks. The Sydney Research Group (SUPER, 2001) notes that although public open space in urban areas are used more frequently and by more people than the more publicised wild land parks, there has been comparatively less research on these areas. They suggest that this has been largely due to local government authorities being unable to develop significant budgets for research. Further, public open space managers should pursue joint research initiatives with organisations that use and benefit from public open space. Such benefits are the focus of Section 4.

4. Benefits and Opportunities of Regional Parks

Within the expanding urban centres of south east Queensland the need for regional parks can be assessed through the potential environmental, social and economic benefits and costs associated with their provision. As a network of such parks is by no means complete, reference must be made to research and experience in other parts of Australia and the developed world before extrapolating results to the local situation.

4.1 Benefit Frameworks

The challenge of maintaining a high quality of life in South East Queensland is a complex and demanding one that requires an appropriate balance to be struck between often competing economic, environmental and social issue sometimes referred to as the "triple bottom line" approach to sustainability (SEQ2021 PMR, 2002). The triple bottom line approach has relevance in identifying the benefits of regional parks in a manner that might assist land use planning or development of a supporting business case. If the provision of land and infrastructure for recreation is to be treated in the same way as other essential land uses (SEQ 2021 Issues and Options for Recreation and Sport, April 2003) then quantifying benefits and costs in a manner that serves integrated planning with other land uses may be an important pre-requisite. Funding for regional parks may ultimately be more available for a good business case rather than a needs-based case.

There currently is a confusing array of frameworks and terminology, which impede clear enunciation of benefits and a business case. For example, a conundrum emerges in that while regional parks offer economic, environmental and social benefits, and recreation is one of those social benefits, recreation has also been described as offering economic, environmental and social benefits.

This terminology issue was identified at the Conference "Coordinating Community Action in the SEQ Regional Landscape, August 2002". Delegates called for clarification of terminology and relationships between existing and emerging concepts in open space management ie ecosystem services, landscape values, benefits of open space, livability and sustainability, ESD and the triple bottom line approach".

Some examples of different frameworks developed for or including recreation benefits are outlined in Figue 4.1. There is considerable research emerging in identifying and quantifying the benefits of recreation and leisure generally but less research is of specific relevance to regional parks. All benefits listed are however relevant in some way to regional parks.

There is a need to establish a robust integrating framework of benefits which serves land use planning generally and recreation planning specifically in SEQ.

Figure 4.1 Frameworks for Recreation Benefits

(1) The Benefits Catalogue (Canadian Parks and Recreation Association, 1997) summarises **recreation benefits** under eight market-oriented headings:

- Recreation and active living are essential to **personal health**.
- Recreation is a key to balanced **human development**.
- Recreation and parks are essential to **quality of life**.
- Recreation reduces self-destructive and **anti-social behaviour**.
- Recreation and parks build **strong families and healthy communities**.
- **Pay now or pay more later!.** Recreation reduces health care, social service and police-justice costs.
- Recreation and parks are significant **economic generators**.
- Parks, open spaces and natural areas are essential to **ecological survival.**

(2) The Sydney Urban Parks Education & Research Group defined **benefits of public open space** to signify an economic or monetary value, but also "to include any improved or advantageous condition of an individual person, group or category of persons, an organisation or community, society as a whole or any other entity eg the environment" (The Social Benefits of Open Space – A Review' SUPER Group, June 2001).
Values of Public Open Space were listed as:

- Existence values – the knowledge that open space exists even if one never visits it
- Experiential values – simply being in open space eg enjoying the aesthetic qualities
- Productive values – open space used for small scale agriculture eg community gardens

In addition, other benefits of public open space were derived from opportunities;
Opportunities and Benefits Provided by Public Open Spaces were listed as:

- Opportunities for activity – eg walking, running, cycling, picnicking
- Opportunities for socialising – chance for interaction with others; companionship and friendship
- Opportunities for spirituality – chance to be alone or with very special friends
- Opportunities for establishing a sense of self or identity

This report suggested some benefits could be assessed in monetary form while others could not be given any meaningful monetary value. Economic benefits were identified as direct (eg fees and charges for park use) and indirect (increased value of neighbouring properties, revenue for local businesses).

(3) Daly, 1995 Australian review presented the **benefits of recreation and sport** under four categories:

- Personal and Individual Benefits
  - Prevention of health problems
  - Stress management
  - Improved quality of life
- Social and Community Benefits
  - Social cohesiveness
  - Improved Community Life
  - Strengthened Families
  - High Community Priority
  - Involved Older Adults
  - Benefits to Women
- Economic Benefits
  - Investment Opportunities
  - Reduced Health Costs
  - Increased Wealth and nation
  - Employment Opportunities
  - Economic Development
  - Growth
  - Improved Worker Productivity
  - Environmental Protection
- Planning and Environmental Benefits
  - Diversity
  - Beauty
  - Development
  - Stability
  - Sensitivity

4.2 An Interim Framework of Benefits for Regional Parks

The following organisation of benefits is suggested until a more robust model is developed or revealed.

1. Research continues to expand the scope of benefits to individuals and communities attributed to recreation. Figure 4.2 presents a recent elaboration of benefits attributed to leisure by research. Most of these benefits are afforded to visitors of regional parks from their **direct recreational experience**.

Figure 4.2 Benefits Attributed to Leisure by Research
Driver B.L. in Outdoor Recreation in American Life, 1999

I. Personal Benefits :

A. Psychological

1. Better mental health and health maintenance
   - Holistic sense of wellness
   - Stress management (prevention, mediation, and restoration)
   - Catharsis
   - Prevention of and reduced depression/anxiety/anger

2. Personal development and growth
   - Self-confidence
   - Self-reliance
   - Self-competence
   - Self-assurance
   - Value clarification
   - Improved academic/cognitive performance
   - Independence/autonomy
   - Sense of control over one's life
   - Humility
   - Leadership
   - Aesthetic enhancement
   - Creativity enhancement
   - Spiritual growth
   - Adaptability
   - Cognitive efficiency
   - Problem solving
   - Nature learning
   - Cultural/historic awareness/learning/appreciation
   - Environmental awareness/understanding
   - Tolerance
   - Balanced competitiveness
   - Balanced living
   - Prevention of problems to at-risk youth
   - Acceptance of one's responsibility

3. Personal appreciation/satisfaction
   - Sense of freedom
   - Self-actualisation
   - Flow/absorption
   - Exhilaration
   - Stimulation
   - Sense of adventure
   - Challenge
   - Nostalgia
   - Quality of life/life satisfaction
   - Creative expression
   - Aesthetic appreciation
   - Nature appreciation
   - Spirituality
   - Positive change in mood/emotion

B. Psycho-physiological
   - Cardiovascular benefits, including prevention of strokes
   - Reduced or prevented hypertension
   - Reduced serum cholesterol and triglycerides
   - Improved control and prevention of diabetes
   - Prevention of colon cancer
   - Reduced spinal problems
   - Decreased body fat/obesity/weight control
   - Improved neuropsychological functioning
   - Increased bone mass and strength in children
   - Increased muscle strength and better connective tissue
   - Respiratory benefits (increased lung capacity, help to people with asthma)
   - Reduced incidence of disease
   - Improved bladder control of the elderly
   - Increased life expectancy
   - Management of menstrual cycles
   - Management of arthritis
   - Improved functioning of the immune system
   - Reduced consumption of alcohol and use of tobacco

II. Social/Cultural Benefits
   - Community satisfaction
   - Pride in community/nation (pride in place/patriotism)
   - Cultural/historical awareness and appreciation
   - Reduced social alienation
   - Community/political involvement
   - Ethnic identity
   - Social bonding/cohesion/cooperation
   - Conflict resolution/harmony
   - Greater community involvement in environmental decision making
   - Social support
   - Support democratic ideal of freedom
   - Family bonding
   - Reciprocity/sharing
   - Social mobility
   - Community integration
   - Nurturance of others
   - Understanding and tolerance of others
   - Environmental awareness, sensitivity
   - Enhanced world view
   - Socialisation/acculturation
   - Cultural identity
   - Cultural continuity
   - Prevention of social problems by at-risk youth
   - Developmental benefits of children

III. Economic Benefits
   - Reduced health costs
   - Increased productivity
   - Less work absenteeism
   - Reduced on-the-job accidents
   - Decreased job turn-over
   - International balance of payments (from tourisms)
   - Local and regional economic growth
   - Contributions to net national economic development

IV. Environmental Benefits
   - Maintenance of physical facilities
   - Stewardship/preservation of options
   - Husbandry/improved relationships with natural world
   - Understanding of human dependence on the natural world

2. Regional parks will also generate **benefits to communities who do not directly visit the parks and other life forms.** These can be listed as follows (a few overlap with benefits in Fig. 4.2):

Environmental

- Protect biodiversity and augment the protection offered by nature conservation areas
- Contribute to climate stabilisation and carbon sequestration
- Regulate environmental disturbances such as floods and droughts
- Regulate hydrological flows for irrigation
- Contribute to ecosystem services providing clean air and water, pollination services, nutrient recycling
- Protect watersheds and recharge aquifers
- Help secure areas near urban centres under threat of development
- Contribute to the environmental comfort (temperature, micro-climate) of the city
- Enable recovery of degraded sites (eg extraction pits or degraded rural lands)
- Divert recreational use away from protected areas
- Enhance appreciation of the natural environment and foster environmentally responsible behaviour

Economic

- Enable cost effective management of areas to sustain their conservation and catchment protection values
- Increase the land value of adjoining properties
- Sustain primary production (eg grazing; timber and fodder production; honey, wild food and flower harvesting)
- Lease for other uses (eg waste recycling) pending ultimate development as a regional park
- Encourage the development of a more compact and efficient city
- Contribute to local, rural and regional economies

Social

- Contribute to the protection and management of cultural resources and heritage of the region
- Preserve the enriching and cultural significance of natural, rural and scenic landscapes
- Contribute to a physically separate identity for urban communities
- Provide a focus for connection and building of communities
- Attract tourists and generate jobs for rural communities

3. Regional parks may also be valued for their **non-use values** and **option values.** These values are more often attributed to protected areas but have relevance to regional parks because of their scale and distinctiveness.

Non-use values include **bequest** and **existence values**. Bequest values refer to the benefit of knowing that others benefit or will benefit from the park. Existence values reflect the benefit of knowing that the park exists even though one is unlikely to visit it or use it in any other way. Non-use values are particularly difficult to measure.

Another value might derive from the option of using the park sometime in the future. In protected areas this value is attributed to genetic resources for sourcing of untested genes for agriculture, pharmaceuticals or cosmetic products. Regional parks have significant **option value** in retaining open space to be used in different ways over time, an aspect of considerable relevance given changing community structures, values and recreational technologies.

Regional parks may have value to people as places of imagination and fantasy where stories of intimacy, refuge or exploration can be created and recreated from the confines of an office, factory, school or home. Familiar or unknown places might be "visited" though meditation or simple day-dreaming.

The benefits of regional parks including outdoor recreation are considerable and extremely varied. The scale of their significance has been estimated in a number of studies.

4.3 Examples of Direct Benefits of Regional Parks to Visitors

There is possibly more research from Australia and overseas highlighting the direct benefits to visitors which might be attributed to regional parks, than research on indirect, option or non use values. These are the focus of this section. There is some unavoidable overlap in sub headings as each research focus tends not to be comprehensive but offers an insight into benefits attributable to a particular theme

4.3.1 Recreational Benefits

Benefits from recreation are a primary focus for recognising the need for regional parks. Fig 4.2 highlighted the wide range of personal, social/cultural, economic and environmental benefits which have been attributed to leisure by research. While many of these have not been quantified the benefits pervade all aspects of human behaviour and performance and are broader and larger than one might first envisage. This is highlighted further by the high level of participation in outdoor recreation in SEQ (See Section 5). It is probably impossible to establish the relative importance of these leisure based benefits. However, some insight is offered by some research examples.

Parks Victoria is responsible for managing 36 National Parks, 3 Wilderness Areas, 32 State Parks, 9 Marine Coastal Parks and Reserves and **83 Regional Parks**. These assets total 3.6 million ha or 16% of the total area of Victoria. Together they attract 25 million visits a year, not including the millions of visits to the bays each summer.

Parks Victoria and it's predecessor, Melbourne Parks and Waterways have carried out world class research over 10 years on the benefits arising as a direct result of being in a park and on community attitudes to parks, open space and recreation. **This with other research has confirmed that Australians visit their parks for many reasons but predominantly to spend quality time with their family and friends.** When asked about their primary leisure activities, a national sample of adults listed spending time with your family and companionship as their two most common objectives. (Zanon, 1996). This indicates the high importance ascribed by park visitors to a social experience as compared with an activity-based experience as motivation for visiting parks.

The SEQ Outdoor Recreation Demand Study, 2001 found that reasons for participating in all outdoor recreation "activities" were overwhelmingly of a leisurely nature, rather than goal focussed or competitive. Results were not reported on whether this motivational preference applied across all landscape settings. The US based 1994 Roper Starch Survey (Cordell & co, 1999) may provides other confirmation establishing the relative importance of different motivations for engaging in outdoor recreation. The top motivations for outdoor recreation for American men and women aged 18 years and over were:

- Fun (rated importantly by 76%)
- Relaxation (71%)
- Health and exercise (70%
- Family togetherness (68%)
- Stress Reduction (66%)
- Teach kids values (64%)
- To experience nature (64%)

Motivation for outdoor recreation is multi-faceted and management needs to adopt more than an activity-based perspective to appreciate its full scope and value to individuals and communities.

4.3.2 Health Benefits of Parks

Parks Victoria's "**Healthy Parks Healthy People**" 2002 report provides a review of published literature on the potential and actual health benefits of contact with nature in a park context. Contact with nature was interpreted in a broad sense from plants, streetscapes and local parks through to national parks. A clear message emerged that parks are currently undervalued as a means of improving and maintaining public health. Research indicates that humans may be dependent on nature for psychological, emotional and spiritual needs that are difficult to satisfy by other means. Through providing access to nature, parks play a vital role in human health, wellbeing and development that has not been fully recognised. Highlights from this paper include:

City living involves an extraordinary disengagement of humans from the natural environment that is likely to be detrimental to health and wellbeing. Parks may be the only means of accessing nature for the majority of people in urban areas, yet most people are unaware of the full range of their potential health benefits. Humans have forgotten how much the natural world means to them. Yet signals abound that the loss of life's diversity endangers not just the body but also the spirit. It has been reported that modern people are experiencing a spiritual famine and that alcohol, food and drug addictions are futile attempts to fill the spiritual emptiness that has arisen through loss of contact with nature.

In terms of health, parks have been viewed almost exclusively as venues for leisure and sport. Recent research shows that "green nature", such as parks, can reduce crime, foster psychological wellbeing, reduce stress, boost immunity, enhance productivity and promote healing. Urban planning should ensure that communities have adequate access to nature.

Surveys show that nature is important to people and the numbers of people seeking nature-based recreation are increasing.

Health benefits of interacting with plants include facilitation of healing in the elderly and mentally disadvantaged, improving mental capacity and productivity for office workers, improving job and life satisfaction of residents, attracting consumers and tourists to shopping districts, and aiding community cohesion and identity.

Parks are important in providing a setting for pet owners to interact both with their pet and other pet-owners.

The positive health benefits from contact with nature are found inn some unique forms of therapy based on human relationships with nature eg ecopsychology or nature-guided therapy, attention restoration, wilderness therapy, horticultural therapy, animal assisted therapy

Parks are a fundamental health resource, particularly in terms of disease prevention. The health benefits of nature have relevance to all National Health Priority Areas (cardiovascular health, cancer, injuries, mental problems and disorders, diabetes and asthma).

Parks Victoria have used the "Healthy Parks Healthy People " slogan to raise awareness that almost everyone's physical and mental well-being is improved by visiting a park and as a means to seek alliances and financial support for parks and the benefits they bestow.

Other research reviews by the **Sydney Urban Parks Education and Research Group** (the SUPER Group) confirm the health benefits to regular park visitors but highlight the difficulty of measuring health benefit attributed to park visits (SUPER, 2001). It is further claimed to be impossible to track down just how much the better health of people contributes to community or broad social benefits eg in reduced medical costs, disease prevention, greater productivity etc.

One important finding relates to the level of physical activity essential for physical wellness. Large scale population studies demonstrate that consistent (preferably daily) but relatively gentle exercise (even for 15 – 20 minutes) is enough to bring about major changes in health. This evidence relates to individual benefits but these accrue to the community as well. This has important implications if the physical health benefits of regional parks are to be optimised. Opportunities for healthful and frequent exercise must be provided if the physical health of individuals and communities is to be improved. This could mean providing attractive settings with good facilities for exercise, accessible within short travel times or linked by walkways and bikeways to major urban centres.

4.3.3 Economic Value of Recreation

It is possible to estimate the economic value of recreational use of protected or recreation areas to those visitors who use them through a non-market valuation technique known as the **travel cost method** (NSW NPWS, 1999). Benefits to visitors are measured by their "willingness to pay" to visit a site. The difference between what they are willing to pay and what they do have to pay is termed the *consumers' surplus* and this is the true welfare measure of visitor benefits (EPA, 2002). The notion of consumer surplus takes account of the fact that consumers usually pay less for the purchase of a quantity of a commodity (in the recreation sense - a visitor trip which includes an entry fee and travel costs) than they would be prepared to pay rather than do without the commodity completely (Tisdell, 1977). By far the most frequently quoted reason for not participating more in recreation activities was *lack of time* (SEQ ORDS, 2001).

According to Tisdell, 1977 the value of a park is estimated by adding an allowance for consumer surplus to the amount which visitors to a park actually pay for entry to it.

A number of studies have estimated consumers' surplus for protected areas in NSW and Queensland. These estimates were used in these studies as an indicator of the economic value of the parks to visitors. (See Fig. 4.3). This is the value above any costs of travelling to a natural area, that visitors are "willing to pay" for the benefits they enjoy for access ie does not include entry fees. This addresses one component of the total economic value of parks and is therefore generally expected to underestimate their total value.

Figure 4.3 Estimates of Consumer Surplus for Various Recreational Areas (QPWS, 2002)

Location	Authors	Average Value estimated ($)	Lower Value estimated ($)	Higher Value estimated($)
Carnarvon Gorge	Beal (1995)	2.50/person		
Centennial Park, Sydney	Lockwood & Tracey (1995)		7.42/visitor-day	10.56/visitor-day
Fraser Island	Hundloe et al. (1990)		15.70/visit*	32.63/visit*
Green Mountains, Lamington National Park	Scoccimarro (1992)		8.09/visitor-day	9.23/visitor-day
Dorrigo National Park (NSW)	Bennett (1995)	15.83 (aver. 2 days)		
Queensland protected areas	Kinhill (1998)*		8/visitor-day	17/visitor-day
Wet Tropics World Heritage Area	Driml (1996)	49/visitor day (Australian tourists)		

* number of days not specified.

The economic value of recreation can be determined from:

- Multiplying the economic value per visit by the number of visitor days per annum to derive annual economic value, then

- discounting this annual economic value (currently 6% recommended by Qld Treasury) over a nominated period to derive the present value of the recreational benefit of the park.

The economic value of recreation and tourism based on consumers' surplus has been estimated for selected protected areas as follows: (from Kinhill Economics, 1998; QPWS, 2002)

Dorrigo Range National Park	$2.7 million/annum
Centennial Park Sydney	$23 million to $33 million/annum
Fraser Is, Green Is, Moreton Is, Inskip Penin.	$9.5 million/annum
SEQ RFA State forests & national parks (1997)	$75 million to $118 million/an. in 1997 growing to $118 m - $185 m in 2021
	net present value for period 1997 to 2021 of between $2 074 million and $3 263 million

The net economic benefits **to visitors** of recreation and tourism in south east Queensland forests, particularly as determined for the SEQ RFA through the Kinhill, 1998 study are huge. There is a need to carry out similar analyses of economic benefit for networks of regional parks under projected visitation scenarios which will help quantify the scale and magnitude of benefits. This is a specialised task recommended for future work. Some insights into outcomes are explored in Section 5.

Parks Victoria has estimated a consumer surplus of about $7 per visit for regional urban parks and national parks within the city of Melbourne and it's metropolitan area (personal communication with Parks Victoria). This forms part of a cost benefit approach for substantiating park development options using a net present value analysis of expected community benefit (ie consumer surplus estimate) and development maintenance costs projected over a long period. Models have been developed to generate likely visitation, expected community benefit and development-maintenance costs.

The travel cost method has been applied to pine plantations. In the Adelaide Hills pine plantations originally planted and managed as a source of timber, have become important as a free public recreation destination close to the Adelaide urban area. (Smailes and Smith, 2000). Visitor counts were determined over a 12-month period in 1996/97 for a patchwork of three forests (primarily *Pinus radiata* plantations) covering almost 16 000ha. A direct recreational use value was estimated at a conservative $2.15 million per annum. The annual timber sale value of the plantations was estimated as $7.3 million. Therefore the gross non-timber use value was nearly one third of the gross timber use value with **net** costs likely to increase the relative value of recreation use to timber use further. These estimates did not include additional indirect use values or option-values to the public of the forest land.

These findings may have considerable relevance to the potential value and use of the extensive state forest and exotic pine plantations totalling some 20 000 ha centred at Beerburrum, or other hoop or exotic pine plantations in the region. The extent of recreational activities recorded in the Adelaide Hills study and an annual use level exceeding 200 000 visits illuminates this potential. Barbecues and picnics were by far the most common activity followed by bushwalking (over 2km), walking/strolling (up to 2km), cycling (including mountain bikes), dog walking and exercising (off leash permitted), camping, horse riding and nature study.

4.3.4 Community Use Benefits of Parks

In another research approach, the SUPER Group has determined the value to communities of large open space venues in Sydney and Melbourne managed by State government agencies. A number of State government community service agencies regularly use public open space in the provision of their programs, such as The NSW Department of Health (eg as part of its public education program), The Department of Education (eg through environmental education centres) and the Department of Sport and Recreation. The provision of public open space provides benefits for these agencies, as it enables them to avoid incurring additional costs associated with having to use alternative venues for delivering their programs.

The economic benefits of public open space for the provision of community services were estimated by considering the levels of expenditure for different programs that would be incurred with and without public open space being available. Avoided costs consist mainly of additional time, extra transport costs and resource costs associated with redesigning program materials.

The economic benefit (in the form of avoided costs) was determined for three large parks and the Sydney and Melbourne metropolitan regions as a whole for 1999/2000. These economic benefits were:

Centennial Parklands (Sydney)	$4 million/annum
Western Sydney Regional Park (Sydney)	$0.25 million/annum
Wattle Park (Melbourne)	$0.2 million/annum
Greater Sydney	$10.6 – 14.6 million/annum
Greater Melbourne	$ 4.4 – 4.5 million/annum

These economic benefits would only be attributed to the social program uses of the parks. Broader informal recreational uses are substantially greater indicating significantly higher economic values for recreation should be attributed to the larger public open spaces of Sydney and Melbourne. For example the travel cost method yielded an annual use value for Centennial Park of between $23 million and $33 million based on average consumers' surplus estimates of between $7.42 and $10.56 per visit. (Kinhill Economics, 1998). Environmental and economic benefits, and non-use and option values would raise this even higher.

The economic benefits of regional park networks under projected visitation scenarios can be estimated using economic valuation techniques such as the travel cost and avoided cost method. Such studies should be undertaken to quantify the scale and magnitude of benefits and costs to support appropriate funding for regional parks.

4.4 Benefits to Rural and Regional Economies

Similar to national parks, regional parks can generate a significant amount of economic activity in the regions in which they are located. These can accrue in a number of ways and can improve economic performance and social welfare particularly in rural areas eg

- Economic expenditure associated with establishment and management of parks is directed to local employees, contractors and businesses. Expenditure can be on wages, capital works, road construction, pest and weed management to name a few.
- Flow-ons to other economic sectors also occur as households employed in the park spend their income on locally supplied goods and services. Business activity stimulated by this consumer spending has flow-on effects for other local businesses.
- While in the area visitors of regional parks would buy a range of items such as accommodation, food and beverages, shopping, motor vehicle needs and other recreational activities. This can create further flow-ons and new jobs.
- Visitors on commercial tours spend money on the cost of the tour and other items purchased while on tour. Approximately 16% of person visit days were made on commercial tours into Queensland protected areas in 1997 (Kinhill Economics, 1998)
- Participation in outdoor recreation can involve significant equipment costs eg transport, camping equipment, mountain bikes, boats, and fishing tackle. These purchases can have a broader benefit to the regional economy.

In the USA, the pursuit of wildland recreation makes large contributions to the Gross Domestic Product (GDP). A 1993 estimate of US Forest Service programs' contribution to domestically produced goods and services was US$123.8 billion, a little less than 2% of the US GDP national total. The majority of this was generated by recreation (in 2000, 75 % of the total forest output), far greater than the contribution of timber and minerals (Driver, Douglas and Loomis, 1999).

Total expenditure for all 7.6 million visitor days within the SEQ Forest Agreement region national parks and state forests was estimated at $196 million in 1997. $79 million of this was attributed to tourists which was 3% of all tourism expenditure in this south east region per annum. The net present value projection of this expenditure to 2021 was estimated at $5,420 million. This is more than double the mean figure of the economic value of recreation to visitors over the same region estimated using consumers' surplus (see Section 4.4.2). Total full and part time employment in the commercial nature-based tour sector alone was 768 people in this region. **Thus the contribution of regional parks to rural economies could be greater than the estimated recreational benefit derived by visitors to the parks.**

4.5 Summary of Benefits

The scope and magnitude of benefits to be derived by regional parks are probably larger than have been imagined and although not limitless, beyond our current ability to determine them or value them. These values extend across environmental, social and economic spheres. Better frameworks are needed to encapsulate their significance of the well being not only to park visitors, but to the broader community and our natural and urban environments. Regional parks offer opportunities to reconnect with nature and can influence improvement in all National Health Priority issues. Regional parks should be valued because they keep options open for future use.

The challenge is to develop a case for regional parks based on potential benefits which can compete for funding with other programs. Economic valuation methods estimating the recreational benefit to visitors and to rural and regional economies can capture the great magnitude and economic significance of benefits involved. These should provide a platform to build a business case supporting the acquisition and management of regional parks.

5. Outdoor Recreation in SEQ

5.1 Beyond Recreation as an Activity Based Experience

The previous discussion has highlighted the breadth of experiential benefits available from parks, both as natural areas, man-modified greenspace or more ornamental landscapes. Dealing with these benefits in terms of recreational activities derived within a range of landscape settings may invariably underestimate their significance. While his has provided direction in the past (see Outdoor Recreation in Queensland – the Big Issues, 2002) a significant refocus is occurring. Outdoor Recreation in American Life indicates:

> *"Recreation and agencies have moved considerably away from activity oriented management, which focuses on supply considerations, towards outcomes- or benefits-oriented management. In the new focus, the major goal of management is to add value to the lives of customers served while protecting and improving the basic biophysical resources being managed. Many park and recreation agencies have substituted the concept of customer for the words user and visitor, and they have involved all stakeholders in planning and plan implementation". Participation in recreation activity is viewed as a means of optimising personal beneficial outcomes. By identifying desired outcomes, parks and recreation managers have found a much broader array of benefits that they must accommodate more fully than in the past. The goal of "Benefits Based Management" is optimising net benefits that accrue to individuals (on-site users, local communities, other stakeholders)".*

Significant effort is needed in south east Queensland to understand the 'customer" and evolve benefits-based management methods that go beyond a recreation opportunity perspective. However, there is much to be learnt about the role of regional parks from the current dominant planning perspective on outdoor recreation and this is the focus of Section 5.

5.2 Absence of Regional Recreation Planning

Appendix C.1 provides an overview of publicly owned lands managed for outdoor recreation in Queensland.

Major suppliers of outdoor recreation opportunities for the public in SEQ are:
- State agencies eg, QPWS including Brisbane Forest Park, SEQ Water Corporation
- Local governments (18 across SEQ)
- Private organisations (eg recreation clubs, Scouts, Churches, Schools)
- Commercial providers and private landowners

Planning and delivery across these sectors has been fragmented. The SEQROC Draft Issues Paper "Planning for Recreation and Sport" for the SEQ2021 Project highlights this issue –

> *While Local Governments are providing a high level of local facilities and services for residents and visitors and the State Government is providing significant State-level facilities, facilities that need to be provided on a regional or sub-regional basis are not being planned for and provided in such a way. Recreation planning is not integrated with other types of planning such as transport and land use. In the planning vacuum, there are rising costs for Local Governments in providing recreation and sport opportunities to the community at a regional level and also significant risks of duplication.*

Given deficiencies in inter-agency planning processes and frameworks, in shared research and data-bases and in co-ordinated funding and targeted facilitation of private sector involvement, the role of regional parks and responsibility for their planning and management is somewhat blurred.

Nevertheless insights into the recreational needs of the region and how regional parks might best meet those needs can be made from available information.

5.3 Recreation within a Demand - Supply Paradigm

A number of initiatives have been taken by State and local government agencies to co-ordinate recreation planning across the region. These generally fit within the concept of there being an outdoor recreation demand-supply equation eg "Does the current supply of outdoor recreation activity sites on publicly and privately owned lands meet the current and latent demands of people residing in south east Queensland?" DNR Research Project, 1998.

The SEQ Outdoor Recreation Demand Studies of 1998 and 2001 responded to this approach by investigating the nature and extent of participation in outdoor recreation activities by the residents of SEQ. (See QORF Fact Sheet, www.qorf.org.au). Results of these surveys are dealt with in Section 4.4. While referred to as demand studies, participation based measures are not clear indicators of economic demand (US Forest Service, 1984). These studies do not provide a basis for establishing current and latent demands because data on related measures of travel cost and visitor usage are not determined.

On the supply side, the Outdoor Recreation Inventory System (ORIS) was initiated to prepare an inventory of land and water based recreation opportunities across SEQ. The intention was to collect comparable outdoor recreation site information across State and local government land based on an inventory of recreation opportunities ie identifying what activities currently occurred within nine defined recreation settings. In 2002 lead agency status for this project was transferred from DNR to SRQ. Information for 227 reserves, 562 activity sites and 1362 activities has been entered into the ORIS database, including approximately 200 reserves mapped with the GIS application. (See QORF Fact Sheet, www.qorf.org.au). Unfortunately this information was not available to assist with this project and the future status and availability of the ORIS database is uncertain.

Despite some progress made with development of demand and supply databases, more work is needed on development of a demand–supply equation. Fundamental questions remain about what level of supply is appropriate given existing and forecast population growth. Sustainable levels of recreational use were proposed as setting limits on resource use but this does not in itself establish desired levels of supply.

In south east Queensland, national parks, state forests and water storages were not established in response to demands for recreational activities by an increasing population. Subsequent development of sites and trails for recreation within these resource reserves no doubt reflected increasing recreational demand for use of these areas. Together with the region's plentiful beaches, estuaries and Moreton Bay, these outdoor recreation resources may have in the past, largely satisfied demand for a wide range of outdoor recreation opportunities. However, current provision for outdoor recreation cannot be assumed to represent an optimal response to community recreational preferences. The current levels of use largely reflect the current availability of opportunities, or the benefits gained reflect the costs (travel costs, equipment, entry fees etc) of consuming the opportunity. If the same resource opportunities were provided, but at more accessible locations, the cost of consumption reduces and actual use would increase (putting aside issues of environmental sustainability and social crowding). **Adopting the notion that current demand is met by supply, or that current recreational opportunities are an optimal response to current participation is misleading. Moreover, extrapolating existing demand (measured by participation) by anticipated population growth will not produce the optimal resource required.** A fuller explanation of recreation demand and supply is provided in Fig. 5.1.

Exploring an optimal supply of recreation opportunities within an economic model requires data collection, theory development and application of technology which, even if it could be resourced and harnessed, would meet substantial explanatory and believability thresholds amongst many stakeholders. Put simply, participation rates as represented by the Outdoor Recreation Demand Studies do not represent demand. A relationship between outdoor recreation demand and supply has yet to be defined for south east Queensland.

The SEQ ORDS's do provide valuable insights into the nature and quantum of outdoor recreation occurring in the region.

Figure 5.1 Recreation Demand and Supply

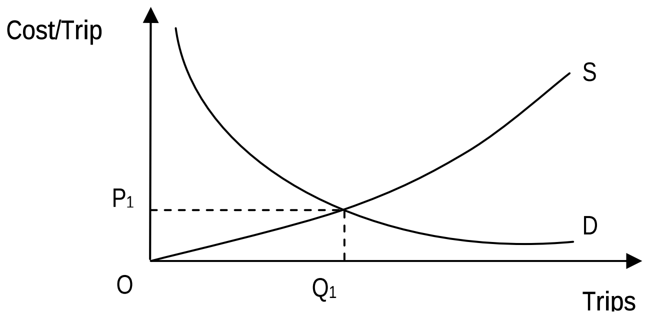
The terms demand and supply can be used in a **broader** sense and a **technical** sense. (Bergstrom, Cordell and Langner, 1994).

In the **broad sense,** demand refers to overall participation or consumption, and supply refers to overall availability of recreational opportunities.

In the **technical sense**, they refer to *economic* demand and *economic* supply as they relate to price (see diagram below) eg

- a demand function D is the total annual trips for an activity that a community will demand at various trip costs;
- the supply function S is the total annual trips for an activity that a community can produce at various trip costs, given the existing availability of opportunities or destinations (ie as travel time distance increases, more recreational opportunities are available to a community and the number of trips which can be produced or supplied increases).
- the equilibrium point (intersection of S and D) is where the marginal benefits of trip consumption are equal to the marginal costs of trip production.

Supply and Demand Functions Defining Optimal Level of Provision



However, constructing aggregate demand and supply functions to predict for example, the total number of recreation trips people would like to consume is a complex task. (See Cordell and Bergstrom. 1989). Put another way Tisdell,1977 prescribes that the supply of parks should be expanded until the social marginal cost of providing them is equal to their social marginal value. Benefits enjoyed and costs imposed in this context relate to the recreation users, facility providers and the broader community.

In this technical sense, demand for and supply of outdoor recreation are elusive concepts. Most outdoor recreation activities are provided under circumstances where market processes normally do not apply There are many complications in assessing outdoor recreation demand and supply using extra market techniques. For example, many forms of *demand* have been distinguished:

- *Actual demand* could be equated with consumption (participation is a measure of consumption)
- *Latent demand* represents the localised, unsatisfied "need" for particular types of outdoor recreation areas or facilities that, either through lack of information about the latent demand, or for other reasons, have not been provided. (Mercer, 1977)

There are also option and existence demand, induced, diverted and substituted demand.

Treating recreation demand in an economic sense can establish the monetary value of a park to visitors using such techniques as the travel cost method outlined in Section 3. A net present value of a park addressing all costs and benefits can then be determined to inform management decisions.

5.4 Recreation Demand

Recreation demand is treated here in the broad sense, referring to overall participation or consumption. Supply refers to overall availability of recreational opportunities.

5.4.1 Visitor Surveys

There are few sources of information on outdoor recreation visitation in SEQ, particularly actual visitor counts that have been recorded for defined areas over a period of time. Some available sources are highlighted below.

- Queensland Parks and Wildlife Service 'estimates" of visitor numbers (persons-visit-days for independent or commercial day use or camping) for national and other conservation parks within Southeastern region (roughly equivalent to SEQ) were about 4.9 million per year. Parks supported 12.5 million visits per year across the state (Master Plan for Queensland's Park System, 2001).

- Estimated numbers of visitors to each of the SEQ Water Board storages over 5 years are shown in Fig 5.3. Over this period there was a steady increase in visitor numbers resulting from a combination of new and expanded facilities (particularly Lake Samsonvale), increasing population within the day-trip catchment and growing community awareness of recreation opportunities provided by the Board. The decrease in visitor numbers at Lake Somerset is a result of low water levels from a prolonged dry spell. These figures roughly reflect a 10% growth of over 120 000 visits per year.

Figure 5.2 Visitor Numbers at Brisbane Water Board Storages

YEAR	LAKE WIVENHOE	LAKE SOMERSET	LAKE SAMSONVALE	TOTAL
1993/94	720,000	335,000	283,000	1,340,000
1994/95	678,000	475,000	367,000	1,520,000
1995/96	590,000	465,000	496,000	1,551,000
1996/97	594,000	575,000	550,000	1,719,000
1997/98	689,000	356,000	557,000	1,602,000

- Fig. 5.3 compares visitor estimates from three sources made from 1991 for some of the most popular national parks in SEQ. Most parks show an increase ranging from 30 to 150% over ten years with a few parks declining in visitation. Some parks may have reached social carrying capacity limits. Wide fluctuation in figures could suggest inaccurate "guesstimates" or surveys more than actual change in visitor numbers. Generally, significant increases are indicated.

Figure 5.3 Comparison of Visitor Estimates at Major National Parks in SEQ

National Park	Open Space and Recreation 1993 (1991 Figures) Annual Visitation Persons/Year	Kinhill Economics 1998 Visitor days per Year	QPWS National Park Usage Figures 2001 Person-visit-days per Year
Kondallila NP	250,000	200,000	340,350
Buleigh Heads NP	375,000	375,000	501,199
D'Aguilar NP's	313,000	216,000	200,183
Lamington NP	397,000	350,000	578,686
Moreton Island NP	70,000	150,000	170,181
Noosa NP	1,400,000 incl. Lake Wyeba NP	1,200,000	1,000,054
Springbrook NP includes Natural Bridge NP	818,500	700,000	549,862
Tamborine Mt NP's	207,900	350,000	511,905
Total	**3,831,400**	**3,541,000**	**3,852,420**

5.4.2 Anectdotal Evidence

Anecdotal evidence from a number of sources confirms growing outdoor recreational pressure within south east Queensland. Members of the Regional Parks Working Group have experience of on-site visitation at various sites across the region. Their comments are recorded below.

Graham Burgdorf (Caboolture Shire Council, PLA)

- Five conservation parks in Caboolture but these was not experiencing substantial recreational usage pressure currently.
- With increased urban growth within the SEQ region, this pressure on parks could mount, especially if they were not managed properly.
- Adding facilities to conservation or other parks can generate or increase use

Terry Harper (QPWS)

- Recreation facilities occupy only a small percentage (1-2%) of the area of reserves. The surrounding land is context for recreation activity.
- With increasing urban growth and declining areas of bushland, regional parks should be positioned to help make the region more sustainable.
- Provision for recreation can support conservation goals.
- Should argue the case for more regional parks based on this more philosophical approach.

Richard Pascoe (Gold Coast City Council).

- Regional parks have an important role in maintaining the scenic amenity of SEQ.
- From his time with Ipswich City Council, usage nodes in some conservation areas were experiencing heavy impact through more use.
- Kholo Crossing was experiencing massive impact.
- In the greater Gold Coast area there was only 10-12 years of green space development left.
- The ICS (Infrastructure Charges Schedule) completed by Gold Coast City Council indicated $350 million was required for green space acquisition and development over ten years.

Rob Hitchcock (NPAQ)

- *"Public demand for open space for recreation was a revelation last long weekend (May 2003) when there were 400 campers at Peach Trees (Jimna), another 400 or so at Charlie Morelands and Booloumba Creek camp grounds near Kenilworth and a reported 800 at Flanagans Reserve near Mt Barney. If Flanagans Reserve near Mt Barney was full then the adjacent Bigriggen camp ground must have been equally as crowded"*.

Kerry Heilbronn & Anthony Ross (Brisbane City Council)

- Experienced increase in usage in conservation areas once facilities go in eg Mt Neurum.
- Increasing pressure being placed on areas like Brisbane Forest Park because of the lack of adequate regional parks in the SEQ region.
- Competition between recreational users eg between mountain-bikers and horse riders.

Dave Batt (S&RQ)

- Has noticed a heavy impact on Scenic Rim walking tracks in the four year period 1979-1983
- Illegal use is increasing eg trail bikes
- Beaches are experiencing increased competition for waves with fights occurring
- Camping and picnic areas are overloaded at peak times with site capacities exceeded. People tend to camp anywhere
- Strong competition between recreational and non-recreational uses eg at Mt Cootha
- Has seen a lot of utilities broken
- Recreational linkages through urban areas are being broken resulting in isolated green spaces in an urban landscape. The cost of retrofitting green space in urban areas was very high.

Generally significant increases in visitation has occurred but not all sites may have experienced this trend. Total visitation per year provides an aggregate summary for site and temporal comparisons. However, many parks are only at capacity levels at peak use periods ie weekends, long weekends and school holidays. Spreading use more evenly throughout the year may be possible but generally designating recreational open space needs must accommodate the peak use phenomenon.

5.4.3 South East Queensland Outdoor Recreation Demand Studies

The 1997 and 2001 South East Queensland Outdoor Recreation Demand Studies provide the best estimate available of the nature and extent of outdoor recreation activities by residents in south east Queensland. The 1997 and 2001 results were broadly similar with no significantly different changes in participation. This alone can confirm growing visitor numbers proportional to population growth over this period (assuming tourist visitation has increased proportionally as well).

Figure 5.4 presents the results of the 2001 survey to more accurately reflect for each activity the total number of activity events per year, or total number of visitor days for each activity. This is based on using the average (or mean) number of times that respondents participated in each activity over the previous 12 months and not the median value. This is consistent with long standing National Recreation Survey procedures employed in the US (Cordell and others, 1999). The percentage participation by activity in the least natural of three recreation settings (ie *somewhat natural*, very natural, totally natural) is also shown.

Figure 5.4 Outdoor Recreation Usage Levels by Activity for 2001 (1998 report figures in brackets)

Outdoor Recreation Activity	**Percentage Participation in Activity** % of Population that participate at least once per year in previous 12 months	**Frequency of Participation** Average No. of times respondents participated in previous 12 months	**No. of Activity Events (or Visitor Days) per Year** #	**Percentage Participation in "Somewhat Natural" Recreation Setting**
Walking or Nature Study (eg bird watching, photography)	49% (60%)	71.7	66 753 000	49% (66%)
Water Activities (incl. swimming, snorkelling, scuba, not in constructed pools)	56% (39%)	28.2	30 005 000	62% (67%)
Bicycle Riding	26% (25%)	43.5	21 489 000	83% (91%)
Picnicking	67% (65%)	6.9	8 784 000	59% (70%)
Driving 2WD Vehicles on unsealed roads	24% (31%)	25.2	11 491 000	35% (44%)
Camping	33% (25%)	5.2	7 170 000*	29% (38%)
Driving 4WD Vehicles on unsealed roads	23% (20%)	16.3	7 123 000	19% (34%)
Riding on Motorised Watercraft (eg speed boat, jet ski)	27% (26%)	12.2	6 259 000	40% (63%)
Riding on Non Motorised Watercraft (eg canoe, sailing, kayak)	19% (17%)	16.1	5 812 000	39% (61%)
Horse Riding	7% (7%)	23.9	3 179 000	27% (53%)
Driving Other Vehicles on unsealed roads (eg trail bike, trike)	7% (7%)	20.4	2 713 000	39% (47%)
Abseiling/Rock-climbing	6% (6%)	3.9	445 000	52% (52%)
		Total	**171 223 000**	

Legend

\# No. of Visitor Days per Activity = Estimated population of 1 900 710 individuals aged 15 or over living in SEQ X Percentage Participation X Frequency of Participation

* Camping visitor days have been estimated from mean number of person nights per camping visit of 2.2 (QPWS protected area camping data 1999/2000 Whole of State figures).

Expressing usage levels in this form allows:

- comparison with actual visitor counts recorded at recreation sites in SEQ. Some inaccuracy may result through:
  - some participation in multiple activities recorded in the ORDS might occur on one visit to a site
  - some participation recorded in the ORDS occurs outside the SEQ region
  - uncertainty in response by participants in the ORDS as to the landscape setting referred to (ie More modified landscape classes 7,8 and 9 were not included in the ORDS questions but respondents have recorded experiences within these classes).
  - not all outdoor recreation activity participation was recorded in the ORDS. For example, fishing participation was not quantified but other surveys show about 21% of people in SEQ went fishing in 2001 with about 7 million activity trips recorded. (Higgs, 2003).
- Use in estimating the economic benefit of outdoor recreation participation in SEQ (as per Section 3)

Presenting results of the ORDS in terms of visitor days regardless of the number of times a person participates in an event is consistent with the way total visitation figures are collected at individual sites eg picnic grounds, camping areas and even sports stadiums.

Major deductions from Fig. 5.2 are:

- For activities surveyed, the total number of visitor days (counting each activity event on separate days as a visitor day) occurring in SEQ is closer to 171 million (using the average or mean frequency of participation) rather than 43 million estimated using the median value.

- Even if participation rates have not changed significantly between 1997 and 2001, population growth will result in additional usage. Over twenty years, SEQ's population of 2.4 million in 2001 is expected to grow to 3.4 million by 2021. On a simple pro-rata basis this could generate an *additional 70 million* activity events or visitor days per year by 2021. This assumes the smaller proportion of visits due to tourists increases by the same rate as the population. (Approximately 13% of total visitor days to the SEQ RFA region State forests and national parks were made by tourists: Kinhill Economics, 1998)

- The majority of this increase can be expected in just four activities with the highest participation rates ie walking or nature study, water activities, bicycle riding, and picnicking. Survey participants indicated greatest preference for these activities occurring in the least natural of three settings described ie "somewhat natural recreation setting". These four activities account for nearly three quarters (127 million in 2001) of all activity events.

- It is suggested that the demand for walking or nature study, water activities, bicycle riding and picnicking has a substantial alignment with Recreation Setting Group C and a portion of Group B (see Section 3.7) and that this might be best accommodated through the more accessible regional parks closer to urban centres depicted as R1 in Fig. 3.5. Participation in other activities shows higher preferences for more natural recreation settings but at far lower demand levels.

- It might be conservatively estimated that about 10% of the future growth in demand for the Group C setting activities described above should be accommodated in new regional parks (the other 90% of visitor days would occur primarily in other open space eg local parks, waterways, beaches, as well as more natural settings. This establishes a figure of about 5 million visitor days required by 2021 for new regional parks with a preference for or acceptance of less natural recreation settings. (127 million x 40% x 10%).

- A similar logic might be explored for the other activities. However, the percentage of growth in demand for these activities required in new regional parks would be higher than 10% because of the lack of alternative more natural settings. Accommodating a third of this growth might be more realistic. This equates to about 5.3 million visitor days by 2021 with a preference for more natural recreation settings (44.2 million x 40% x 30%)

- Thus about 10 million additional visitor days could be required within regional parks by 2021, assuming participation rates remain relatively stable.

This figure suggests the order of magnitude of benefits that a network of regional parks might deliver. Assuming lower order figures of $7 and $10 per visitor day (for closer and more distant regional parks) for consumers' surplus from Section 5.3 and consistent growth increases per annum, an average economic value of recreational benefit could be $42.5 million per annum between 2001 and 2021 (10 million x $8.5 / 2). The present value of this annual recreational benefit can also be calculated. Assuming a constant annual economic value of $42.5 million, the NPV at 6% discount rate is $708 million.

Comparison with estimates produced by other studies for Centennial Park in Sydney suggest this estimate may be in the ball park ie the annual consumers' surplus estimates for recreational visitors are $23 million to $33 million per annum with annual avoided costs for community service agencies of $4 million. Visitation is 5 million people per year.

The ORDS figures and the above analysis reflects actual participation and not latent demand ie additional visitation which might occur if parks were located closer to people, were better promoted or had better facilities. The scope for additional benefits to be realised by recognising and accommodating latent demand must be substantial.

Many assumptions and interpretations have been made to derive this estimate. Its primary value is to demonstrate the scale of magnitude of recreational benefits that may be derived from regional parks and to highlight the need for more comprehensive studies by professional staff in fields such as EIA (economic impact assessment) or SIA (social impact assessment). Accordingly, attempts should be made to estimate the total economic value of a broader range of environmental, social and economic benefits and costs.

A recent related case study indicates the relevance of such an approach. An assessment was made of the potential economic, environmental and social impacts of eradicating **red fire ants** detected in Brisbane in 2001. A cost-benefit analysis indicated that a potential net present value of more than $2.8 billion over 30 years justified the jointly funded State and federal government's commitment of $140 million to an eradication campaign over a period of five years. The potential impacts assessed were comprehensive including preservation of the Australian way-of-life in affected areas (eg the ability to have backyard barbeques, play in parks, school yards etc). (Queensland Government, 2002).

5.5 Recreation Supply

5.5.1 Resource Available

There is yet to be compiled a total inventory of land and water available for outdoor recreation in south east Queensland by site, sub-region or regional level.

1. The **Loder and Bayly 1993 inventory** of recreation opportunity settings inventoried all lands in SEQ at 100 000 scale. Lands actually available for outdoor recreation (ie predominantly publicly owned) were not discriminated. The study found that at least 76% of SEQ is at the developed end of the recreation spectrum (ROS Classes 1,2 and 3) with 24% at the more natural end (ROS Classes 4,4 and 6). The more natural lands were small and fragmented with eight main clusters based on hilly to mountainous topography with no major concentrations in flatland along rivers. There were no wilderness areas (ROS Class 7) recorded. Inland waters (lakes, dams, rivers) were included in ROS Classes but inshore waters of Moreton Bay were not assessed.

2. The **area of public open space** can provide a poor surrogate for the supply side of outdoor recreation. The most comprehensive inventory of land and water based public open space in south east Queensland was presented in the RPAG 1993 report "Open Space and Recreation". This paper framed the ROSS concept. The report listed the land estate managed by the State but information on public open space owned by local government (as opposed to open space designated in strategic plans) was not available.

The Regional Landscape Values, 1995 report lists the publicly owned open space of South East Queensland as follows:

Total Area of SEQ	2 229 500 ha	
National and Conservation Parks	121 347	5.4% of region
State Forests	208 054	9.33%
Timber Reserves, lakes and dams	29 340	1.32%
Total public open space	**358 740 ha**	**16.9% of region**

The SEQ Performance Monitoring Report 2001 indicates:

Total Area of SEQ	2 370 000 ha	
1995 Protected areas and SF	313 230	14.0% of region
2000 Protected areas and SF	343 704	15.4% of region

The increase of 30 474 ha over this period is mainly attributed to tenure conversions from freehold (largely local government) and DNR&M reserves rather than acquisitions. This 10% increase in the protected estate cannot be equated with an increase in the area of public land available for outdoor recreation (personal communication with SEQ2021).

A summary of **public land tenures available for outdoor recreation** in south east Queensland is provided in Appendix C.1.

3. In March 2000, the South East Queensland Water Board converted from a statutory authority to a private corporation, the **South East Queensland Water Corporation**. This has resulted in the closure of some recreation sites and contraction of other recreation services to private providers. Different recreational opportunities have been retained at the three major storages ie

- Lake Wivenhoe – regional attraction for quieter, land and water- based family recreation
- Lake Somerset – regional attraction for motorised water sports and fishing
- Lake Samsonvale – a lake-side urban park.

The SEQ Water Corporation indicates:

> *Collectively the 21 water storages offering recreation within a 125 km radius of Brisbane provide a 'regional landscape' of regional significance. To date at the regional scale, recreation planning and management at water storages is largely un-coordinated.* (ES&S, 1999)

4. The **SEQ Forest Agreement** tenure conversion process will not result in an increase in the area of public land available for outdoor recreation. Regional priorities to ensure protection of biodiversity will see significant areas of state forest gazetted as protected areas under the Nature Conservation Act 1999. While final outcomes are not yet know, existing recreational uses may be largely accommodated, with horse riding proving to be an exception in some areas. However, increasing recreational use as a result of increasing population may be difficult to accommodate in an estate focussed more on nature conservation than multiple use. Extension of recreational facilities or development of new sites in particular, will prove difficult to accommodate. Less well-developed state forest areas outside the region may attract new users. However, these are located further away, increasing travel times and traffic congestion on major roads at peak holiday periods.

5. Data on major **local government reserves** with regional landscape values, or local government owned or managed land designated for outdoor recreational use is difficult to obtain and a major omission in any regional analysis. A number of local governments have acquired significant areas of land with regional landscape values sometimes through the use of "green" or "bushland" levies. Fig. 5.5 provides a recent summary of likely funds raised through environmental levies.

Figure 5.5 Environmental Levies of Local Government in SEQ - Oct 2002

Council	Number of Properties Rated *	Environmental Levy #	Amount per annum /ratepayer #	$ Total Amount Raised
Brisbane CC	364 100	Bushland Preservation Levy	$30 pa/ ratepayer	$10 923 000
NORSROC				
Caboolture SC	44 400	No levy in 02/03		-
Caloundra CC	36 900	Yes	$60 pa	$2 214 000
Kilcoy SC	1 700	No		-
Maroochy SC	57 200 (at 1/7/00)	Yes	$30 pa	$1 716 000
Noosa SC	25 500		$35 pa	$ 892 500
Pine Rivers SC	44 500	No		-
Redcliffe CC	21 800	No		-
WESROC				
Boonah SC	4 300			-
Esk SC	7 300			-
Gatton SC	6 100	Yes	$20 pa	$ 122 000
Ipswich SC	47 900 (at 1/7/00)	Yes	$28 pa	$1 341 000
Laidley SC	6 600 (at 1/7/99)			-
Toowoomba CC	35 200	Yes	$25 pa	$ 880 000
SOUTHROC				
Gold Coast CC	196 600	Open Space Preservation Levy	$27 pa + $2 for dev. of Botanical Gardens	$5 701 400
Redland SC	58 800	Yes	$50 pa	$ 2 940 000
Beaudesert SC	22 600	No levy		-
Logan CC	62 000	Yes	$43 pa	$2 666 000
TOTAL	1 043 500			$29 396 100

Source of Information
* DLGAP Report, Number of Properties Rated as of 1/7/02, unless otherwise stated
# SEQ Environmental Working Group Questionnaire, Sep 2002

The total area of land acquired through these levies has not been collated. However, some acquisitions have been substantial by individual Councils eg

- Brisbane City Council - $70 million raised to acquire 1 700 ha of bushland
- Ipswich City Council – 5 000 ha acquired through levies over 4 years

Environmental levies are used to acquire land primarily with significant nature conservation values. To some extent recreational values may contribute but this status has not been determined.

The Regional Parks Working Group in researching this project has initiated a survey through local governments of existing or potential regional park areas. Results of this survey although incomplete, are provided in Appendix C.1.6. The SEQ Local Government Sport and Recreation Forum has also initiated this year a similar survey addressing all types of local government parkland. Both surveys are yet to be completed.

6. Information on **water-based recreation settings** available in SEQ particularly on rivers, streams, estuaries, Moreton Bay, beaches and the open sea or ocean have not received the same attention in recreation assessments. The ORIS classification of recreation settings does not apply to marine environments. Generally this discussion paper has not been able to deal with this sector but recognises its huge importance to the region and the need for further work.

5.5.2 Recreation Activities

Time constraints have not permitted an assessment of demand and supply trends relating to specific recreational activities or interest groups. Many of these groups are well organised with high memberships and can provide valuable information on recreation needs eg clubs in bushwalking, nature study, cycling, 4 wheel driving, canoeing, orienteering, endurance riding. Consultation involving organised groups and informal outdoor recreation participants should be a major focus of subsequent work on this project.

Evidence is emerging about loss of opportunities for more specialised activities – see recent article below from Queensland's daily newspaper.

> Friday, June 13, 2003 The Courier-Mail (page 15)
>
> **Orienteerers slowly wiped off the map**
>
> ORIENTEERERS calculate that during the past 20 years housing developments are largely responsible for the loss of 112sq km of southeast Queensland bushland once used for cross-country navigational courses.
> Queensland Orienteering Association development officer Liz Bourne said the sport had lost 24 mapped orienteering courses around Brisbane since organised events began in the 1980s.
> The sport, which offers map-and-compass challenges to people aged eight to 80, has lost membership because of the steady loss of suitable near-Brisbane countryside, she said.
> Previously a Sunday morning activity, orienteering for Brisbane people was now a full day out, with drives of one, two or more hours to orienteering courses as far afield as Stanthorpe.
> Ms Bourne said of 24 areas "lost forever" to her sport, at least 15 had been completely swallowed up by new housing estates.
> Motorcycling Queensland general manager Lindsay Granger said the difference between today and 20 years ago, in a comparison of available land for trail-biking around Brisbane, was enormous.
> Plant species, wildlife and recreational space, all face a similar threat in the southeast
> - Philip Hammond

5.5.3 Recreation Services and Facilities

Information on expenditure to improve recreation services and facilities is an important part of the supply dimension. Further work will be required to complete this picture. Options and trade-offs between putting resources into acquiring new parkland or more services into existing parkland need to be assessed.

Melbourne Parks and Waterways (now Parks Victoria) have established through research on urban regional parks a relationship that predicts visits to parks (ie annual visitor number) based on three variables – provision of services, size of park and catchment population (Zanon,1996). These three variables affect visits differently ie

- Visits increase with an accelerating pace with provision of services. 17 service attributes have been established as important to visitors, from safe access, adequate car parking to suitable opening and closing times. Each park can then be scored from 0 to 100 on its services provided. To take one park example, the first 50 point score in services predicts 90 000 visits, whereas the second 50 points predicts an additional 265 00 visits. This evidence suggests that it is better to put resources into fewer well-serviced parks than more poorly serviced parks in order to maximise public visits to parks.
- There is a decelerating relationship between number of visits and size of a park. This evidence suggests that although increasing size of a park will increase visits there is a diminishing return in terms of public use.
- There is a dramatic decelerating relationship between visits and catchment population. Recreational demand approaches maximum when the surrounding population is 200 000 and that the recreational demand is effectively saturated after that point.

This research relates more to community use of urban regional parks than more remote parks**. It could suggest a network of well serviced parks of up to 200ha in size distributed or serving catchments up to 200 000 people each could be a cost effective strategy.** It could mean more resources are better diverted to larger regional parks than intermediate level parks. Similar research based on south east Queensland community use and needs is required for urban areas particularly across local government boundaries. Regional opportunities may be missed through planning or research contained within local government areas.

5.5.4 Additional Insights

Tracking changes in the recreation resource area (including land and inland and inshore waters) requires an approach which discriminates recreational settings or park types. An aggregate picture is misleading as areas of different recreation settings are considered as equivalent, eg acquisition of 50ha of land for a regional park in close proximity to a large urban centre may be many times more significant for **recreation based benefits** than an equivalent area acquired to augment an existing declared catchment or bushland reserve. Similarly, the region provided in 2001 approx 140ha of State owned reserves/1000 people. Large protected areas with little or no recreational use distort the actual provision status which must be assessed at more detailed levels.

Residents of south east Queensland do not confine their outdoor recreation to the region. Activities involving multiple days (camping and 4WD in particular) occur frequently in locations such as the Cooloola part of Great Sandy National Park, Fraser Island, Bunya Mountains and increasingly the Tweed Shire. Regional parks serving SEQ residents might be justified **beyond the region's boundaries.**

5.6 Defining How Much is Needed

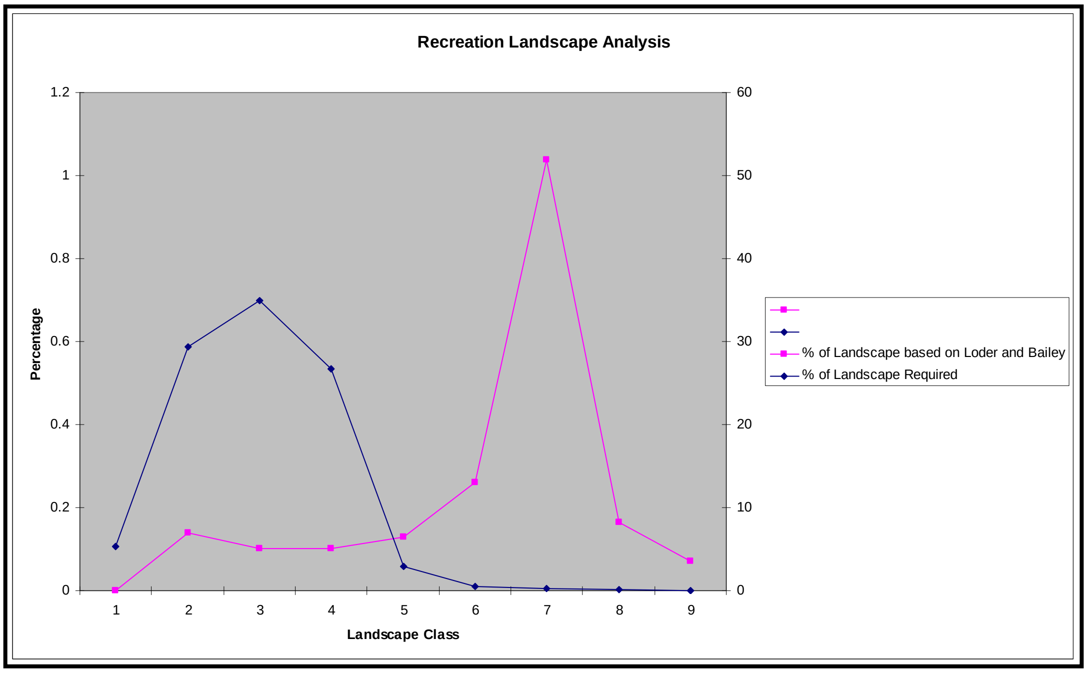
5.6.1 Existing Studies

At lease one attempt has been made at quantifying the land area required for outdoor recreation in SEQ. This combined DNR/SRQ study was based on a regional inventory of recreation opportunity settings undertaken for the SEQ 2001 project by Loder and Bayly Consulting Group, 1993. The Loder & Bayly study mapped public and privately owned lands in SEQ according to seven Recreation Opportunity Spectrum classes (wilderness to highly disturbed). The DNR/SRQ study transformed this inventory into the nine landscape classes employed in the Recreation Demand Studies.

Fig. 5.5a Determination of Recreation Land Required for SEQ.

Waring and Batt Landscape Class		Loder and Bailey Landscape Class	% of Landscape based on Loder and Bailey	Hectares		Estimated Outdoor Recreation Demand	No of people recreating at least once / annum	No. of people recreating on a big weekend	ha required / person	total hectares reqd	% of Landscape Required
1	Wilderness	Wilderness	0.00	0	0.2	0.12	4428.744	2214.372	500	1107186	5.3
2		Natural	6.90	276000	6.1	3.66	135076.692	67538.346	90	6078451	29.3
3		Natural Motorised	5.05	202000	13.1	7.86	290082.732	145041.366	50	7252068	35.0
4		Natural Motorised	5.05	202000	20	12	442874.4	221437.2	25	5535930	26.7
5		Semi-natural	6.40	256000	26.8	16.08	593451.696	296725.848	2	593451.7	2.8
6		Semi Developed	12.98	519200	33.8	20.28	748457.736	374228.868	0.25	93557.22	0.4
7		Semi Developed	51.92	2076800	40.8	24.48	903463.776	451731.888	0.1	45173.19	0.2
8		Developed	8.19	327600	25.833333	15.5	572046.1	286023.05	0.05	14301.15	0.06
9	Highly Urban	Developed	3.51	140400	1	0.6	22143.72	11071.86	0.025	276.7965	0.0
		Total				99.98				20720395	

Fig. 5.5 b Comparison of Recreational Land Available in SEQ with Required Land. (expressed as a percentages by Landscape Class)



Using a number of assumptions around existing demand levels and recreation land requirements per person, a calculation was made of the area of land required for each of the nine landscape classes in SEQ. 20.7 million ha was determined as required for the SEQ 1997 population, not necessarily all of which needed to be located in SEQ. Fig. 5.b compares the existing land with required land by landscape class, expressed as percentages of the two total areas. This analysis indicated a massive undersupply of opportunities in the more natural classes (1-4) with sufficient potential land in more developed classes 6-9).

Given that the entire area of SEQ is only 2.37 million ha, these outcomes must be questioned. This study does highlight the difficulty of determining outdoor recreation needs on a region wide basis.

The fundamental issues remain:

- How should any deficiency or sufficiency in recreation opportunities be determined?
- Is the south east Queensland region adequately provided for in terms of current provision of outdoor recreation opportunities?
- What is needed given the expected growth in population and emerging trends?
- What is the role of regional parks within the range of opportunities needed?

A number of approaches are investigated. The position with respect to regional parks must be considered within the wider provision of opportunities for outdoor recreation provided by State and local government parks and reserves.

5.6.2 A Standards Approach

A standards approach to determining open space needs has been applied through national guidelines (The Australian Model Code of Residential Development) and by the Australian States and Territories (eg NCDC), local government agencies, many bodies worldwide. There is wide variation in these standards and their level of detail. In Australia, open space standards for recreational land have primarily targeted parkland within urban or near metropolitan areas. National parks, State forests, water reservoirs and large areas of water or sea are generally not included.

There appear to be a number of international source points for park or open space standards which have been quoted ie:

- The common standard of 2.83 ha per 1000 is derived from the British 7 acres per 1 000 standard of the early 1900s (Daly, 2000)
- George Butler of the (American) National Recreation Association reluctantly prepared a standard of 10 acres of park per 1 000 population within each city, plus an equal area in parkways, large parks, forests, and the like, either within or adjacent to the city. (NRPA, 1995).

This NRPA standard (converted to 4 ha/1000) has been widely adopted by planners in Australia for the provision of public parks and open space.

A few standards for *regional parks* have been applied in Australian states and overseas but there would appear to be wide variation in the concept of regional park addressed. The dominant themes of these standards refer to min size or size range, service radius or max. driving time, ha /1000 people and range of facilities provided. Some of these standards are provided in Appendix C.

However, there is widespread concern about a standards approach as they have little or no research basis and have little relationship to community needs. Their acceptance worldwide was on the basis of the need for some sort of comparative and equitable standard to apply to development proposals. (Urban Renewal Task Force, 1994).

5.6.3 Systems Approach

A new 'systems approach' has evolved which attempts to determine **level of service** guidelines for parkland, open space and pathways that are needs based, facilities driven and land measured. According to the US National Recreation and Park Association one of the greatest challenges of the 21 st Century will be to provide adequate, well planned opportunities to socio-economically and culturally changing populations.
The NRPA have developed clear processes for deriving levels of service reflecting customer's needs which include determining in the following steps:

- park classifications for which the LOS will apply
- open space standards for each park classification
- present supply, expressed demand and *latent demand*
- the collective LOS for the entire park and recreation system

The outcomes of this process are similar to desired standards of service required to define required infrastructure as part of local government planning schemes and infrastructure charges plans.

This systems approach could be applied to regional parks. This would require a structured community consultation program to engage the wider community as well as recreation interest groups (see Section 7.2). Investigations carried out at a strategic level as outlined under Section 6. would also be needed to inform the community, planners and decision makers in an iterative cycle. An example of the kind of outcome and format produced could be as follows:

Recreation Setting or Activity	Level of Service
Recreation Setting Group C Modified landscapes (or natural where available) Typically R1 type regional park	Regional parks of 200-250ha in size within a half hour travel time of urban areas containing up to 200 000 people (Existing regional and State+ recreation opportunities would need to be recognised)
Recreation Setting Groups A & B Natural and Semi-Natural Typically R2 type regional park	Resource availability largely determines outcome. No LOS specified.
Activities such as horse riding, trail bike riding, water skiing, mountain biking. Activities can be accommodated within other parks or as special use sites.	Sites distributed on a regional or sub-regional basis, meeting eg maximum travel time criteria.

5.6.4 Interactive Open Space Demand Model

This follows the process developed by Parks Victoria which does not rely on any particular levels of service or standards but attempts to achieve greater distributional equity of parks and their services to people across Melbourne's metropolitan area. This can be achieved for particular types of open space, for different categories of open space activities or as one model embracing all park types.

The process is supported by analysis of net present value of parks determined through projected park use modelling and the travel cost method estimation of recreational benefit.

The advanced USA based aggregate economic demand supply modelling is perhaps an extension of this approach.

It should be noted that these approaches may emphasise the recreational value attributed to regional parks. A wider range of values and issues should be considered in determining regional parks. These are addressed as criteria in Section 6.

6. Determining a Network of Regional Parks

6.1 A Role for Opportunism

Future decisions on identifying and funding of regional parks may ultimately and necessarily include a degree of opportunism. This could occur for a variety of reasons largely relating to uncertainty:

- Information and research, particularly on community needs is evolving and not yet able to inform a strong strategic approach.
- Given the rate of regional growth and loss of critical inter-urban, near urban or coastal greenspace likely within the next 10-15 years, opportunities to secure key parcels should be given priority assessment.
- Unexpected options to purchase, acquire or develop lands as regional parks may justify an immediate response rather than foregoing the opportunity.
- Continued incremental development or acquisition of properties based on individual initiative of local government or State agencies will ultimately contribute to any strategic network.
- In order to develop agreement and commitment to a coordinated approach, pilot projects and individual initiatives will be necessary.
- Community needs and values as well as preferred recreational activities are changing and are difficult to predict.
- Recreational uses traditionally supplied on public lands may become viable business opportunities on private lands.
- Continued pressure to conserve biodiversity may displace existing or potential recreational uses from natural areas. This may change the accepted balance of recreational opportunities offered in the region.
- Recreational development within individual regional parks should be determined through community involvement. This may lead to unexpected but uniquely beneficial outcomes.

Accepting a role for opportunism does not imply a laissez faire approach to planning and coordination of regional parks is acceptable. It is suggested that combining strategic and opportunistic approaches is required to balance an overall sense of direction, a narrowing window of opportunity and a need to maintain flexibility and innovation.

6.2 Criteria for Recognition of Regional Parks

A number of approaches have been taken in identifying a network of regional parks for south east Queensland. Criteria were proposed previously and continued improvement is desirable in terms of increasing clarity, avoidance of duplication, greater comprehensiveness, ability to be expanded or objectively quantified, relative importance or weighting and degree of community involvement. This will be an ongoing task beyond this discussion paper.

The RPWG has developed a set of criteria which should assist in the recognition of regional parks at a strategic level in South East Queensland. These are presented in Figure 6.1.

Figure 6.1 Criteria for Recognition of Regional Parks

Issue	Criteria	Sub Criteria
1. Regional Recreation Need	Responds to deficiency of regional outdoor recreational opportunities and emerging trends	Complements provision of regional recreational opportunities on a variety of tenures at regional, state and higher levels.
		Complements emerging alternative provision of regional recreation opportunities eg private ventures.
2. Quality of Recreation Resource	Open space with high suitability for sustainable outdoor recreation.	Accommodates a diverse range of required recreational opportunities where benefits are optimised through multiple use of the site
		Provides recreational access to water bodies
	Characterised by culturally, scenically or environmentally significant landscapes	Provides significant educational experiences of cultural, historic and natural environments
		Represent a spectrum of landscape types within the region
3. Distributional Equity of Resource	Offers equity of access to the regional population	Recreational opportunities are equitably distributed relative to the existing and future population pattern
		Minimises travel time and maximises recreational participation time
4. Contributes to the SEQ2021 Vision, Sustainability and Social Justice principles	Includes land with an important natural resource function eg catchment management, nature conservation	Consolidates or links compatible existing open space areas
	Strategically buffers or separates urban settlement	
	Promotes access by public transport or non-motorised means	Minimises environmental impacts associated with travel
	Resource distributed in compensatory manner recognising socio-economic disadvantage	
5. Optimisation of Benefits	Optimises environmental, social and economic benefits to park visitors, adjoining local and regional communities	Contributes economic, environmental and social benefits to rural communities
		Cost effective acquisition and management
6. Realisation Potential	Co-ordinated management as an integrated unit is significantly enhanced	Availability of land for acquisition or inclusion
		Willingness of land mangers to co-ordinate management
		Willingness of local community to contribute to planning and management
		Co-ordination and management is improved and does not complicate or detract from existing effective management arrangements.
	Marketable and perceivable as a regional entity	
	Imminent loss of opportunity	Threatened by development
	Opportunity to transform a degraded asset	

These criteria will be refined further with community input, particularly to influence their weighting. This framework offers the following advantages:

- The criteria attempt to encapsulate all issues which might be relevant in identifying potential regional park sites and in establishing priorities for their acquisition, development or management.
- They provide transparency about how issues might be considered in decision making
- Each of the major and sub criteria are capable of exploration at a strategic level given adequate information or consultative processes. Many can be objectively quantified and assessed using GIS based systems.
- They will assist in determining achievable desired levels of service for regional parks in terms of land area, location, type of setting, services required, populations served and benefits derived.

6.3 Exploring a Strategic Approach

Initial research has been undertaken to demonstrate the potential insights that might be gained through a fully developed program. This research has also determined available information and deficiencies and tested analytical processes.

Given the available information, cooperative research has focussed on Criterion 3 *Distribution Equity of Resource*. Much of this information could also be used to examine other criteria.

6.3.1 Distribution of the Recreation Resource Relative to the Population

The distribution of regional outdoor recreation opportunities relative to the urban population pattern in 2001 was investigated. Work focussed on developing an aggregate measure of *Accessibility* reflecting how accessible the regional population is to current regional outdoor recreation opportunities. This approach can assist in identifying sufficiencies and deficiencies in supply across a broad range of national, state and regional sites.

Limitations in data prevented a single index being developed. Instead separate measures of *Proximity* and *Opportunity* were developed. A full explanation of the process with assumptions and qualifications on outputs is provided in Appendix D. The major qualifications relate to:

- local government recreation sites were not available for inclusion in the analysis
- only 2001 population data were available, and not the spatial extent of forecast population numbers

10 maps derived from this work are provided in this discussion paper:

Figure 6.1a, 6.1b, 6.1c	Travel Time Catchments from Brisbane CBD, Broad Beach and Maroochydore.
Figure 6.2	Proximity Summation of Inverse (driving) Distance between all Recreation Sites and Pop'n. Units
Figure 6.3	Proximity: Summation of Inverse Distance between all Inland Dams and Lakes and Pop'n. Units
Figure 6.4	Opportunity: Number of Recreation Sites within 1/2 hr Travel Time of Population Units
Figure 6.5	Opportunity: Number of Recreation Sites within 1 hr Travel Time of Population Units
Figure 6.6	Opportunity: State Reserve Area (ha) per 1000 people within ½ hr Travel Time of Population Units
Figure 6.7	Opportunity: State Reserve Area (ha) per 1000 people within 1 hr Travel Time of Population Units
Figure 6.8	Population Pressure on Sites Number of People within ½ hr Travel Time of Recreation Sites

The first three maps help conceptualise travel times or driving time from major urban centres. A combined travel time map from all population centres is difficult to represent graphically. These maps assist conceptualising driving times across the region. Providing equality of access for suburban residents is as important as for city centre residents. A single travel time catchment map for all population centres is difficult to represent graphically. Generally most recreation sites are accessible within 1.5 hrs drive from Brisbane CBD and within 2.5 hours from any location in the region. Travel by other means was not investigated. Promoting bicycle and public transport access would be investigated under other criteria.

Figure 6.1a Travel Time Catchments from Brisbane CBD

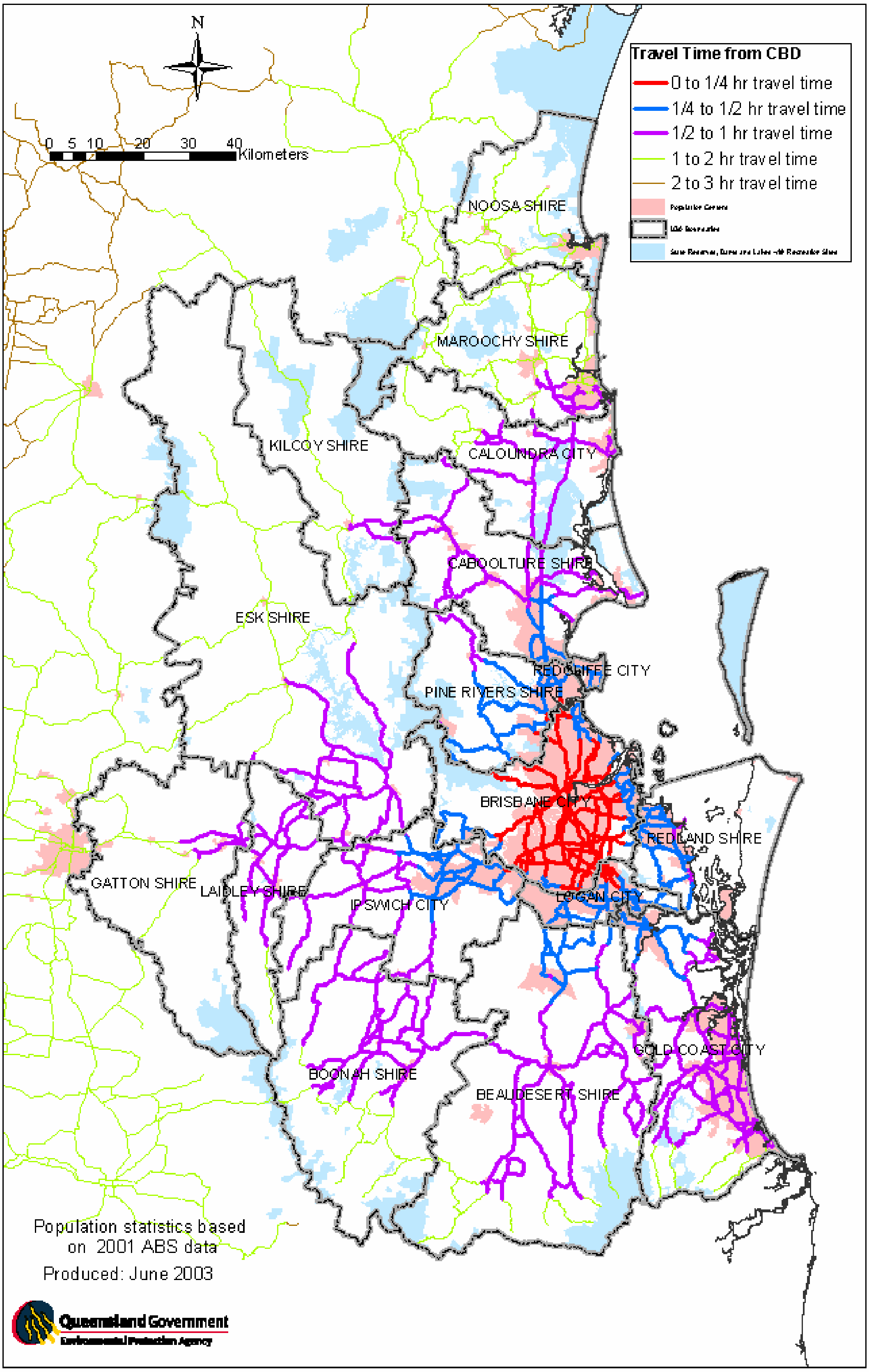


Figure 6.1b Travel Time Catchments from Broad Beach (Gold Coast)

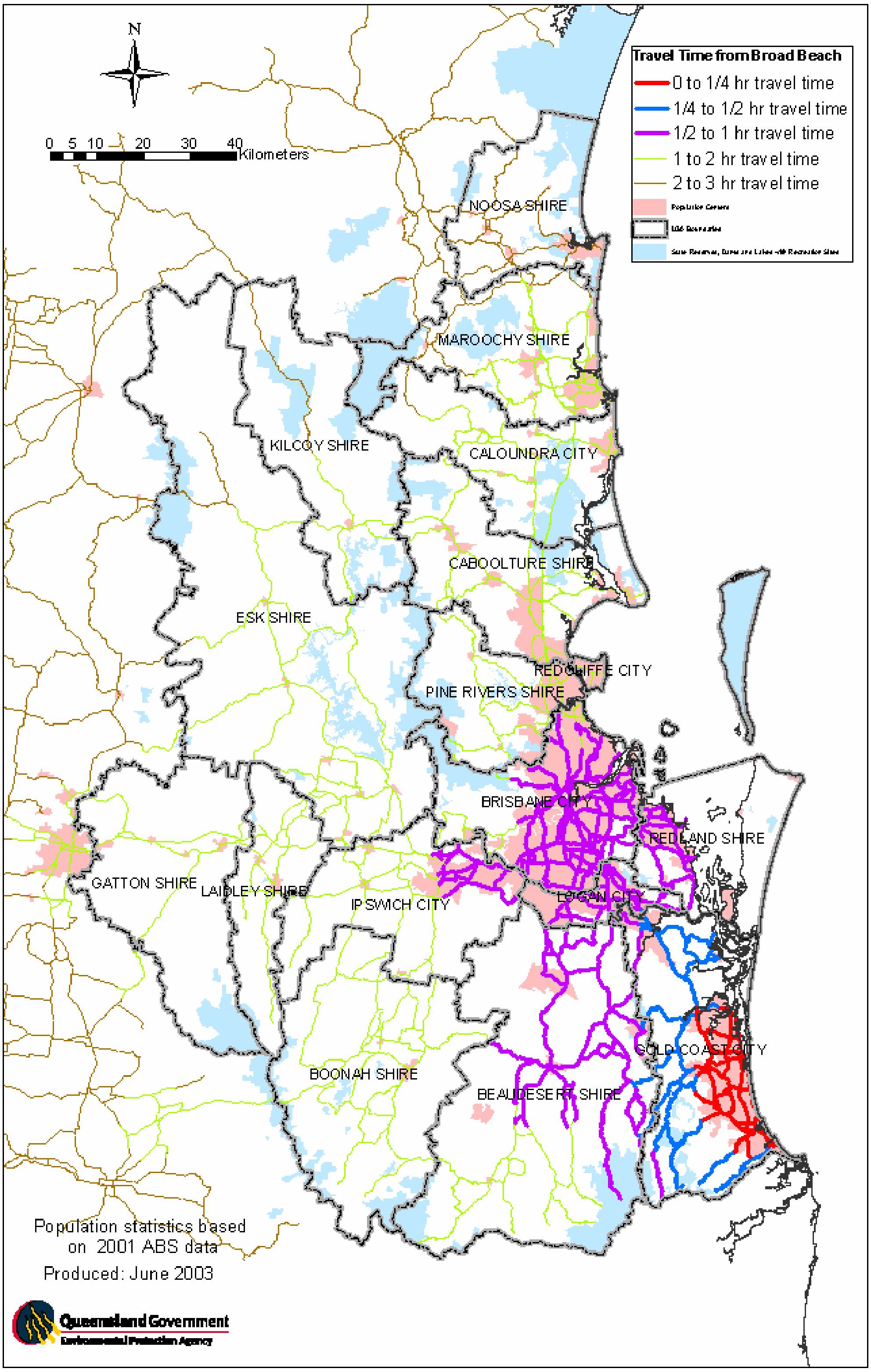


Figure 6.1c Travel Time Catchments from Maroochydore

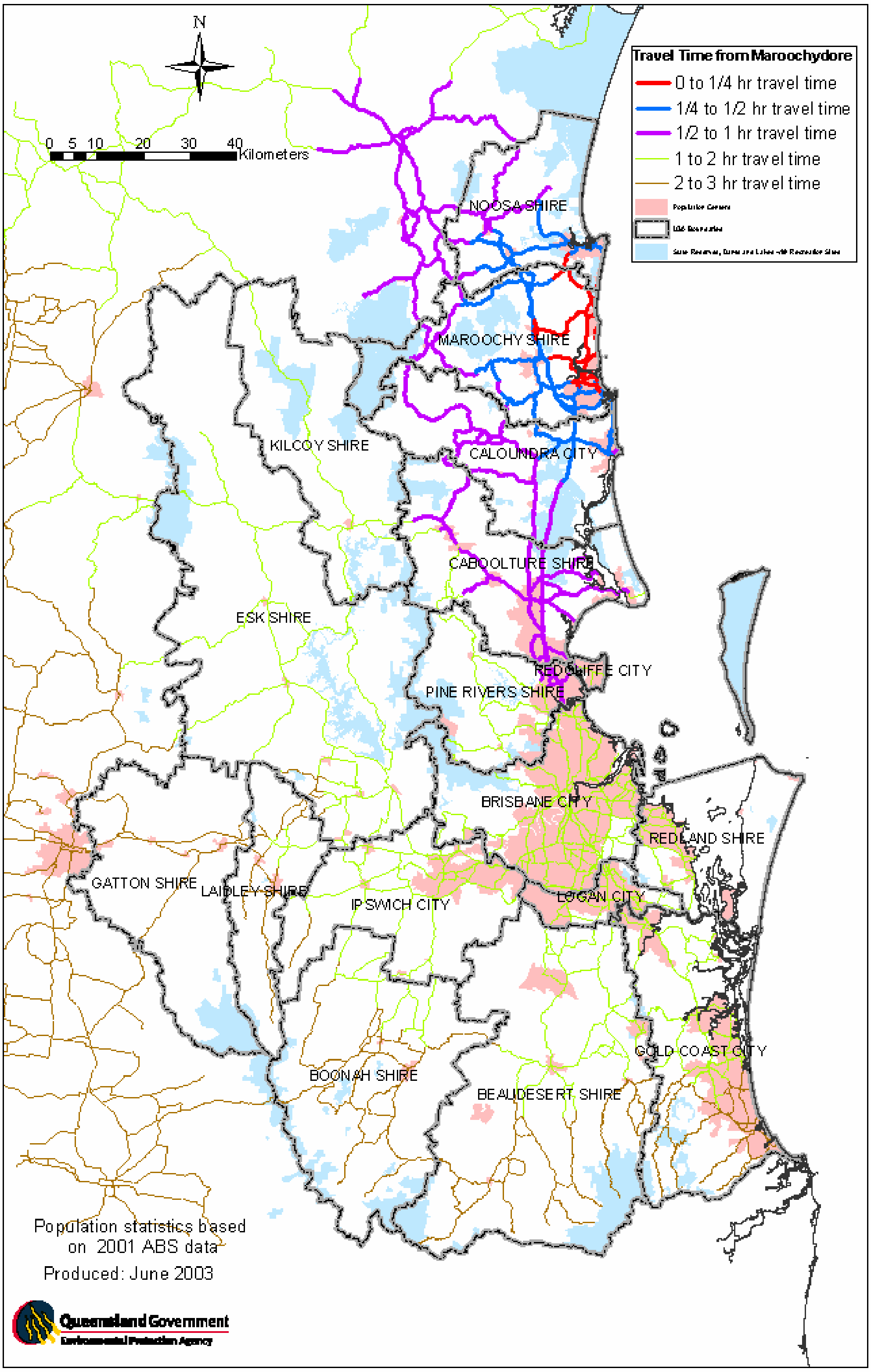


Figure 6.2 Proximity: Summation of Inverse Distance Between all Recreation Sites and Population Units

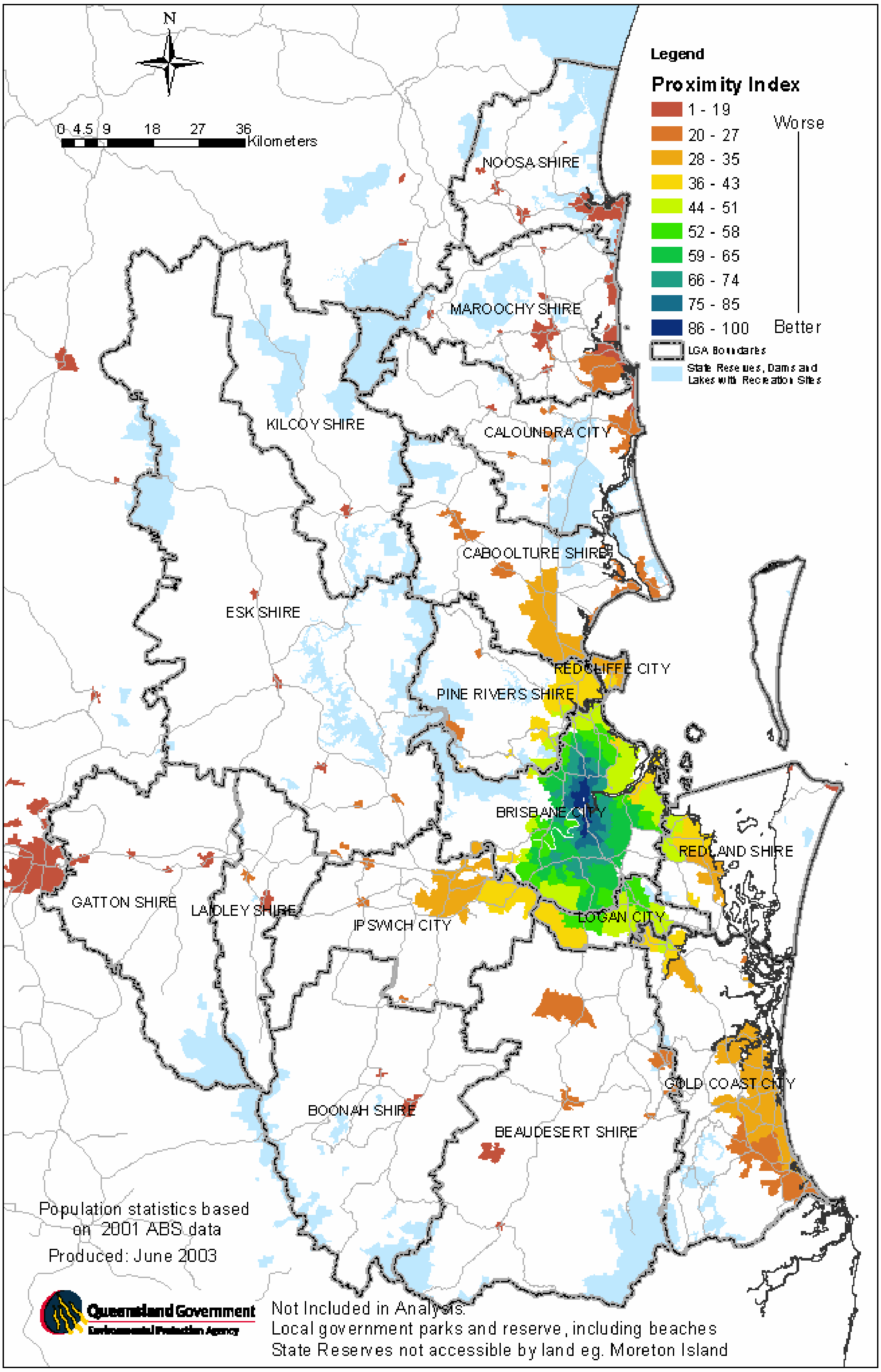


Figure 6.3 Proximity: Summation of Inverse Distance Between Dams and Lakes and Population Units

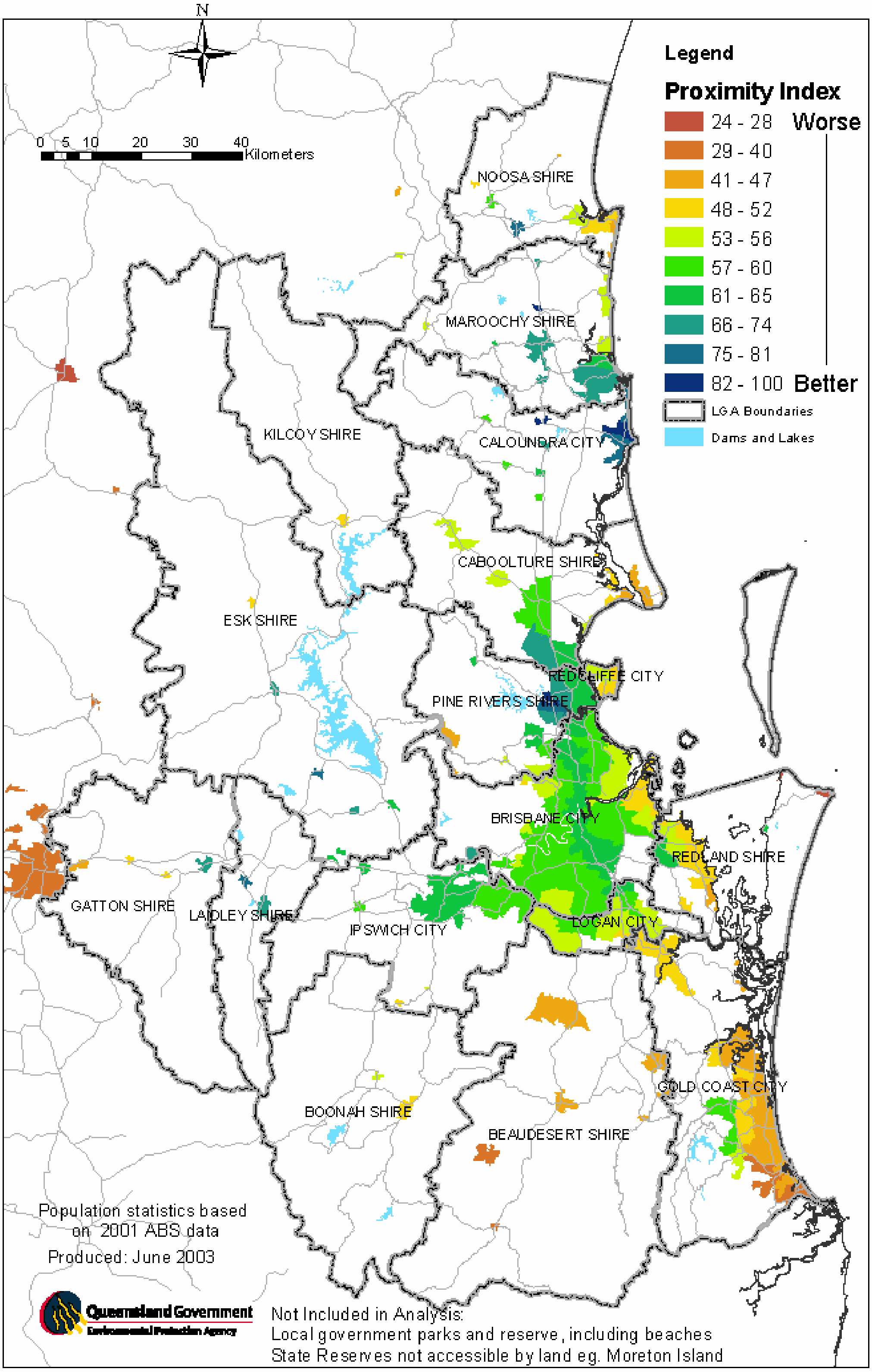


Figure 6.4 Opportunity: Number of Recreation Sites within 1/2 hr Travel Time of Population Units

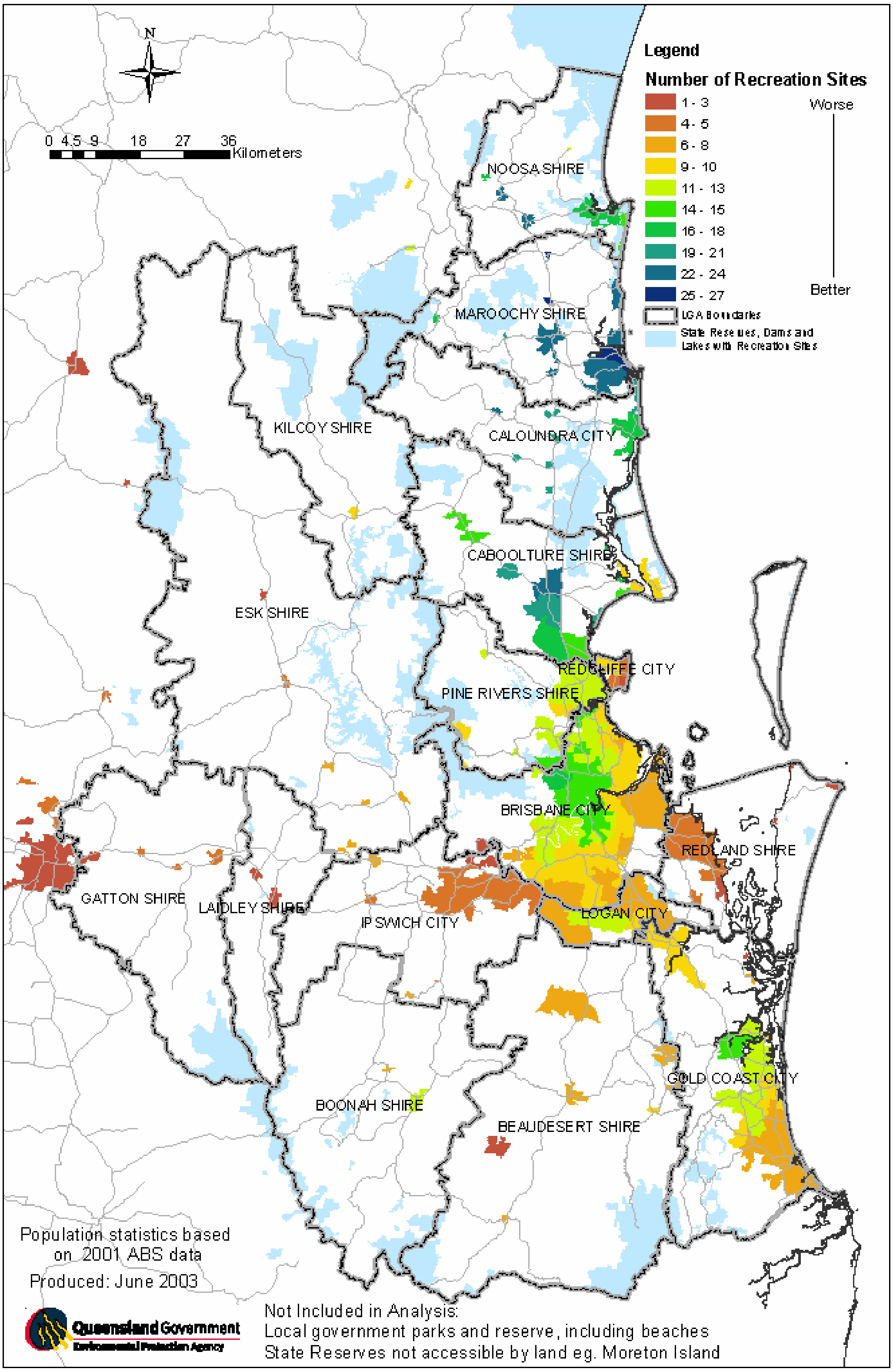


Figure 6.5 Opportunity: Number of Recreation Sites within 1 hr Travel Time of Population Units

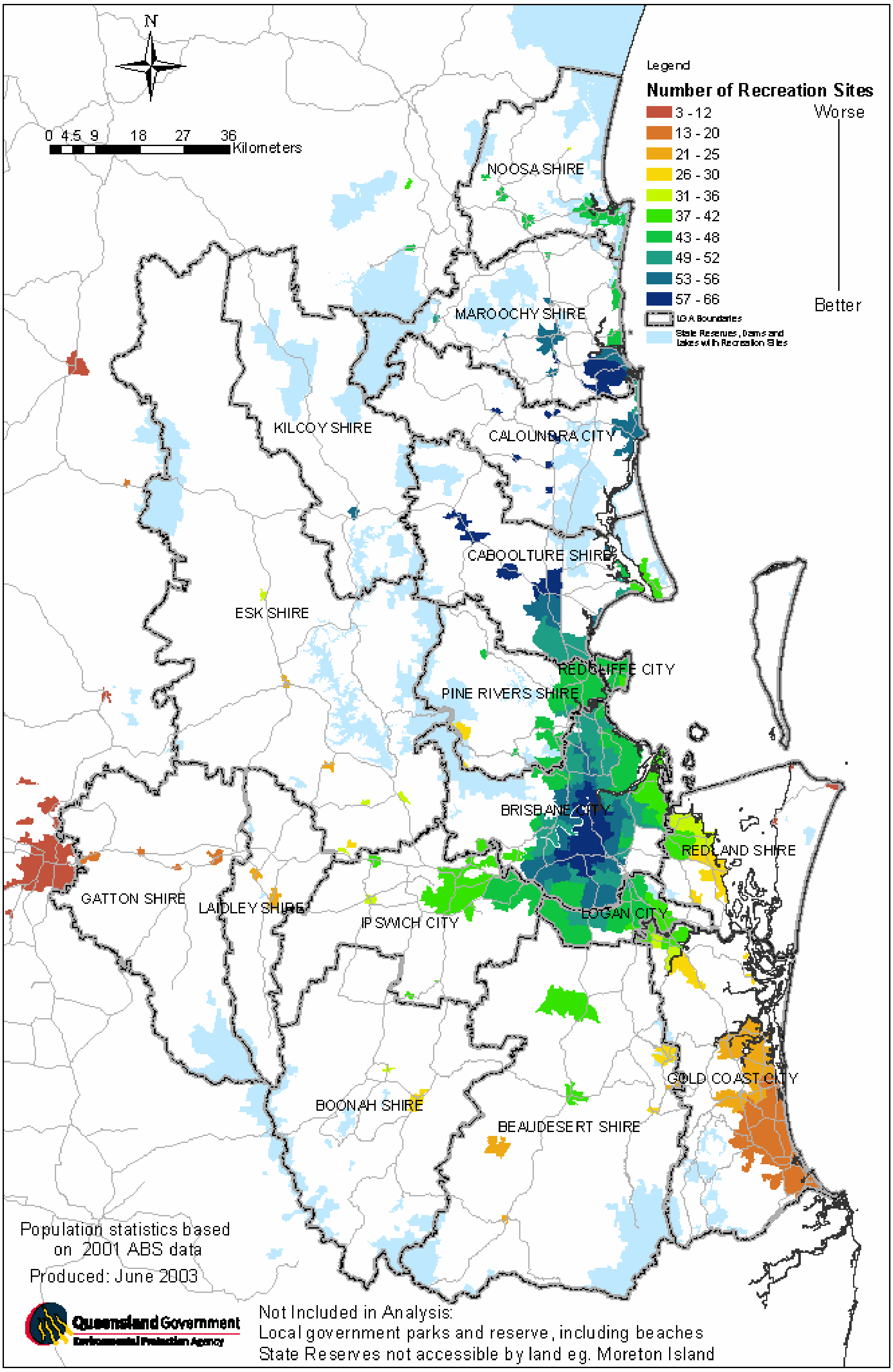


Figure 6.6 Opportunity: State Reserve Area (ha) per 1000 People within 1/2 hr Travel Time of Population Units

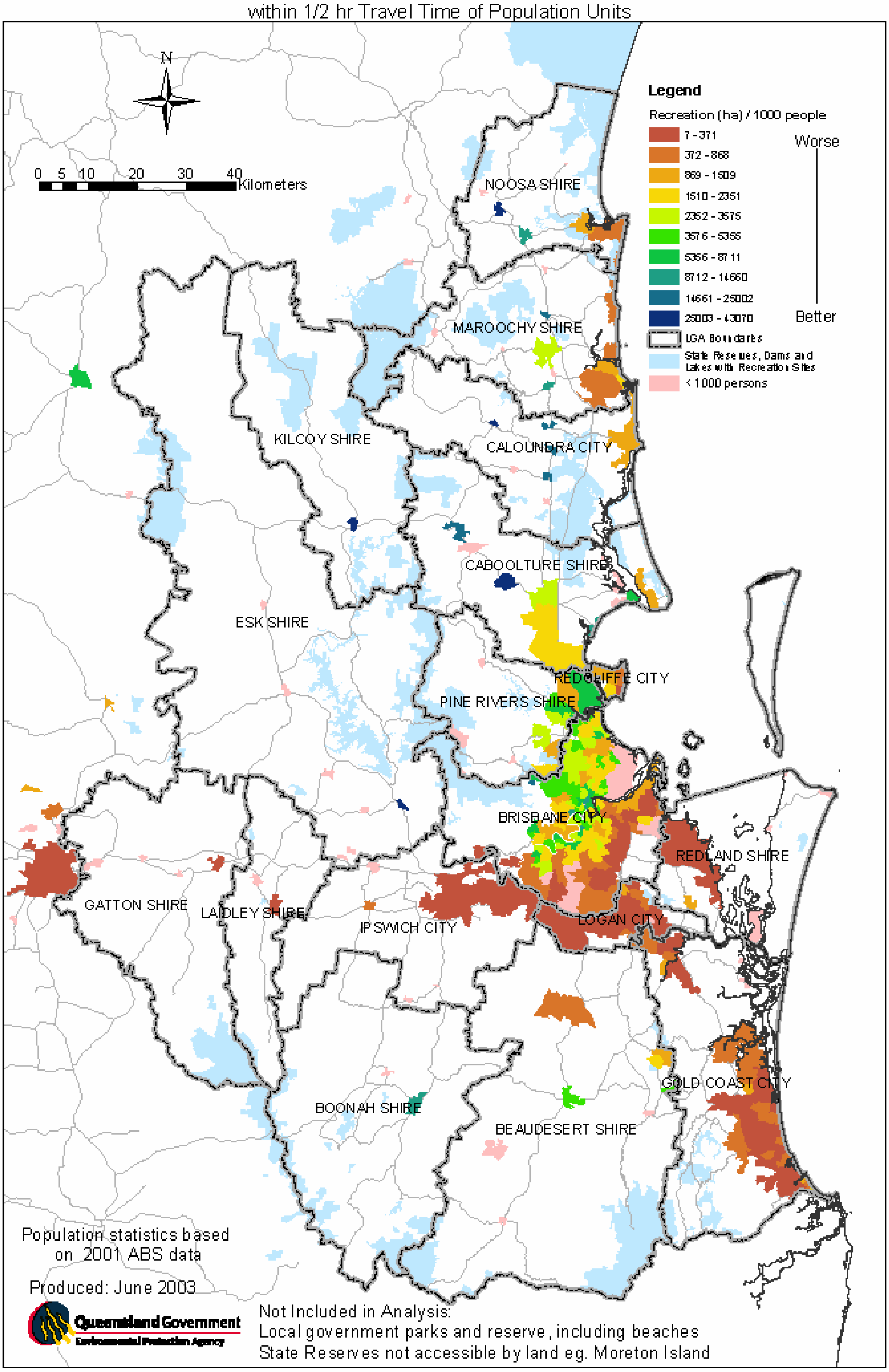


Figure 6.7 Opportunity: State Reserve Area (ha) per 1000 People within 1 hr Travel Time of Population Units

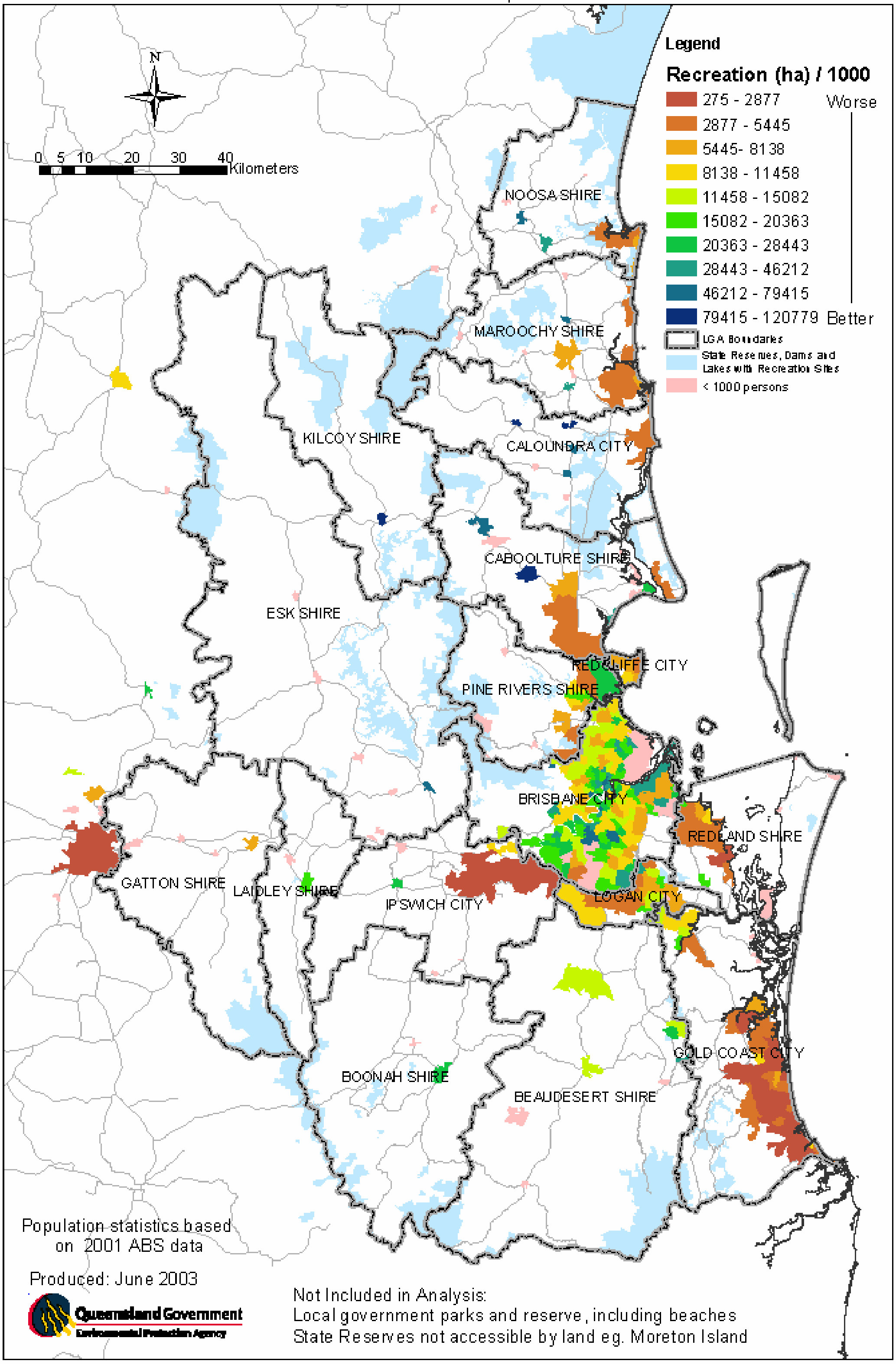
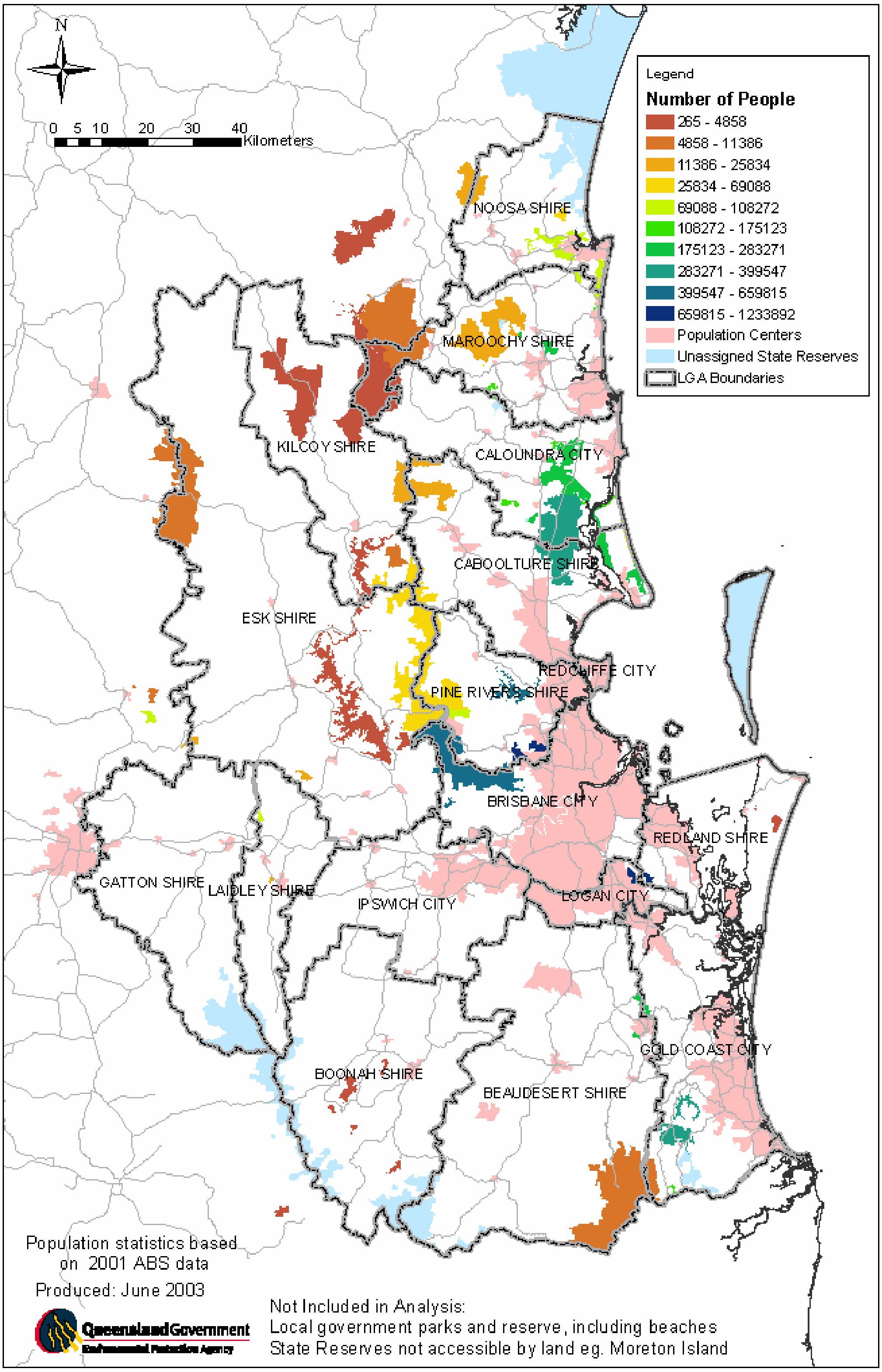


Figure 6.8 Population Pressure on Sites:
Number of People within 1/2 hr Travel Time of Recreation Sites



Figures 6.2 – 6.8 produces measures of the *relative* differences in accessibility of population units to recreation sites. These assist in interpreting how well provided for population centres are in terms of their access to regional recreation opportunities. These analyses can also help inform nomination of desired levels of service (eg providing urban regional parks within ½ hr drive distance of population centres greater than 250 000 people) but does not derive these.

Fig. 6.8 offers a reverse perspective – the numbers of people within a 1/2 hr drive time of each park. This indicates the population pressure on each park or its servicing power. This approach can be used to determine where additional parks are best placed or where more facilities are best sited to service large populations.

Essential findings are as follows:

- The Sate reserves, inland dams and lakes are distributed inequitably across the region relative to population centres. Ipswich, Gold Coast City, Redland Shire, Logan City and the south side of Brisbane repeatedly show the region's lowest levels of opportunity. This is heightened for shorter travel times ie ½ hr compared with 1 hr. This indicated fewer and smaller recreation sites relative to their population size are available close by to their urban centres.

- Smaller centres at Toowoomba, Gatton, Laidley show an equivalent level of undersupply of regional recreation opportunities within ½ hr travel distance, as the major centres listed above.

- The urban area with the region's highest accessibility is the north side of Brisbane and the inner south, reflecting its proximity to the large Brisbane Forest Park with multiple recreation sites as well as ready access to other regional sites to the north, west and south.

- Coastal urban centres in Noosa and Maroochy Shires and Caloundra City have relatively good numbers of recreation site opportunities within ½ hr and 1 hr travel times. However, the area of recreation land available to their large populations (ha/1000 people) falls below the regional average. Smaller inland communities north of Caboolture all have relatively good accessibility to recreation sites.

- Larger urban centres in Redcliffe City, Caboolture and Pine Rivers Shires have mid to lower access to regional recreation sites. Residential centres in Beaudesert Shire (Mt Tamborine, Beaudesert, Kooralbyn, Jimboomba) have mid to lower levels as well. These are relative regional measures only, not necessarily desired levels.

- Only one measure of access to inland dams and lakes was complied ie Fig.6.3. Pine Rivers Shire and Caloundra City offered the best proximity to multiple sites across the region. Further investigation is required, particularly to establish the surrogate water based recreation role inland dams and lakes provide for non-coastal communities.

- Existing sites offering outstanding servicing power to large populations within a ½ hr drive are:
    - Daisy Hill forest reserve
    - D'Aguilar, Samford and Bunyaville forest reserves, Lake Manchester– ie in BFP
    - Lake Samsonvale
    - Hinze Dam and Numinbah forest reserve
    - Pine plantations at Beerburrum

  Other outstanding potential, privately owned locations can be evaluated using the same methodology.
  The Brisbane Forest Park sites are not necessarily high investment priorities as surrounding populations are relatively well provided for. BFP visitation figures would confirm a high percentage of visitors originating from Brisbane's north side and central city area. The other sites however, are accessible to large populations without good recreation opportunities.

- Establishing regional parks based primarily on the recreational suitability of the existing public estate may in fact heighten regional inequity in access. Acquisition of new land is needed to address distributional inequity in regional recreation opportunities.

The absence of coastal and other major local government parks may affect the outcomes derived and the work should be completed using all site and future population data. Parks Victoria have developed a more advanced interactive open space demand model to assist with strategic investment decisions for equitable provision of major regional parks across the city of Melbourne and its metropolitan area. This model utilises park visitation figures collected over a decade. A coordinated data collection and research program could make rapid gains to simulate this work and deliver a substantial planning capability for State and local government agencies.

6.3.2 Other Criteria

A strategic approach can be applied to other criteria. It should be noted that the Common Nature Conservation Classification System underpinning biodiversity significance and procedures for mapping scenic amenity combine GIS based systems with community value input or decision support processes. A similar developmental path is required for regional parks and outdoor recreation planning generally.

The combined criteria can be used to assess preferred siting options, develop priorities for acquisition or timing of acquisitions or resolve an entire preferred network of regional parks. The criteria

7. Achieving a Network of Regional Parks

7.1 Alignment of Stakeholders

Achieving a network of regional parks will require alignment of purpose and action of four core sectors:

- government, both State and local at political levels
- professional planners, administrators and park mangers in government
- community recreation participants, both informal and organised groups
- private land owners and business involved in public outdoor recreation provision

No single State or local government agency has responsibility for all outdoor recreation services in Queensland. Hence finding a source for coordination and initiative is a key factor. The RLSAC has provided this but its role post June 2003 is unclear in relation to regional parks as the EPA assumes responsibility for the Regional Landscape Strategy as part of its core business from this date.

7.2 Preconditions

It is difficult to specify an exact path to achieve coordination, given the complexity of the relationships involved. It is easier to specify a number of preconditions for success. If the following preconditions are met, then it is reasonable to expect that a number of actions might result progressively towards coordination and achieving a network of regional parks. Such preconditions include:

Philosophy

- The vision for regional parks is clearly defined and broadly supported
- Empowerment of stakeholders and community
- Community ownership of initiatives
- Trust-based partnerships

Actions

- Engagement of community in public discussion and consciousness raising
- Funding support by local and State governments
- Equal relationships between public and private land providers
- Research into community needs and regional park practice nationally and internationally
- Sharing of knowledge eg through staff exchanges
- Common understanding and coordination of research, planning and management
- Incentives for private land-owners and commercial providers
- Legislation to support establishment and operation of regional parks particularly across multiple landholders

The processes behind producing this paper have assisted with meeting some of these preconditions.

7.3 First Steps

It is probable that the first steps towards a network of regional parks will occur through coordination of park planners and managers. This network of managers and planners has already commenced through professional bodies and forums such as the SEQ Sport and Recreation Forum and Parks and Leisure Australia. The RLSAC, and the RPWG which has developed this discussion paper, should be supported to continue this work. This provides a fertile ground for joint projects, particularly if encouraged by a regional body interested in providing start up funding.

Besides the community based benefits of a network of regional parks outlined in Section 4, community and agency benefits are increased through greater coordination. These benefits relate to:

- Improved research and planning resulting in avoidance of duplication and provision of a range of recreation services and opportunities, regionally or sub-regionally
- Increased economies of scale for research, planning and resource management
- Exchange of best practice information and improved professional standards
- Coordinated marketing and consistent fees across multiple tenured lands
- Improve community engagement processes.

Awareness of the benefits of coordination might facilitate continued cooperation of agencies.

Another area for early participation is pilot projects demonstrating that private landholders can provide commercially viable recreation resources in cooperation with other landholders both public and private. This probably requires leadership from a body with funding to reduce the financial risk to the landholders.

Special interest groups involved in horse riding, mountain bikes and trail bikes are already active in promoting the needs of their members and activity. The idea of regional parks serving multiple user needs might align different users towards achieving a common goal.

Building a joint approach with agencies involved in community health and wellbeing (eg Queensland Health) should also be pursued.

Similarly, connecting with Smart Growth and regional sustainability initiatives offers new opportunities eg major infrastructure providers such as Queensland Transport (particularly the Queensland Bicycle Strategy), Powerlink, Water providers as well as programs supporting catchment management, protection of biodiversity, tourism, regional and rural development and a wide range of interests in limiting urban sprawl.

As pilot projects demonstrate viability and benefits, the cooperation of people is likely to be formalised at organisation level, preparing the way for greater coordination and strategic development of a fully funded program.

7.4 Funding

Identifying the scale of funding required and possible options might advance debate in this critical area.

The estimate of average economic benefit of recreation of about $40 million per annum established in Section 5.4.3 for a future network of regional parks determined on growth alone (ie assuming no existing deficiency) might provide a starting point. This figure does not include environmental, social and economic benefits (or costs) accruing to the wider community. A proportion of this must be well justified as an annual expenditure supporting land acquisition, planning and community engagement, development and maintenance and incentives for private land-owner participation. Cost estimates based on acquiring and managing a network of diverse regional parks determined through a desired levels of service approach should be cross-referenced with recreational benefit estimates.

Funding of regional parks on a 50/50 basis of local and State government might gain political acceptance and could be pursued as a simple and equitable formula. Local government has supported regional projects on this basis eg funding of the Regional Trails Strategy for SEQ has been successful on a 50/50 basis.

Various sources of funding are also outlined.

Green Levies
Nearly $30 million per annum is raised by local governments in SEQ through levies on rates for acquisition of greenspace, primarily for nature conservation purposes. An additional levy might apply for acquisition of regional open space, particularly regional parks.

Sale of Crown and surplus government land
In New South Wales a percentage of the proceeds from the sale of Crown and surplus government land is used to fund the purchase of land for community and open space purposes. In this way a direct public benefit is linked to the sale of a public asset. In Queensland no such arrangement exists although significant sales of public land assets occur.

Conveyancing Charges
Funding for the former ROSS program ($35 million over five years) was matched by an increase in conveyancing charges. This measure was seen as being a form of user pays in that the increased activity in conveyancing was related to population growth, notably in SEQ.

Charge on Development
Levying charges on new development (infrastructure charges) for provision of regional open space for recreation purposes was considered by the RPWG. Appendix E.2 provides an earlier overview of the position. Department of Local Government and Planning questions the apportioning of infrastructure charges (under the Integrated Planning Act, to be amended under IPOLA 2003) related to regional parks to local development to provide infrastructure (land and/or works) benefiting substantial residents outside the local government area. Key advice provided in response to a submission made in October 2002 was as follows:

> *An important principle of IPA infrastructure charging (which was a major factor in the development industry agreeing to routine charges applying to a wider range of development infrastructure than ever before) is that charges are limited to 'basic and essential' items necessary to the person paying the charge. Recreation infrastructure at the local end of the spectrum passes the test, but the relationship becomes more tenuous as you move up the scale and other non-local users predominate.*
>
> *Comments about the inequitable disparity between expenditure on spectator type recreational pursuits and outdoor active recreation are endorsed. It is unfortunate that government seems to place little importance on regional recreation infrastructure which encourages people to exercise, and that agencies are forced to consider placing additional costs on the already heavily burdened property sector when those costs should be met from more appropriate sources such as taxation revenue and direct user charges.*

Consensus has emerged amongst local government in SEQ that additional local public park infrastructure required to service its own growth in population will be subject to infrastructure charges. This has generally excluded regional parks.

Mechanisms for greater equity in funding of regional parks still need to be found to offset local government acquisition and development costs of site opportunities where the local ratepayers do not generate the majority of use.

Private Donations of Land and Cash
Private donations from non-profit organisations and business can contribute to funding particularly if public finding matches private contributions.

User Fees
User fees such as for park access, camping, boat or canoe rental, horse riding, 4 WD, cabin hire to name a few can contribute to operations and management costs but are unlikely to fund acquisitions. User fees support equity or fairness in directly supporting the services used.

7.5 A Strategy for Regional Parks

Development of a **regional parks strategy** should be a major focus to be realised in future. This strategy would have the following characteristics:

- Continues to build cooperative planning and coordination across a broader range of government, public agency, community and private sector interests
- Launches a new round of data collection, research and analysis to identify a complete network of regional parks meeting future population needs
- Has adequate funds, resources and expertise to carry out this research
- Involves community in establishing directions and levels of service eg desired levels of service for regional parks or for particular recreational activities
- Facilitates involvement of the wider community as well as specific interest groups
- Employs representative survey methods (eg telephone survey) as well as more collaborative and ongoing processes for more motivated groups and individuals
- Links community engagement for regional parks with existing consultation frameworks for other programs eg local government “your city your say”, catchment management groups, recreation forums.
- Considers the interests of local communities as well as more strategic or regional priorities
- Consults with indigenous communities
- Identifies pilot projects with other public and private sector stakeholders

*   *   *

APPENDIX A.1
Regional Parks Working Group

- Constituted November 2002 under the RLSAC
- Comprises representatives from:

▪ Regional Landscape Unit, EPA	Steve Macdonald (Chair of RPWG)
	Tony Prineas
▪ WESROC	Craig Maudsley
▪ Brisbane City Council	Anthony Ross and Kerri Heilbronn
▪ SouthROC	Richard Pascoe (Gold Coast City Council)
▪ NORSROC	Graham Burgdorf (Caboolture Shire Council)
▪ Parks and Leisure Australia	Graham Burgdorf
▪ Queensland Parks and Wildlife Service	Terry Harper
▪ Sport and Recreation Queensland	Dave Batt
▪ Queensland Outdoor Recreation Federation	Kathy Kingsford
▪ National Parks Association of Queensland	Rob Hitchcock
▪ SEQ Water Corporation	Damien Long
▪ Department of Natural Resources and Mines	Frank Jacobson

APPENDIX A.2
Tasks of the Regional Parks Working Group

Key Objective : **To establish a vision for Regional Parks in SE Queensland meeting the expected needs of the regional population by 2021 and how this could be achieved.**

1. To prepare a discussion paper on the concept and need for regional parks and how a network of such parks might be achieved. This should address funding and management issues. This discussion paper is intended for wider public comment and development of a subsequent strategy.

2. As part of the discussion paper, investigate available information and as far as possible, establish the need for and definition of regional parks. This should make reference to:
   - supporting criteria for their definition and prioritisation
   - guiding principles
   - the desired level of provision, including settings and activities
   - community attitudes and trends
   - existing regional recreational opportunities both publicly (State and local) and privately owned.
   - the potential economic, social and environmental benefits of providing regional parks to the SEQ region
   - a conceptual example of a network of spatially defined regional parks
   - additional research or investigations required to further clarify these issues

3. Investigate funding strategies for regional parks including the use of infrastructure charges as a means of securing regional open space for future outdoor recreation needs.

4. To foster networks and strong partnerships with key stakeholders including State and local government. Involvement of community and recreation interest groups is anticipated at release of a draft discussion paper

APPENDIX A.3
Principles of ESD and Social Justice (from SEQ RFGM 2000)

Principles of Ecologically Sustainable Development (ESD)

- Decision making processes should effectively integrate both long and short term economic, environmental, social and equity considerations
- Where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation
- The global dimension of environmental impacts of actions and policies should be recognised and considered
- The need to develop a strong, growing and diversified economy which can enhance the capacity for environmental protection should be recognised
- The need to maintain and enhance international competitiveness in an environmentally sound manner should be recognised
- Cost effective and flexible policy instruments should be adopted, such as improved valuation, pricing and incentive mechanisms; and
- Decisions and actions should provide for broad community involvement on issues which affect them.

Principles of Social Justice

- Equity — A fairer distribution of economic resources and political power
- Access — Fair and equal access to good quality public services in areas essential to achieving and maintaining a decent lifestyle
- Participation — The opportunity for full participation in social and political life and in decision's which affect people's lives; and
- Equality — Equality of opportunity without discrimination (the capacity to live without discrimination and to achieve according to potential).

APPENDIX B
History of Regional Parks in South East Queensland

1. The concept of regional parks was identified in 1993 as part of the SEQ2001 Project. In response to concerns over high population growth in South East Queensland, the SEQ 2001 Project provided for a coordinated approach and development of a growth management strategy. The Regional Planning Advisory Group (RPAG) recommended a regional open space system (ROSS) that featured open space frames, core areas and links. The Open Space and Recreation Report to RPAG proposed three *regional "recreation" parks* reinforcing the ROSS. These were centred on the Blackall Range, Mt. Tamborine and Moreton Bay and linked to the ROSS Concept Plan.

2. Subsequently, the Regional Framework for Growth Management for SEQ (RPAG Final Report, 1994) proposed investigating the feasibility of establishing other "Brisbane Forest Park" type *regional recreation parks* in the SEQ region centred on these three areas. The purpose or outputs of regional recreation parks were not defined.

3. The SEQ 2001 RFGM of 1995 proposed expanded investigation of regional recreation parks to include Flinders Peak/Spring Mountain, Lake Moogerah and Lake Maroon and Wivenhoe Dam and Somerset Dam. Responsibility for investigating this priority action was allocated to the ROSS Committee.

   In December 1995, the Recreation Technical Working Group (RECTAG) acting on a request from the ROSS Committee recommended changes to regional recreation parks within the RFGM ROSS. These were:

   i. The name Regional Recreation Park be changed to Regional Park. This was to reflect in the name the intention to provide the full range of open space benefits heralded in the ROSS ie nature conservation, water catchment management, protection of scenic amenity and cultural resources and provision of outdoor recreation opportunities.

   ii. Providing a definition and terms of reference for regional parks.

   A Regional Park was defined (by the ROSS Committee) as an area of land and/or water which is:

   - Part of the Regional Open Space System
   - Comprised of areas in sufficiently close proximity to form a cohesive management entity and develop a common identity
   - Clearly of regional significance because of its size or other widely recognised attributes
   - In one or more tenures, including, **on a voluntary basis**, private freehold
   - Managed through a formal co-ordinated management arrangement which, **where appropriate**, allows for:
   - Provision of a diverse range of outdoor recreation and/or nature based recreation opportunities
   - Protection of nature conservation, water catchment, landscape amenity, cultural heritage and social values
   - Provision of opportunities for ecotourism
   - Provision of opportunities for outdoor recreation
   - Provision of opportunities for appropriate productive uses
   - Protection and respect of the rights and responsibilities of landholders

Draft terms of reference for the concept of Regional Parks were:

- To provide a geographic focus for delivery of the full range of Regional Open Space System outcomes and functions
- To simplify the decision making processes required in a co-operative management arrangement by limiting the stakeholders and landholders involved to those who are interested in specific geographical areas
- To geographically define and name an area to which the community can relate
- To provide management and regulatory arrangements which are specific to a particular area
- To deliver a tangible Regional Open Space System outcome and to provide a strategy for implementing the ROSS in a particular area, and
- To provide a geographic focus for expenditure of ROSS funding

iii. Assessing proposed locations for Regional Parks in the 1995 RFGM and Sub-Regional Structure Plans as well as identifying other opportunities for Regional Parks. A brief summary follows of recommendations.

Location	Recommendation
Moreton Bay	Do not identify as RP. Leave existing planning and management responsibilities unchanged
Lake Moogerah and Lake Maroon, Lake Wivenhoe and Somerset Dams	Do not identify as RP's. Leave existing planning and management responsibilities unchanged
Tamborine Mountain	Identify as a RP including five freehold lands provided Beaudesert Shire Council agrees.
The Blackall Ranges	Investigate a RP based on Crown and other government lands covering the Baroon Pocket Dam precinct, Obi Obi Creek downstream of dam, SF 783 and Kondalilla NP and which excludes any private freehold land. Proceed after higher priorities for RP's have been substantially addressed.
Spring Mountain – Flinders Peak	Identify as a RP, provided it is compatible with a new NP in the area and is acceptable to Ipswich City Council.
The D'Aguilar Ranges – Mt Mee State Forest – North Pine Dam – Brisbane Forest Park area	Investigate a RP based on Crown and other government lands but exclude any private freehold lands
The Springbrook – Nerang State Forest Area	Investigate a RP based on Crown and other government lands but exclude any private freehold lands
The Daisy Hill – Mt Cotton Area	Establish a RP based on co-operative interagency model for all public sector lands in the area but excludes any private freehold lands
Pumicestone Passage, Bribie Island and the Adjacent Mainland	Do not proceed until the outcomes of the Moreton Bay Marine Park Zoning Plan and the land acquisitions in the Pumicestone Passage catchment area are clear.

Important understandings emerging from these recommendations include:

- Regional Park status could be activated through offering more cohesive management across multiple tenured land on a range of issues (eg fire, unauthorised access, weed control) and not necessarily primarily for recreation purposes
- Defining criteria are very subjective
- Multiple open space objectives were to be targeted without priority given to any open space value
- Recreational objectives are very broad ie provision of a diverse range of opportunities
- Inclusion of private freehold land was only to be on a voluntary basis

- The assessment process was largely opportunistic placing great emphasis on existing Crown or government land as the core of any regional parks and the willingness of agencies to co-ordinate management.

4. Under the1995 RFGM, funding was made available for the ROSS program. Between 1995 and 2000 the State government made 12 acquisitions of land totalling 7,532 ha specifically for regional landscape strategy purposes. Those properties of significant area are outlined below with the current management status.

Property	Date Purchased	Area ha	Purchase Price	Status
Glen Rock Regional Park	1994/95	6 303	$1 860 000	Management Plan completed. Site open for use.
The Settlement, Springbrook	1994/95	380	$2 400 000	Draft Management Plan subject to public comment.
Mt Neurum, Caboolture Shire	1994/95	350	$275 000	Management Plan completed.
Mt Maroon				Management Plan not commenced

5. Over the period 1996-97 the ROSS program lost support primarily as a result of concern by rural landowners over loss of development rights. The program was renamed the Regional Landscape Strategy and re-launched in a low-key co-operative mode with emphasis on implementation through planning schemes. Under the 1998 RFGM: Principle 5.1
“The RLS will include regionally significant open space that is:

   - Contained within public land including national parks, state forests, state reserves and major Local Government reserves
   - Private land with the agreement of the land owner
   - Land acquired for regional open space purposes
   - Land appropriately designated in Local Government planning schemes”

   No explicit reference was made to regional recreation parks or regional parks.

6. In July 1999, the Regional Landscape Strategy Advisory Committee (RLSAC) considered the concept of Regional Parks as a component of the RLS and determined a number of issues. These were later reported in a draft Discussion Paper “ Coordination of open space planning and management in SEQ – Mechanisms to establish Regional Parks through the SEQ RLS, Sept. 1999”. Essential outcomes were:

i. Regional Parks should be concerned with the full range of open space values, not just recreation

ii. Regional Parks could include freehold land on the basis of voluntary contractual arrangements with landholders

iii. The working title Regional Park be retained for the present

iv. The objective of the Regional Parks concept is the provision of an integrated cooperative management framework for open space lands of regional significance. The management of a Regional Park should maximise benefits to the community and participating landholders by allowing management of the lands and land use activities as a single cohesive unit

v. Regional Parks were defined closely based on the ROSS committee definition (see 1.3 ii above)

vi. Points were provided “to assist identification of areas appropriate for the application of a coordinated management framework”:

- Contiguous parcels of land managed by more than one land management body
- No particular land use is more valuable or important than any other land use
- Coordinated management of an area on a cooperative basis will outweigh costs of participation in the management arrangement
- Coordinated management framework is not based on any particular legislation
- The management framework recognises and protects the statutory obligations and policy commitments of individual landholders
- Coordinated and cooperative land management will maximise benefits to the wider community and landholders

7. The 2000 SEQ RFGM expanded on priority actions of the 1998 RFGM. Although reference was made to promoting the development of a regional trails network, there was no specific reference to regional parks. A number of other priority actions refer to advancement of the recreation component of regionally significant open space ie 5.8 and 5.11. Lead agency for these actions lay primarily with the then Department of Natural Resources.

8. The RLSAC also produced a paper in 2000 on how *regional landscape areas* should develop (Regional Landscape Areas for Implementing Natural Resource Management Planning). The distinction between *regional parks* and *regional landscape areas* is important as the concepts help recognise different components of regionally significant open space. This is addressed in some detail in Section 4 of this paper.

9. In order to advance these priority actions primarily related to outdoor recreation, the RLSAC held a conference on “Managing Parks for SEQ” in Nov. 2001. This attracted stakeholders from State and local government as well as the recreational community and business sector.
Delegates made the following resolution:
   - This conference endorses the establishment of a Working Group to look in more detail at how opportunities for liaison and networking can continue
   - The Working Group should define/refine the definition of “Regional Parks”
   - The Working Group should establish broad objectives to establish a networking group across disciplines and institutional boundaries

10. The RLSAC reconvened the Regional Parks Working Group in November 2002. The RLSAC confirmed in December 2002 the TOR for the working group (recorded as the Tasks of the Working Group – see Appendix A.2) and also clarified the distinction between regional parks and regional landscape areas ie that recreational uses be the overriding determinants for the definition and significance of regional parks.

APPENDIX C
Regional Park Concepts from Australia and Overseas

C.1 Queensland

In Queensland, outdoor recreation services are provided by many public sector agencies as well as by the private sector and volunteer based non-government organizations. No single public agency has responsibility for outdoor recreation services. An understanding of the Queensland public sector delivery of outdoor recreation services is provided here under:

(a) which agencies are responsible for outdoor recreation on particular areas of land or water, and

(b) which agencies are responsible for what outdoor recreation activities or specific related issues

Table C.1.1 Public Sector Agencies with Responsibilities in Outdoor Recreation

State and local government agencies involved in providing outdoor recreation services in south east Queensland	**(a) Lands managed for recreation**
Queensland Parks and Wildlife Service (in the Environmental Protection Agency) -	National parks, conservation parks, resource reserves, world heritage areas, wilderness areas, coordinated conservation areas and other protected areas managed under the *Nature Conservation Act 1992* State marine parks as defined in the (Queensland*) Marine Parks Act 1984*, and State forests, timber reserves and those forest reserves that were previously state forest all of which are managed under the *Forestry Act 1959.*
Department of Natural Resources and Mines.	Stock routes, roads (at least in part) and Reserves for Community Purposes
SunWater	Precincts around SunWater controlled dams (and lakes) including Moogerah and Maroon Dams
South East Queensland Water Corporation (SEQ Water)	Precincts of water storages at Lake Wivenhoe, Lake Somerset and Lake Samsonvale (North Pine Dam)
Brisbane Forest Park Authority (part of the Queensland Parks and Wildlife Service)	Brisbane Forest Park
Local government agencies	Responsible for acquisition and management of public open space for a range of outdoor recreation purposes. Sport and recreation land managed by local government is held as either freehold or in some type of Reserve for Community Purposes under the *Land Act 1994*.
	(b) Thematic issue outdoor recreation responsibilities
Queensland Parks and Wildlife Service	Regulation (including education and enforcement) of both recreational and commercial hunting or taking of native wildlife
Queensland Boating and Fisheries Patrol (part of Queensland Department of Primary Industries)	Onsite or operational education about and enforcement of marine safety regulations and both commercial and recreational fishing regulations (including seasonal closures, gear restrictions and bag limits)
Queensland Department of Primary Industries	Management of diseases and movement of livestock (including horses, donkeys, camels, alpacas, etc that are ridden or used as pack animals for recreation) Management of both commercial and recreational fishing regulations including setting seasonal closures, gear restrictions and bag limits
Queensland Transport	Motor vehicle legislation; motor vehicle registration and regulation of motor vehicle use (including recreational uses); motor vehicle registration, navigation aids, boat ramp construction and maintenance and regulation of

	motor vessel use (including recreational uses); Waterways Transport management Plans.
Department of Natural Resources and Mines	Management of recreational fossicking in Queensland
Queensland Police Service	Regulation of recreational shooting including firearms, licenses and certification of firing ranges; regulation of bicycle, vessel and motor vehicle use (including recreational uses) in public areas.
Sport and Recreation Queensland (a division within the Queensland Department of Innovation and Information Economy and Sport	Technical advice and support to local government for recreation planning and funding support to incorporated organizations for recreation facilities.

Source: *Outdoor Recreation: Service Provision in the Queensland Public Sector, Dave Batt, S&RQ, Nov 2002*.

Table C.1.2 Public Lands and Waters where Outdoor Recreation might be Permitted

Tenure	Management Objectives
Tenures under the Nature Conservation Act National parks (1)	The management principles are: o As the cardinal principle, to provide, to the greatest possible extent, for the preservation of the natural condition and the protection of cultural resources o Present the area's cultural an natural resources, and their values: and o Ensure the only use of the area is nature- based and ecologically sustainable.
National parks (scientific) (1)	These areas are established to protect places or species with exceptional scientific value. It gives a high level of protection for nature. Scientific study and monitoring are allowed under strict conditions and parts can be managed as necessary to control threatening processes Entry is by special permit and there is no provision for recreation use.
Conservation parks (1)	Like national parks, conservation parks are managed to: o Conserve and present the area's cultural and natural resources o Permanently conserve the area's natural condition; and o Protect and manage scientific sites and special natural features. Conservation parks can be managed or co-managed by trustees, such as local governments. A greater range of activities can be undertaken than in National Parks. Any commercial use of the area's natural resources such as fishing and horseriding must be ecologically sustainable. Educational activities and nature-based recreation are encouraged.
National parks (recovery) (1)	Where an area is intended to become National Park, but has been degraded and needs some manipulation of its natural resources to restore its conservation values. It can be declared a national park (recovery) or in effect a "national park in waiting".
Resources reserves (1)	Resources reserves are declared over land which has high conservation value but cannot be reserved as national park or conservation park. For example, areas subject to fossicking, mining or intensive tourism. Sometimes resource reserves might protect land which will eventually be converted to

Tenure	Management Objectives
	national park but needs to be rehabilitated first. Trustees can be appointed to manage a resource reserve.
Forest reserves (2)	Tenure of an interim nature for a max. of 5 years and managed by the EPA with associated conditions. Most Forest Reserves are ex-State forests. They are intended to be a “holding” or temporary land tenure for the lands which the Queensland Government intends to convert to one of the protected areas defined in the *Nature Conservation Act 1992* (ie. national parks, conservation parks, resource reserves, etc.).
State forests (2)	Most State Forests are managed primarily for timber production, but multiple use principles are followed whenever possible. Section 33 of the Forestry Act 1959 states that: “The cardinal principle to be observed in the management of State forest shall be the permanent reservation of such areas for the purpose of producing timber and associated products in perpetuity and of protecting a watershed therein.” State forests cover the full range of forest management options, from Logging exclusion Areas, through enriched eucalypt forests to exotic pine plantations. Multiple uses may include:- o Extractive industry; o Stock grazing o Apiculture (commercial bee keeping – honey production) o Motorized recreation; and o Non-motorised recreation
Timber reserves (2)	Few timber reserves remain in Queensland. The Tenure Actions Group within the EPA is currently in the process of converting these areas to State Forest where appropriate or another tenure.
Marine parks (1)	Marine parks are established over tidal lands and waters to protect and conserve special areas while allowing for the planned use of marine resources. Unlike a national park on land where all landscapes and wildlife are preserved to the greatest possible extent, a marine park allows most people to do most things while still protecting the natural environment. Multiple-use management allows for many different activities in marine parks. Zoning plans set out the kinds of activities that can occur within each area. The Queensland Parks and Wildlife Service, with public input, has developed a zoning plan over the marine park, similar to a town plan over land. Moreton Bay Marine Park has five zones plus six designated areas. They provide a balance between human needs and the need to conserve the Bay's special values. Recreational activities in Moreton Bay Marine Park include: Recreational boating, diving, Line fishing (except trolling), Trolling for pelagic fish, Recreational bait gathering, Recreational collecting (limited to five declared fish, or declared invertebrates other than coral), Jet skis and similar motorised watercraft, and Trawling.
Declared Catchment areas (4)	Land designated as declared catchment area is proclaimed under the *Water Act 2000*. Within these areas the approval of some development by local government under the *Integrated Planning Act 1997* is subject to concurrence by the Department of Natural Resources and Mines. The purpose of this regulation of development is to avoid unacceptable impact of development on water quality adjacent to major storages. Current declared catchment areas in SEQ include: Maroon and Moogerah dams in the Boonah local government area (LGA), Atkinson and Wivenhoe dams in the Esk LGA, Atkinson and Bill Gunn dams in the Laidley LGA, and Cedar Pocket Dam in the Widgee Noosa LGA.

Tenure	Management Objectives
Recreation at Wivenhoe Dam (5)	Lake Wivenhoe has 6 483 ha of land designated for recreation (area of lake 10 750ha) with an average annual visitation of 624 000 (over the last three years 1996-1999) The overall setting is a regional focus for quieter and more relaxed land and water-based family recreation. High levels of repeat visitaton and a higher proportion of older visitors. Main activites include sailing, electrically-powered boating, rowing and canoeing, camping, picnicking, fishing (boat and shoreline) and walking.
Lake Somerset and Lake Samsonvale, non-declared catchment areas (5)	
Lake Somerset (5)	Lake Somerset has 45 ha of land designated for recreation (area of lake 4 212 ha) with an average annual visitation of 465 000 (over the last three years 1996-1999) The overall setting is a regional focus for motorised water sports and recreational fishing. water-based family recreation. High levels of repeat visitaton and relatively low proportions of young and older visitors. Main activites include petrol-powered boating (including jet skis), water skiing, camping and caravaning, picnicking and fishing (boat and shoreline).
Lake Samsonvale (5)	Lake Samsonvale has 323 ha of land designated for recreation (area of lake 2 181 ha) with an average annual visitation of 534 000 (over the last three years 1996-1999) The overall setting is an urban Lake-side park in a relatively quiet, natural setting. High levels of local visitation, high levels of repeat visitaton, broad range of age classes and mainly shore-based recreation. Main activites include sailing, rowing and canoeing, (club members only), fishing (shoreline only), picnicking, nature study and walking.
Local government parkland (3) Types of parks can include: • Youth Spaces • Parks of Interest • Recreation Parks & Sports Grounds • Picnic Grounds • Memorial Parks • Parks for Cooling Off • Natural Areas and Bushland Reserves • Play Parks	South East Queensland has a number of local government areas that provide parkland areas as one of a number of community facilities. For example Brisbane city council has over 1,700 parks and community spaces totaling more than 10,500 hectares of green space. These parks are the natural, no-fuss places for: • Gathering family, friends and neighbours • Ball games, walking, jogging and exercising • Taking some quiet time out to 'recharge your batteries' • Riding a bike, or flying a kite • Skating, BMX and rollerblading • Watching the wildlife and picnicking • Barbecues and reunions

Sources: (1*) Environmental Protection Agency website June 2003 - www.environment.qld.gov.au*

(2) *Outdoor Recreation: Service Provision in the Queensland Public Sector, Dave Batt, S&RQ, Nov 2002*.

(3) Brisbane City council Website June 2003 – www.brisbane.qld.gov.au

(4) Natural Resources and Mines website June 2003 - www.nrm.qld.gov.au

(5) Review of Recreation Policies at South East Queensland Water Board Storages, South East Queensland Water Board, 1999

Table C.1.3 Inventory of Potential and Existing Regional Park Sites in SEQ Responses from Brisbane City Council and Ipswich City Council Only.

Brisbane City Council

Inventory of Regional Parks for SE Queensland						
Park(s) Name or Location	Land Owners	Land Managers or Co-operative management arrangement	Area Ha.	Landscape Type eg Dam, native forest, rural land, estuary, developed parkland	Recreational Activities Provided/proposed	Brief Statement on why this is or could be a regional park
Existing Regional Parks						
Moreton NP	State	QPWS	?	island	Bushwalking, fishing	
Brisbane Forest Park (BFP)	State/BCC	State/BCC	?	Native forest	Bushwalking, mountain-biking, picnicking,	
Moreton Bay Marine Park	State	QPWS	3400km2	Bay	Boating/motorised & non-motorised watercraft (eg. jet-ski, Water-skiiing sailing, sea-kayaking), Fishing, Dolphin & whale watching, diving	
Potential Regional Parks						
Brisbane River & Riverwalk		State jurisdiction within bed and banks. BCC for Riverwalk except where above water.	?	Freshwater & tidal River & corridor along river	Boating motorised & non-motorised watercraft, (eg. Canoeing, Water-skiing), Walking, cycling, rollerblading/skating, picnicking	Potential for enhanced pedestrian and cyclist access along River with implementation of Riverwalk.
Water Reserves within BFP: Lake Manchester Gold Creek Enoggera Reservoir	BCC	BCC/QPWS		Constructed reservoirs & native forest & rural land surrounding within reserve	Awaiting outcomes of current study, which will include recommendations for appropriate recreational activities within the reserves and on the waterbodies. (possibly hiking, canoeing?)	

Table C.1.3 Continued
Ipswich City Council – Proposed Rgional Parks

Prominent Features	Vegetation and Geological Units	Conservation Value	Recreational Activities Provided/Proposed	Recreational Activities Excluded	Statement on why thisis/could be a regional Park
White Rock, Spring Mountain, Woogaroo and Mountain Creeks	Eucalpyt Open Forest and Woodlands, Cainozoic igneous rocks and Consolidated fine,medium and coarse textured sediments.	Significant part of largest area of lowland eucalypt forest in SEQ. Variety of landscapes, vegetation types and habitats. Habitat for a number of rare and threatened species, endemic ecosystems.	Camping - Has potential for high quality opportunities. North and Eastern sections suitable for small walk-in bush camping and picnic sites. Bushwalking and nature Study - Has at least six high quality areas for bushwalking and nature study. Horse Riding and Mountain Bike Riding - The northern section and the track along Woogaroo Creek provides moderate quality opportunities. Picnicking - Has potential for high quality picnicking opportunities in the northern and southern area. Outdoor Education - Has moderate to high quality opportunities. Some areas required restricted group size due to susceptibility to impact.	Rockclimbing and abseiling due to the Indigenous cultural significance of the cliffed areas. Horse Riding and Mountain Bike Riding are not suitable in the Southern area of the Park. Four-wheel Driving and Trail Bike Riding is not permitted in this Estate.	Diverse natural area that offers a variety of recreational opportunities.
Flinders Peak, Mt Blaine, Mt Goolman, Goolman Lookout, Sandy Creek	Riparian, Rocky Heath, Eucalpt Open Forest and Woodland, Vine Forest. Quaternary alluvium, Cainozoic igneous rocks and Consolidated fine, medium and coarse textured sediments.	Significant part of largest area of lowland eucalypt forest in SEQ. Mixed sandstone and acid volcanic landscape with variety of vegetation types and ecosystems, many naturally restricted. Habitat for numerous rare and threatened species.	NORTH SECTION : Camping - Has potential to develop one small walk-in camp site in the southern part of this section. Buskwalking and nature study - Opprtunity for two high qulaity walking trails to be established. Horse Riding and Mountain Biking - Has limited opportunities along existing vehicle tracks. Picnicking - Has potentail for a small number of high quality picnic areas assocaited with walking tracks. Outdoor education - Has moderate to high quality opportunities, the area will required restricted group size due to susceptibility to impact. SOUTH SECTION : Camping - Has some opportunities for walk-in bush camp sites. Bushwalking and nature study - Opportunities for high/moderate quality walking circuits and trails. Horse Riding and Mountain Biking - Has limited opportunties along existing vehicle tracks in the less steep sections of the area. Picknicking - Has potentail for high quality walk-in picniking in conjunction with trails. Outdoor Education: Has high quality opportunities, the area will required restricted group size due to susceptibility to impact.	NORTH SECTION: Rockclimbing and abseiling is not suitable for this area. Four-wheel Driving and Trail Bike Riding is not permitted in this Estate. SOUTH SECTION: Rockclimbing and abseiling is not suitable for this area. Four-wheel Driving and Trail Bike Ridingis not permitted in this Estate.	Diverse natural area that offers a variety of recreational opportunities.
Purga Creek and associated wetland areas	Riparian, Wetlands, Melaleuca. Quaternary alluvium and Consolidated fine,medium and coarse textured sediments.	Reserve combining representatives of three endangered ecosystems on the floodplain of the Bremer River basin.	Walking and nature study - The western section provides high quality opportunities for walking and nature study. Picnicking - Opportunities for picnicking within the western section. Outdoor Education - The western section offers high quality outdoor education opportunities.	Camping is not suitable for this site. Rockclimbing and abseiling is not suitable for this area. Horseriding and mountain bike riding are not suitable for this area. Four-wheel Driving and Trail Bike Riding is not permitted in this Reserve.	Diverse natural area that offers a variety of recreational opportunities.
Waterways,			Canoeing, Boating, Fishing, Water skiing.	Swimming	Large waterway that is centrally located to the a large percentage of population with the SEQ area.

C.2 Victoria (Australia)

Melbourne 2030, Planning for Sustainable Growth, October 2002

The metropolitan open space network consists of:

- major urban parks, such as those in Central Melbourne managed by Melbourne City Council
- National and State parks
- major (regional) parks managed by Parks Victoria
- the Metropolitan Trail Network
- linear open space corridors including waterways
- areas of cultural and environmental significance
- the coastal foreshores and waters of Port Phillip Bay and Western Port

While metropolitan Melbourne and the surrounding region is noted for the quality of its parks, there are gaps in the network of parkland and it is unequally distributed.

Table C.2.1 Victoria's Public Land Categories

Description	Objectives
1. Reference area A substantially undisturbed area of land containing representations of major land systems in the State.	• Protection of natural ecosystems for use as scientific references. • Restricted use for non-manipulative scientific investigation.
2. National park An extensive area of land of nationwide significance because of its outstanding natural environments and features, scenic landscapes, and diverse land types.	• Protection and conservation of native flora, fauna, and natural features and the protection of sites of archaeological and historical significance. • Supply of water and protection of catchments. • Recreation and education associated with the enjoyment and understanding of, and compatible with protection of, the nature environment. • Limited areas of development for more intensive recreation.
3. State park An area of land containing natural environments and features, scenic landscapes, and one or more land types complementing those found in national parks to provide a system representing the major land types of the State.	• Protection and conservation of native flora, fauna, and natural features and the protection of sites of archaeological and historical significance. • Supply of water and protection of catchments. • Recreation and education associated with the enjoyment and understanding of, and compatible with protection of, the natural environment. • Limited areas of development for more intensive recreation.
4. Wilderness A large area with landforms and native plant and animal communities relatively unaltered or unaffected by the influence of the European settlement of Australia.	• Maximisation of the extent to which they are undisturbed by the influences of the European settlement of Australia. • Maintenance and protection of natural processes. • Provision of opportunities for the public to enjoy inspiration, solitude and self-reliant (non- mechanised) recreation in undisturbed natural settings.
5. Regional park An area of land containing indigenous or non-indigenous vegetation readily accessible from urban centres or major tourist routes and capable of providing opportunities for informal recreation for large numbers of people.	• Recreation for large numbers of people associated with enjoyment of the natural surroundings. • Protection and conservation of native flora, fauna and natural features compatible with the above. • Limited exploitation of natural resources in specified areas and where compatible with both the above.

6. Marine park An area of coastal, intertidal or subtidal land that, because of its natural environment or the nature of the waters that cover it, is of conservation or scientific significance.	• Protection and conservation of native flora, fauna, natural features, and sites of archaeological or historical importance. • Diverse recreation and education associated with the enjoyment and understanding of natural environments compatible with the protection of park values. • Development of selected areas for more intensive recreation. • Controlled commercial utilization of natural resources in marine parks.
7. Nature conservation reserve An area of land and/or water of particular importance because of its significant floral or fauna values or natural habitat.	• Protection of species of communities of native plants and animals. • Education, scientific study, and limited informal recreation compatible with that protection.
8. Natural features reserve An area of land containing important elements of the natural environment, landscape, and/or geological or geomorphological features; that are of scenic or conservation significance.	• Protection and maintenance of the identified landscape and/or other values. • Recreation and education where appropriate and where compatible with the above. • Controlled low-intensity exploitation of natural resources compatible with both the above.
9. Historic and cultural features reserve An area of land containing significant relics and/or artefacts of historical or cultural importance.	• Protection and maintenance of identified historical relics and artifacts. • Recreation and education associated with the understanding of the history of the region, compatible with the above. • Limited exploitation of natural resources compatible with both the above.
10. Education area An area of land containing a diversity of land types capable of providing for a range of educational experiences and having safe access.	• Provision of opportunities for students to compare and study the nature and functioning of natural ecosystems and to conduct field analysis and manipulative experiments. • Maintain the integrity of the ecosystems so far as is compatible with the above.
11. Water production An area of land in the catchment of or adjacent to a water supply storage or off take.	• Protection of the water supply and the operation of the water supply system. • Restriction of access to protect water quality. • Conservation of the natural environment, landscape and features of cultural significance where compatible with the first object.
12. State forest An extensive area of land supporting native forests and other native vegetation and containing a mosaic of land types, diverse conservation and recreation values, and a range of resources needed to supply community demands.	• Provision of timber and other forest products on a sustainable yield basis. • Supply of water and protection of catchments. • Protection and conservation of native flora and fauna, landscape, and other natural values, and archaeological and historical values. • Provide opportunities for public recreation and education and other public services.

http://www.parkweb.vic.gov.au/education/resource_kit/resources/PVERKsection10712.pdf

Table C.2.2 Regional Parks in Victoria

Park Name	Area (ha)	Activities	Facilities	Visitor Numbers
Ararat Regional Park	3670	Walking, picnicking, cycling	Walking tracks, cycling tracks, lookouts, picnic tables	N/A
Bendigo Regional Park	460	Walking, picnicking	Walking tracks, picnic tables, toilets	N/A
Crawford River Regional Park	2463	Walking, picnicking, camping, fishing, bird watching,	Picnic tables, BBQ's, walking tracks, camping grounds, toilets, showers	N/A
Creswick Regional Park	N/A	Walking, picnicking, camping, fishing, bird watching, mountain biking	Picnic tables, BBQ's, walking tracks, camping grounds, toilets, showers, mountain bike trails	N/A
Hepburn Regional Park	N/A	Walking, mountain biking, picnicking, horse riding, camping	Picnic tables, BBQ's, walking tracks, camping grounds, toilets, showers, mountain bike trails, horse riding trails	N/A
Kurth Kiln Regional Park	3500	Walking, mountain biking, picnicking, horse riding, camping	Picnic tables, BBQ's, walking tracks, camping grounds, toilets, mountain bike trails, horse riding trails	N/A
Lake Albacutya Regional Park	8300	Walking, picnicking, fishing, canoeing, swimming, duck hunting, camping	Walking trails, picnic tables, BBQ's, boat ramps, camping facilities, toilets, showers	11,663
Macedon Regional Park	2379	Walking, four wheel driving, picnicking, horse riding, abseiling, rock climbing, rafting, canoeing	Walking trails, picnic tables, horse riding trails, off road driving trails, lookouts, boat ramps, toilets, showers	213,733
Mount Alexander Regional Park	1400	Picnicking, camping, walking, bird watching, rock climbing	Picnic tables, camp grounds, toilets, showers, lookouts, walking trails	N/A
Murray-Kulkyne Regional Park	3530	Walking, picnicking, fishing, canoeing, swimming, boating camping, four wheel driving, horse riding	Walking trails, picnic tables, BBQ's, boat ramps, camping facilities, toilets, showers, four wheel drive tracks, horse riding tracks	37,871
You-Yangs Regional Park	N/A	Walking, mountain biking, picnicking, horse riding, camping, bid watching, canoeing, rock climbing, abseiling, four wheel driving	Walking trails, picnic tables, BBQ's, boat ramps, camping facilities, toilets, showers, four wheel drive tracks, horse riding tracks, mountain biking tracks, lookouts	85,812

C.2 New South Wales (Australia)

Table C.3.1 NSW Public Land Categories

Park/Reserve Category	Description
National park	A relatively large area protected for its unspoiled landscapes and native plants and animals. National parks are set aside for public education and recreation, and usually offer visitor facilities
Nature reserve	An area of special scientific interest. Nature reserves are mainly established to conserve their native plant and animal communities. Few have visitor facilities
State recreation area	A park, often containing important natural environments, which has been set aside mainly for outdoor recreation.

Regional park	Parks situated near a large population centre, offering open space and recreational and cultural opportunities for urban residents. The environments in regional parks have often been largely altered since European occupation.
Reserve	A Crown reserve set aside for long-term environmental conservation and managed by the National Parks and Wildlife Service, even though there remains the possibility of future mining exploration.
Marine park	A unique and outstanding marine area, set aside to conserve seawater plants and animals. Marine parks are divided into zones that allow different, sustainable levels of commercial and recreational activities.
Historic site	A site of national cultural importance, including buildings, objects, monuments and landscapes. Historic sites are generally open to visitors.
Wilderness area	Usually an 'overlay' on certain national parks or reserves. The term 'wilderness' has a special meaning under the Wilderness Act 1987, referring to a large, remote area of land that has remained essentially unchanged by modern human activity. We manage wilderness areas so that native plant and animal communities are disturbed as little as possible. Horses and vehicles are not permitted in these places, and bicycles are only allowed on a small number of approved management trails.
Ramsar wetland	A globally significant wetland site, protected by international convention. In managing Ramsar sites, we try to preserve their unique ecological characteristics.
World Heritage-listed area	The globally recognised World Heritage list contains some of the most important examples of natural and cultural heritage in the world. Protected by international convention, they are part of a group of more than 600 treasures that include the Great Barrier Reef, Mount Everest, the pyramids of Egypt and the Great Wall of China.

http://www.npws.nsw.gov.au/parks/whatis.html

Table C.3.2 Management of Regional Parks in NSW

Expanded Description	Regional parks are a relatively new category of park established by the New South Wales Government in 1995. They provide large areas of regional open space and bushland that are assessed as having high conservation, landscape and recreation values. Being generally situated on the edge of rapidly growing urban population centres, Regional parks serve the dual purpose of providing outdoor recreation opportunities while providing protection for flora and fauna species threatened by urban expansion. As regional parks are generally situated near large population centres, their environments have in some cases been largely altered since European occupation. Facilities found or being developed in most regional parks include playgrounds, picnic areas, bike tracks, walking tracks, lookouts and heritage sites. One major feature of these parks is that some activities allowed within them are not permitted in other land categories within the national parks reserve system. Leashed dog-walking areas are found in some regional parks but are not permitted within other areas. The proximity to large urban areas provides regional parks with strong social, cultural and historical values while providing valuable opportunities for the rehabilitation and regeneration of degraded areas and providing the community and region with access to high quality recreational experiences within a natural bushland setting.
Management/ Co-ordination	As part of the National Parks and Wildlife Act there are eight categories of land managed for conservation: National Parks, nature reserves, Historic sites, aboriginal areas, Wildlife management areas, Karst conservation areas State recreation areas and regional parks. State recreation areas and regional parks are primarily managed to maximise their recreation potential while preserving and protecting their natural features. The National Parks and Wildlife Act 1974 requires that a plan of management be prepared for each national park, state recreation area, nature reserve and regional park. A Plan of Management is a legal document that outlines how an area will be managed. It can be revised and rewritten if necessary (in accordance with the same process as for adoption of a plan) to accommodate changes in management practices

	Management and conservation is based on five key result areas. Conservation assessment, conservation planning, conservation management, conservation facilitation and capacity building.
General Management Objectives	The following general objectives relate to the management of national parks, state recreational areas and regional parks in New South Wales: • Protection and preservation of scenic and natural features. • Conservation of wildlife and natural biodiversity. • Maintenance of natural processes as far as possible. • Conservation of Aboriginal sites and historic features. • Provision of a range of recreational opportunities consistent with the protection of the natural and cultural environment. • Encouragement of appropriate scientific and educational inquiry into environmental features and processes, prehistoric and historic features and park use patterns. • The preservation of any conservation values in respect of each Regional Park, and the restoration and regeneration (where appropriate) of the land concerned. Following these broader objectives each regional park has its own set of specific objectives applying directly to the management of its own features and assets. The NPWS does not solely manage the parks. As an example, Berowra Regional Park has established the Berowra Regional Park Trust. The Trust comprises three Hornsby shire councillors, one NPWS staff member, one staff member from Hornsby Shire Council and two community representatives. The NPWS and Hornsby Shire Council under the direction of the Trust carry out the day-to-day management of the Park. Additional suitable land is also obtained to improve convoluted boundaries, decrease boundary-to-area ratio, increase range and diversity of vegetation communities, give protection to rare fauna, plants or plant communities outside present boundaries, give control over creek catchments, increase recreation opportunities, protect visual boundaries and to give coordinated management to a greater area of bushland.
Planning of Regional Parks in Metropolitan Sydney	The Department of Urban and Transport Planning has responsibility for planning regional open space (which includes regional parks) for metropolitan Sydney . The metropolitan area includes 44 local Councils. Acquisition of regional open space has been on-going in Sydney for 40 years and has established a land bank of open space in advance of urban settlement. These areas are leased pending their eventual use to generate funds to develop regional park facilities. The Sydney Regional Development Fund also provides funding for acquisition of regional infrastructure including regional open space. This fund is supported by the 44 metro Councils as well as State government. Excess acquired lands (eg road reserves) can be disposed of to generate profit to fund regional open space. Lands acquired as regional parks under these arrangements are eventually passed on to park management agencies including NPWS and the metro councils.

Table C.3.3 Regional Parks in NSW

Park Name	Area (ha)	Activities	Facilities	Visitor Numbers
Berowra Valley	3872	Walking, canoeing, picnicking, camping, fishing, swimming	Picnic tables, BBQ's, walking tracks, camping grounds, toilets, showers	N/A
Leacock	34	Walking, picnicking,	Walking track, lookout, BBQ's, picnic tables,	N/A
Parramatta River	5	Walking, picnicking,	Walking track, lookout, BBQ's, picnic table, , toilets	N/A
Penrith Lakes	<1	N/A	N/A	N/A
Rouse Hill	43	Walking, picnicking, bike riding,	Walking track, BBQ's, picnic table, bike tracks, toilets	N/A
Western Sydney	582	Walking, picnicking, bike riding, horse riding	Walking track, lookouts, BBQ's, picnic table, bike tracks, toilets, horse trails	N/A
William Howe	43	N/A	N/A	N/A
Wolli Ck.	7	N/A	N/A	N/A
Yellomundee	485	N/A	N/A	N/A

Arakoon	114	Fishing, swimming, walking, picnicking, camping, boating, bike riding	Boat ramps, showers, BBQ's, walking tracks, picnic tables, toilets, camping grounds	N/A
Bargo	5660	N/A	N/A	N/A
Barnunj	164	N/A	N/A	N/A
Bents Basin	48	Fishing, swimming, walking, picnicking, camping, boating, bike riding, canoeing	Showers, BBQ's, walking tracks, picnic tables, toilets, camping grounds, cycling tracks	N/A
Bungonia	3977	Walking, picnicking, camping, bike riding, rock climbing, picnicking	Showers, BBQ's, walking tracks, picnic tables, toilets, camping grounds, cycling tracks	N/A
Burragorrang	17642	Walking, picnicking	Walking tracks, BBQ's, picnic tables, toilets	N/A
Cape Byron	99	Fishing, swimming, walking, picnicking	BBQ's, walking tracks, picnic tables, toilets	N/A
Colymea	1674	N/A	N/A	N/A
Corramy	856	N/A	N/A	N/A
Dharawal	5814	Walking, swimming		N/A
Garrawarra	900	Walking, bike riding, picnicking	Picnic tables, walking tracks, bike tracks	N/A
Georges River	1	N/A	N/A	N/A
Glenrock	516	Fishing, swimming, picnicking, walking	Walking tracks, picnic tables, toilets	N/A
Illawarra Escarpment	1504	Picnicking, walking	Walking tracks, picnic tables, toilets	N/A
Lake Macquarie	667	Fishing, swimming, walking, picnicking, camping, boating, bike riding, canoeing	Boat ramps, showers, BBQ's, walking tracks, picnic tables, toilets, camping grounds	N/A
Mount Canobolas	1673	Walking, picnicking, camping	BBQ's, walking tracks, picnic tables, toilets, camping grounds	N/A
Mullion Range	1025	N/A	N/A	N/A
Munmorah	1462	N/A	N/A	N/A
Nattai	3383	N/A	N/A	N/A
Parr	38121	Four-wheel driving, picnicking	Four –wheel driving tracks, BBQ's, toilets	N/A
Torrington	30052	Walking, picnicking, abseiling, rock climbing	BBQ's, toilets, picnic tables, waling tracks	N/A
Yerranderie	12192	N/A	N/A	N/A

C.4 Western Australia

Table C.4.1 Western Australia's Public Land Categories

Category	Description
Nature Reserve	Areas of high conservation value, either because they represent natural ecosystems or because they contain or provide habitat for particular species of plant or animal
National Park	National Parks are areas that have national or international significance for scenic, cultural or biological values and can accommodate recreation without detracting from these values
Conservation Park	Conservation Parks serve the same purpose as National Parks but do not have as much national or international significance
Marine Nature Reserve	Marine areas of high conservation value, either because they represent natural ecosystems or because they contain or provide habitat for particular species of plant or animal
State Forest	State Forests containing indigenous vegetation are managed for recreation and nature conservation, to protect water catchments and to produce a sustainable harvest of timber.

Marine Park	Marine parks are marine areas managed for conservation and recreation.
Timber Reserve	Timber reserves are set aside primarily to produce timber but also serve other functions.
Regional Park*	Regional Parks are areas of open space that are identified as having outstanding conservation, recreation and landscape values.

Table C.4.2 Management of Regional Parks in Western Australia

Management and Coordination	In 1997 the, state government announced a commitment to introduce legislation to give regional parks legal standing and vesting in the NPNCA (National Parks and Nature Conservation Authority). Eight Regional Parks were recognized as formal identities with the coordination of their management progressively transferred to CALM (Department of Conservation and Land Management). Regional Parks are vested in the Conservation Commission of Western Australia (CCWA). CALM, is the government's primary agency for conservation and recreation land management. The role of CALM in regional park management is two fold. First, it is to manage the areas of regional parks that are vested in the CCWA. Secondly, it is to co-ordinate the management of regional parks. This latter is initiated through the preparation of individual management plans for the regional parks. Under the management plans for the individual Regional Parks, CALM generally will manage the conservation areas and the local governments will manage the recreation areas. Regional Parks comprise Crown Lands, state lands, land owned by local governments and land held by private entities that have agreed to dedicate their land to the regional park. While CALM manages regional parks, in 1989 the state Government decided that the responsibility for planning the acquisition of lands for regional open space be retained by the Ministry for Planning on behalf of WAPC (Western Australia Planning Commission). The objective for each individual regional park is to integrate the policies of the management agencies to complement and support the vision for the park. Each plan is based on the current CALM policies derived from the major legislation as listed below. Moreover, the management actions of the city where the park lies should reflect the intent of the management plan and will be coordinated by CALM. There is also an aim to purchase the private lands that are incorporated in regional parks in order to secure the full management of the park. However, this cannot be done under the plan, only by the WAPC. Likewise, freehold land owned by the WAPC will be converted into reserves under the LAA (Land Administration Act 1997) and placed in the care and control of the WACC or the Local Government and managed in accordance with each park plan. The current land tenure arrangements within defined regional park areas are complex with a number of different landholders of private and Crown land. WAPC has proceeded to, and will continue to, acquire lands that are required to consolidate the parks.
Management Zoning	The objective for each park is to adopt a management zoning system that protects conservation values, provides for appropriate recreation and other uses and provides for efficient management of the individual park. Management zones are a framework for protecting the park by minimising the existing and potential conflict between uses and activities. They also highlight which management objectives have priority in a given area. It also provides for a clearer communication of management intentions to the public. The three zones are a) Conservation and protection b) Natural environment use c) Recreation
Funding	Inter agency agreement: CALM and the Individual City Council usually finance and manage their respective land areas. A capital budget has been provided by the WA Planning Commission (WAPC) for the future planning and development of facilities within regional parks. Funding for local governments involved in regional parks is available through Area Assistance Grant Schemes administered by the WAPC.

Legislation	Conservation and Land Management Act 1984 The Act has been implemented to make better provision for the use, protection and management of certain public lands and waters and the flora and fauna of these areas. It is also in place to establish authorities that will be responsible for incidental or connected purposes. Wildlife Conservation Act 1950 The Wildlife Conservation Act was implemented to provide for the conservation and protection of wildlife. Land Administration Act 1997 An Act to consolidate and reform the law about Crown land and the compulsory acquisition of land generally, to repeal the *Land Act 1933* and to provide for related matters.

Table C.4.3 Regional Parks in Western Australia

Park Name	Area Ha.	Activities	Facilities	Distance from CBD
Beeliar Regional Park	3400	Walking, bicycling, picnicking, bird watching, canoeing	BBQ's, toilets, picnic table, walking track, bike track, jetty	10km
Canning Regional Park	N/A	Walking, bicycling, picnicking, bird watching, canoeing, fishing, swimming	BBQ's, toilets, picnic table, walking track, bike track, jetty,	9km
Darling Range Regional Park	85000	Walking, bicycling, picnicking, bird watching, horse riding, mountain biking	BBQ's, toilets, picnic table, walking track, bike track, horse riding trails	20-50km
Herdsman Lake Regional Park	400	Walking, bicycling, picnicking, bird watching	BBQ's, toilets, picnic table, walking track, bike track	6km
Jandakot Regional Park	3800	Walking, bicycling, picnicking, bird watching, horse riding	BBQ's, toilets, picnic table, walking track, bike track, horse riding tracks	20-30km
Rockingham Lakes Regional Park	N/A	Walking, bicycling, picnicking, canoeing, fishing, swimming, scuba diving/snorkelling, boating	BBQ's, toilets, picnic table, walking track, bike track, jetty	45km
Woodman Point Regional Park	272.5	Walking, bicycling, picnicking, bird watching, canoeing, fishing, swimming, camping, scuba diving/snorkelling	BBQ's, toilets, picnic table, walking track, bike track, jetty, camp site	20km
Yellagonga Regional Park	1500	Walking, bicycling, picnicking, bird watching,	BBQ's, toilets, picnic table, walking track, bike track	20km

C.5 South Australia

Table C.5.1 South Australia Land Categories

South Australia has 7 categories of parks. Parks have been established over the past century for a variety of reasons, ranging from the conservation of biodiversity and cultural heritage to multiple use areas which include the environmentally responsible use of our natural resources, for example in eco-tourism, pastoralism and mining.

Type of Park/Reserve	Description
Game Reserves (GR)	Areas set aside for the conservation of wildlife and the management of game for seasonal hunting
Regional Reserves (RR)	Areas proclaimed for the purpose of conserving wildlife or natural or historical features while allowing responsible use of the area's natural resources
Recreation Parks (RP)	Areas managed for public recreation and enjoyment in a natural setting
National Parks (NP)	Areas considered to be of national significance due to wildlife, natural features of the land or Aboriginal or European heritage
Conservation Reserves (CR)	Land currently set aside for conservation of natural and cultural features under the Crown Lands Act 1929
Conservation Parks (CP)	Areas that are protected for the purpose of conserving wildlife or the natural or historic features of the land
Wilderness Protection Areas (WPA)	Land set aside under the Wilderness Protection Act 1992 to protect natural and remote areas

Table C.5.2 Management

Management/Coordination: National Parks and Wildlife South Australia	Recreation parks in particular are proclaimed under the Act to be conserved and managed "for public recreation and enjoyment." However, in partnership with the community and other agencies, NPWSA believes that considerable progress can be made towards increasing protection of biological and cultural values, while providing quality recreational opportunities for visitors. The role of reserves is predicated by the twin aims of the National Parks and Wildlife Act1972; to provide for public benefit and enjoyment and to conserve wildlife in a natural environment. Moreover, Section 38 of the Act states that a management plan is required for each reserve or park. The management plan should set forth proposals in relation to the management and improvement of the recreation park and the methods by which it is intended to accomplish the objectives of the Act in relation to that reserve. Section 39 of the National Parks and Wildlife Act 1972 provides for the designation of zones in a reserve and constrains the use of land in those zones to the conditions specified in an adopted management plan. Zoning aims to ensure that public use and management actions remain compatible with the protection of park values. Parks are zoned to ensure appropriate public use, landscape protection and the conservation of wildlife habitats and cultural features. Each park is zoned according to its own features and assets. Regional Parks are managed in terms of their natural resources like geology, soils, native flora, native fauna, and introduced plants and animals. Management schemes also include fire management plans, cultural heritage management for colonial and aboriginal heritage and tourism and recreation management relating to vehicle access, facilities and commercial and other uses. The Department for Environment and Heritage states that it supports and promotes partnerships and cooperative management arrangements to establish integrated natural resource management. It aims to establish working relationships with government agencies, local authorities and local communities. These partnerships are then used to provide a positive direction for the shared development, maintenance and management of the parks and to improve the resourcing and

	funding capability to manage the park in accordance with the objectives of each plan. NPWA also recognises the need to consider the importance of adjoining allotments in relation to strategic recreational and biodiversity perspectives.
Funding	State Government and various inter-governmental agreements
Legislation	National Parks and Wildlife Act 1972 An Act to provide for the establishment and management of reserves for public benefit and enjoyment; to provide for the conservation of wildlife in a natural environment; and for other purposes. Crown Lands Act 1929 Wilderness Protection Act 1992 An Act to provide for the protection of wilderness and the restoration of land to its condition before European colonisation; to make consequential amendments to the National Parks and Wildlife Act 1972; and for other purposes.

Table C.5.3 Recreation Parks in South Australia

Park Name	Hectares (ha)	Activities	Facilities	Visitor Numbers
Anstey Hill Recreation Park	362			
Blackwood Forest Recreation Park	21			
Brownhill Creek Recreation Park	51	Walking, horse riding, picnicking, bike riding	Toilets, BBQ's, picnic tables, bike tracks, horse riding tracks, walking tracks	30000-40000 year
Caratoola Recreational Park	54			
Cobbler Creek Recreational Park	266	Walking, picnicking, bike riding	Toilets, BBQ's, picnic tables, bike tracks, walking tracks	
Granite Island Recreational Park	27			
Greenhill Recreational Park	24			
Long Island Recreational Park	8			
O'Halloran Hill Recreational Park	292			
Onkaparinga River Recreational Park	285			
Para Wirra	1421			
Shepherds Hill Recreational Park	1688			
Sturt Gorge Recreational Park	244			
Totness Recreational Park	41			

C.6 United States of America

C.6.1 Park, Recreation, Open Space and Greenway Guidelines;

A Project of the National Recreation and Park Association and the American Academy for Park and Recreation Administration, 1996.

6.1.1 National Guidelines

These are US national guidelines often referred to by regional and local authorities in planning their local and regional open space requirements.

The **Regional Park System** consists of a number of resource units that serve regional park and recreation needs. They are typically administered by regional agencies and governed by state legislation.

The regional park system typically consists of three park classifications:

Regional Park: An area selected for its natural and ornamental quality and its suitability for regionally based recreational activities. Typically, a regional park is 200 to 500 acres (81 to 202 ha) in size, although a site as small as 100 acres is acceptable if the quality of the resource provides adequate justification. Its size is based on its capacity to accommodate a variety of activities, preserve its natural character, and provide adequate buffering between activity areas. Access to water bodies suitable for recreational uses is of particular importance during site selection. Recreational activities include swimming, picnicking, camping, boating, fishing, and a variety of trail uses.

Regional Park Preserve: Similar to a regional park in that it is selected for its natural and ornamental quality and its suitability for regionally-based recreation activities. The distinguishing feature between the two lies in its greater emphasis on preserving and protecting representative landscape types of the region. To contain a diversity of natural resources, a regional park reserve should be large enough to protect the resource.

Regional Special Use Facility: Region-wide recreational facilities not typically found in either a park or park reserve. Examples include zoos, large gardens, and large arboretums.

6.1.2 Park and Recreation Standards

"The NRPA recognizes the importance of establishing and using park and recreation standards as:

- A national expression of minimum acceptable facilities for the citizens of urban and rural communities
- A guideline to determine land requirements for various kinds of park and recreation areas and facilities
- A basis for relating recreational needs to spatial analysis within community-wide systems of parks and open space areas
- A means to justify the need for parks and open space within the overall land-use pattern of a region or community"

"George Butler of the National Recreation Association established recommended space standards for playgrounds in neighbourhoods of different populations. Butler reluctantly prepared a standard of 10 acres (4.05 ha) per 1000 population **within** each city, **plus** an equal area in parkways, large parks, forests, and the like, **either within or adjacent** to the city. His reluctance to suggest a definitive standard arose because he saw that this standard, or any other, was likely to be used indiscriminately regardless of location and other factors that must modify the standard."

“The standard derives from studies of park acreages located within urban areas. Over time, six to 10 acres per 1000 population came to be the commonly accepted standard recommended by the National Parks Recreation Association and used by the majority of communities.”

C.6.2 1997 East Bay Regional Parks District Master Plan, Oakland California

The East Bay Regional Park District provides and manages the regional parks for Alameda and Contra Costa Counties, a 1,700 square mile area (4 400 square kilometers) which is home to 2.1 million people.

The District is the primary provider of regional park facilities and activities for the two counties. The regional park system consists of 55 regional parklands and over 1000 miles of trails on approximately 85 000 acres (34 400 ha) of land.

6.2.1 Vision

The East Bay Regional Parks will preserve a priceless heritage of natural and cultural resources, open space, parks, and trails for the future and will set aside park areas for enjoyment and healthful recreation for generations to come. An environmental ethic guides us in all that we do.

6.2.2 Classifying Parklands

All district parks are categorized into five classifications. Each classification has a distinct purpose and sets forth the minimum standards that an area must have to be considered part of the regional park system. (The classifications are supported by planning documents that indicate appropriate, general levels of recreational use and provide resource protection strategies.) A classification is intended to apply to an entire park, based on its predominant characteristic.

1.Regional Park. A Regional Park is a spacious land area with outstanding natural features including rare species of flora and fauna. A Regional Park also has sufficient land area to support many outdoor recreational opportunities for the enjoyment and education of the public. A Regional Park must be 500acres or more, including land and water; must have scenic or natural resources in at least 70% of its area and must have the capacity to accommodate a variety of recreational activities. However, these activities in a designated Recreation/Staging Unit, may not take place in more than 30% of its area.

2. Regional Preserve. A Regional Preserve is an area with outstanding natural or cultural features that are protected for their intrinsic value as well as for the enjoyment and education of the public. The essential feature of a Regional Preserve may be open space; wilderness; scenic beauty; flora; fauna; or archeological, historical or geological resources.

The size of a Natural or Cultural Preserve must be sufficient to ensure that its significant resource(s) can be managed so as to be protected and enjoyed. The Recreation/Staging Unit(s) providing for public access and services will comprise no more than five percent of the area.

A Wilderness Preserve must be sufficiently wide at all points to minimize disturbance from noise and protect the qualities of the wilderness. The area will be a minimum of 3,000 acres (1 200 ha) The area may exceed 10,000 (4 050 ha) or more acres with the potential for both unrestricted and possibly restricted public access areas. Generally the Recreation/Staging Unit(s) providing for public access and services will comprise no more than one percent of the area.

An Open Space Preserve will generally consist of at least 200 acres (81 ha) of undeveloped open space land within or bordering an urban area. An Open Space Preserve may be used for agriculture or for passive recreation activities that do not require substantial facilities or improvements.

3. Regional Recreation Area. A Regional Recreation Area provides a variety of outdoor recreational experiences on a site that is particularly well suited to the type of recreational activities that the District provides. The area must have established regional recreation facilities or the potential or the potential to provide the opportunities for regional facilities such as picnicking, swimming, fishing, camping and boating. The area must lend itself to development for a variety of uses that meet recreational needs and it must be able to withstand intensive public use. The Recreation/Staging Unit provides for public access and services may comprise no more than 90 percent of a Regional Recreation Park.

4. Regional Shoreline. A Regional Shoreline provides significant recreational, interpretive, natural, or scenic values on land, water, and tidal areas along the bay and delta. A regional shoreline (one area or a group of smaller shoreline areas that are connected by trail or water access) must contain a variety of natural environments and manageable units of tidal, near-shore wetland, and upland areas that can be used for scientific, interpretive, or environmental purposes; and/or contain sufficient land and water to provide a variety of recreational activities such as swimming, fishing boating or viewing. The Recreation/Staging Init providing for public access and services may comprise no more than 30 percent of a Regional Shoreline.

5. Regional Trail. Regional Trails provide non-motorized, multiple-use pedestrian, equestrian, and bicycling connections between District Parks. Thus encouraging alternative models of transportation and helping to reduce pollution. They also link District parks with other local parks, open spaces, transportation and employment centers, and urban communities. Regional Trails, by their very nature, traverse a wide variety of terrain, ranging from urban streets to open range lands, irrigation canal banks, utility corridors, and former railroad rights-of-way.

C.6.3 Regional Recreation Open Space Policy Plan, Metropolitan Council, Twin Cities Region, Minneapolis. Minnesota. September 2001.

The concept of a regional park system is a foundation of the concept of **Smart Growth**. Regional parks make the region a more attractive place to live, work and do business. In a high technology economy that provides business and workers with unprecedented mobility, amenities that add measurably to the quality of life, such as parks and natural open space, create powerful draw for economic development.

The new challenge posed by a broader concept of Smart Growth is for the regional park system to become a more integrated component of the region's park and open space system **and integrated with housing and transportation**.

6.3.1 Siting Criteria for units of the Regional Park System: Future designation of lands for the regional park system should primarily stress lands with important natural resource functions, include or provide access to water bodies, and then lands with natural resource qualities that enhance outdoor recreation. Geographic balance or proportionate distribution tied to population distribution patterns can be given weight when natural resource features can be provided through restoration that focuses on the natural resource features of the area.

National standards for regional parks assume a one-hour driving time as acceptable. The high quality highway system (in the Metropolitan Council area) places most regional facilities within half-hour or less driving time from the urbanized area.

Acquisition of any additional **public water frontage** within the regional park system should be given **very high priority** because of the strong public attraction to water resources and its high demand and rapidly escalating value making it more costly in the future.

6.3.2 Regional Parks (definition):

Use:	Area of natural or ornamental quality for nature-oriented outdoor recreation such as picnicking, boating, fishing, swimming, camping and trail uses.
Service Area	3-5 communities
Size	200-500 acres, 100 acre minimum. (80-200ha, 40 ha minimum)
Site Attributes	Complete natural setting contiguous to water bodies or water courses where possible.
Site location	Where natural resource occurs.

6.3.3 Land Acquisition Funding Priorities for Regional Parks

The priority rating for acquiring park lands is as follows:

1. Lands **available for purchase** that would be lost to the regional park system **if timely action is not taken** and which meet criteria 2 and 3 below.
2. Lands essential to protect the natural resources that define a park and make it usable to the public as planned
3. Lands that are essential for the park to reach its full regional natural resource based outdoor recreation service potential as defined in the Council's regional park system plan and the park unit's master plan.

6.3.4 Regional Trails

Because user surveys indicate that recreation trails draw heavily from nearby areas, an important criterion is to concentrate on the acquisition of more trail corridors in the metropolitan urban service area where over 90 percent of the population resides.

C.6.4 Harris County, Texas

Regional Parks. A park that serves the needs of an entire community or region and is greater than 150 acres (60 ha) is classified as a Regional Park. These parks not only serve the active and passive recreational needs of the larger community, but also help in the preservation of large open spaces with valuable natural features. Regional Parks have a service area radius of ten-miles. A wide variety of passive and active recreation facilities including "Super Sports Complexes" can be developed within Regional Parks. Matching the needs of the population with the physical restraints of the land will allow for appropriate development of these large park parcels.

http://www.eng.hctx.net/park/iv%20park%20classification%20and%20inven.pdf

C 7. CANADA

Greater Vancouver Regional District. Mid-Coast Recreational Needs Assessment. August 2002

Park Classifications and Area Standards

The basic standard for developed parkland (mini, neighbourhood and community parks) recommended for the Mid-Coast is six acres per 1000 people.

Regional parks are included in a separate category and assigned their own standard (10 acres per 1000 people) because they provide for other recreational needs than do the three developed local park categories.

Regional Parks draw people from a much larger area than do local parks. They are characterized by unique natural resources and relatively large size, and provide outdoor recreation opportunities of regional significance. Small portions of a regional park might be allocated to fulfil neighbourhood park requirements.

C8. HONG KONG

Recreation ranges from home entertainment such as playing mah-jong and watching television, through passive activities such as strolling and performing tai-chi to active games and competitive sports. Planning standards provide an equitable basis for the planning, distribution and design of open space and recreation facilities.

Open Space is required to meet the active and passive recreational needs of the populations, either within the residential neighbourhood (Local Open Space) or centrally located to serve a wider area (District Open Space). Regional Open Space at prominent locations in the urban areas, serves larger catchment areas and may also serve as a major tourist attractions. Green Open Space as Amenity Areas, Country Parks, Green Belts and Coastal Protection Areas are excluded from the Open Space standards set out below.

Regional Open Space
- min. 5ha in size and a max building site coverage of 20%
- no set standard of ha/ 1000 population

District Open Space
- min. 1 ha in size and max. building site coverage of 10%
- 10ha/ 100 000 persons

Local Open Space
- min 0.05ha in size in urban areas and max. building site coverage of 5%
- 10ha per 100 000 persons in residential areas, or
- 5ha per 100 000 workers in industrial, business and commercial areas

APPENDIX D
Analysis of Regional Accessibility (Opportunity + Proximity)

The distribution of regional outdoor recreation opportunities relative to the urban population pattern in 2001 was investigated. Work focussed on developing an aggregate measure of ***Accessibility*** reflecting how accessible the regional population is to current regional outdoor recreation opportunities. This approach can assist in identifying sufficiencies and deficiencies in supply across a broad range of national, state and regional sites. The steps involved were as follows

1. Compiling Recreation Sites Data

Information about recreation opportunities across the study area was obtained from four main data sets:

1. Naturally Queensland Information Shop - The shop produces a handout for campers which lists the facilities found on parks across Queensland.

2. Discover Our Parks - EPA Internet site which contains general information on a number of popular parks. A copy of the database that drives the website was obtained through the Publishing Services Unit, Public Affairs Branch, Corporate Affairs Division (Dave Cumming). http://www.epa.qld.gov.au/environment/park/discover/

3. Access Queensland - A whole of State Government Internet site that aims to provide the Queensland public with a single point of access for Government services. Camping permits are able to be organised and paid for online. The website has general information on parks where camping is allowed. A copy of the database that drives the website was obtained through Tourism and Visitor Management Branch, Parks Division (Victor Bushing). https://www.smartservice.qld.gov.au/AQ

4. Lakes - Additional information on recreation at lakes was taken from tourist maps ie Dams and Lakes Around Brisbane.

Information from all the data sets was combined into a single spreadsheet and duplicate were removed. Some information was duplicated between the datasets but with slightly different categories eg Discover Our Parks had a category of 'Drinking Water' whilst Access Queensland had 'Drinking Water Available'. In cases like this the data was combined.

Sites with low visitor numbers were generally excluded. Data on 73 recreation sites was compiled. Each park was also categorised into one or a number of three Recreation Setting Groups A, B ,C (see Fig. 3.4). This was based primarily on some facilities being characteristic of recreation settings and knowledge of landscape settings at each site. Without the ORIS data and resources available, this was the best approximation possible.

The centroid of each park was nominated as the destination. The site data was then joined to the centroids of each park using the Estates GIS coverage (version 9.1 released 31st March 2003).

2. Population Data

Population statistics and spatial population units were derived from 2001 ABS Census data. Statistical Local Areas (SLA) provided the base spatial population units for urban areas. However, because of the large variation in the size of the SLA spatial units (ranging from a suburb to a Local Government Area) a composite spatial unit coverage comprising a combination of SLA units and ABS Regional Centres and Localities (RCL) was used in the analysis. The composite population unit coverage was derived by using the SLA units to represent the high-density urban area such as Brisbane City, the Gold Coast and the Sunshine Coast while the lower density and smaller regional centres were represented by the RCL spatial units. This combination of SLAs and RCLs provided a more even area distribution of population units across both urban and regional localities.

Population units with less than 5 000 people were omitted in the analysis to minimize distortions created by uneven population units.

3. Recreation Opportunity and Proximity Analysis

The basis for developing spatial relationships between population units and recreation sites involved calculating the shortest travel time (ie driving time) from each population unit (origin) to all recreation areas (destinations) across a transport network. Shortest travel times were calculated using the minimum impedance path algorithms available in ESRI ArcInfo Network Analyst. Travel speeds were attributed to road types available in MapInfo street centreline data and travel times were calculated using road segment lengths with assigned impedances. The minimum path impedance algorithms allowed the development of a travel time matrix comprising the shortest origin-destination travel times for all population unit to recreation site travel paths.

3.1 Based on the travel time matrix a broad theme of **Recreation Opportunity** was used to develop two spatial representations of relationships between population centres and recreation sites:

- The number of recreation sites within a specified travel time of a population unit
- Total recreation area (ha) per 1000 people within a specified travel time of a population unit

3.2 ESRI ArcInfo Network Analyst was also used to apply gravity models based on inverse distance rules to determine aggregate relationships between population centres and recreation sites under a broad theme of **Recreation Proximity**. The spatial representation of Proximity comprised the following spatial products:

- The summation of the inverse distance from a population centre to all recreation sites
- The summation of the inverse distance from a population centre to all water based recreation sites

3.3 To assist in understanding travel times, visual representations of travel time catchments were developed for three major urban centres: Brisbane city CBD, Broad Beach on the Gold Coast and Maroochydore on the Sunshine Coast. These served only as conceptual aids and were not used in the analysis.

4. Qualifications on Work

This work was advanced primarily to trial methodologies and to demonstrate the kind of analysis and output that might be achieved given accurate, current and projected demand/supply data, GIS operating systems and expert staff resources.

The development team comprised Doug Ward, Steven Howell, Amy Bortman and Tony Prineas. While recognising the potential of this approach many assumptions were made and data related qualifications to outputs must be recognised.

Assumptions and Qualifications

- *Actual drive times* along existing road networks from population units to recreation sites were used rather than drive distance or a radial distance “as the crow flies”. *Travel time* rather than *travel distance* better reflects people’s perception of discretionary behaviour for recreation as for example, a 40km journey on a highway is far less daunting than 40km through urban streets. Research also shows that a simple radial distance approach can significantly overestimate the number of people serviced compared with actual travel distances of equivalent size.

- Primarily recreation sites managed by State agencies were included ie national parks, conservation parks, forest reserves, state forests, SEQ Water, as well as inland dams and lakes (73 sites in total across SEQ). Information on local government parks and reserves was not available and is a significant omission affecting outcome interpretations. In particular coastal beaches managed by local government were not included. Smaller recreation sites with less than 5 000 visitors per year were generally excluded as not being of regional significance.

- The future urban growth pattern with population forecasts was not available. The analysis needs to be repeated with forecast information as existing distributional inequities will be heightened with growth.

- Significant recreation sites visited by SEQ residents will occur outside the region's boundaries. Sites not accessible by land have also been omitted (eg Moreton Island, St Helena Island). These should be included in some form in future work.

- The recreation sites were "best matched" with Recreation Setting Groups A, B and/or C. Time did not allow analysis of the distribution of recreation settings across the region.

- The distance decay factor (ie the rate at which visitation declines with increasing distance from a site) normally applied to analysis of proximity was not known and assumed to be 1.

- Centroids were adopted within each park as the destination point. Where some reserves (or parks) comprised spatially separated portions, multiple destinations were generated which exaggerate the number of recreation sites available for these parks. This did not occur frequently however.

APPENDIX E
Infrastructure Charges and the Regional Landscape Strategy

A preliminary investigation of infrastructure charges under IPA as a component funding strategy for the RLS

Regional Landscape Unit, October 2002

The potential to secure funds through Infrastructure Charges under the Integrated Planning Act 1997 (IPA) to assist in implementing the Regional Landscape Strategy for SEQ is investigated in this paper. This commences with an examination of Act requirements, SEQ population growth before reporting on recreation proposal with stakeholders.

1. 0 Conformity with Principles of Infrastructure Charging under IPA

The potential for levying of charges for regional 'open space" infrastructure requires checking the potential conformity with the principles of infrastructure charging under IPA. A number of these principles are considered below.

- Infrastructure is defined broadly to include 'land, facilities, services and works used for supporting economic activity and meeting environmental needs'. An infrastructure charge is a charge levied to pay for the capital costs of providing development infrastructure. Open space land protecting a variety of values as well as some developed recreational facilities could fall under the definition of infrastructure.

- Infrastructure under IPA is either 'private benefit' or 'social benefit' the distinction being made on a policy decision regarding who pays for it, not on the physical characteristics of the infrastructure. Infrastructure funded through infrastructure charging provisions of IPA is treated as private benefit infrastructure. Infrastructure may have both social and private benefit characteristics.

  Because all infrastructure that is not government funded (ie not social infrastructure) is private benefit infrastructure it could be argued that given the imminent lack of direct government funding of the RLS, substantial components of regional open space are private benefit infrastructure, and hence potentially funded through infrastructure charging.

- A number of principles underpinning the Act will require a more detailed response to be mounted explaining the connection to regional open space infrastructure. These include:
  - Fees for infrastructure which provide a direct, private benefit to users should be explicitly treated as a user charge
  - Why, alternative, more efficient, charging mechanisms cannot be used, should be demonstrated.
  - Infrastructure costs should be equitably apportioned based on estimated shares of infrastructure usage.

- Fair apportionment is a central principle of user pays charging. This requires knowledge (or forecasts) of users and usage so infrastructure costs can be equitably distributed amongst users in line with forecast facility usage. Defining direct usage is easier for some open space values (ie infrastructure) eg recreation than for others eg nature conservation, scenic amenity.

- Further restrictions emerge as only certain types of infrastructure can be funded by infrastructure charges. The capital costs of the following items of development infrastructure may be funded through infrastructure charges:

  - Urban water cycle management infrastructure (including infrastructure for water supply, sewerage, collecting water, treating water, stream managing, disposing of waters and flood mitigation).
  - Transport infrastructure (including local roads, vehicle lay-bys, …cycle ways, pathways)
  - Infrastructure for local community purposes (meaning land and basic works for local recreation purposes…). Capital costs for infrastructure for local community purposes is limited to the cost of land to a developable standard ie may include the costs of drainage, water supply, fencing, access costs etc but may not include the costs of developing land for its final purpose. Capital costs may include the cost of planning and designing the item.

  Of these three types, infrastructure for local community purposes offers the best prospect of securing land and services through infrastructure charges according with regional open space values.

- Local community purposes infrastructure has two components, one of which is relevant to open space ie public recreation land (PRL) predominantly serving a local area. In the Act and accompanying guidelines PRL is seen as one part of a broader public open space system providing multiple use of public open space. Care is needed to distinguish the public recreation land for which infrastructure charges may be levied from other public open space land offering wider primary benefits (eg conservation, landscape feature protection, water quality) where they may not be levied. This is resolved through desired standards of service for PRL being identified in the ICP. Further, the quantity of PRL to be supplied should be determined as part of a **public recreation strategy** and identified in the ICP.

This overview of IPA objectives, principles and guidelines suggests a complying case might be formulated enabling the acquisition of open space lands and services through infrastructure charges serving regional outdoor recreation needs. Other regional open space infrastructure providing primarily nature conservation, scenic amenity, cultural heritage and catchment management benefits might not comply.

2. 0 Funding of Regional Parks through Infrastructure Charges

Regional Parks are an evolving concept. The current concept envisages a range of park types encompassing natural areas offering more nature based recreation (eg Glenrock, Flinders Peak, Brisbane Forest Park), more rural or water feature based settings (eg Wivenhoe and Somerset Dams), eco-tourism precincts or village clusters (such as Tamborine Mountain) and potentially more intensively developed multi-use parks. It is likely infrastructure charges may be more appropriate for some concept sectors eg where State Government Funding has not been used or is not available, than for others eg if substantial private land is embraced within the park or substantial conservation values are protected. A range of funding strategies will invariably be pursued with some best fitting of concept, available funding and user need.

An important aspect will be the funding of regional recreation facilities by the State. At the more nature based end of the spectrum (State Forest and National Parks) ‘regional’ recreation facilities have been and continue to be funded by the State. However, there may be significant gaps (eg Regional Trails) where State funding is not available or insufficient to meet future needs. State funding has not been available for the more multi-purpose, developed, informal use regional sites which in part explains why there are few of these in existence. Local councils have had to plan and fund larger scale parks from a local ratepayer base and accept significant non-local use. Inequity in use has been a major concern limiting development. Infrastructure charging offers a way forward not only in terms of fair apportionment of costs to users but in terms of a vehicle requiring co-ordinated planning and cost effective delivery across local council boundaries.

A significant challenge remains in quantifying Regional Park needs in terms of a public recreation strategy as required under IPA. This will involve setting standards of service for PRL and service catchments to ensure equitable service delivery and cost apportionment to future residents. It should be possible to establish an early ball-park estimate of the quantum costs involved for new Regional Park needs for SEQ. This will allow an estimate of the additional infrastructure charge per developable hectare or lot in SEQ per annum. As such charges are passed on to residents, early estimates will be crucial in discussing market and political acceptance with stakeholders.

An indication of the likely tolerance of additional cost to future residents to fund Regional Parks can be established from SEQ population growth predictions – see Table 1.

Table 1. Scenario of Additional Infrastructure Charge per Lot for Regional Parks in SEQ

Nominal Additional Charge Per Lot per Annum (a)	Total Additional Charges Levied Per Annum (a x 17 000)	Percentage of Average PRL Infrastructure Charge per Lot in SEQ (a/$3 500 x 100)	Percentage of Average Transport, Waterway and Community Purpose Infrastructure Charge Per lot in SEQ (a/$20 000 x 100)
$ 100	$ 1 700 000	3%	0.5%
$ 500	$ 8 500 000	14%	2.5%
$1 000	$17 000 000	28%	5%

Assumptions:

- An additional 1 million people expected in SEQ in 20 years (DLGP 2001 Medium Series Projection)
- 17 000 new lots per year (50 000 new residents per year/3 people per lot)
- PRL Infrastructure Charge per lot for Low Medium Residential Land @ 10 lots per ha, $3 500 nominal average in BCC. QDLGP advice.
- Transport, Waterway and Community Purpose (includes PRL) Infrastructure Charge for Low Medium Residential Land @10 lots per ha, $20 000 nominal average in BCC. QDLGP advice.

The additional charge per lot for even a minimum viable annual program of Regional Park acquisition and development (say $2million per year) may achieve political and market acceptance.

3.0 Advice from Department of Local Government and Planning

The prospect of infrastructure charges being levied to fund Regional Parks was discussed with policy officers in QDLGP. The essential outcomes were as follows:

- There is a need to demonstrate consistency with the IPA’s objectives and requirements before the proposal could be supported. There was support for on-going dialogue on key issues.

- The support of SEQROC was seen as essential. The Regional Parks Working Group was seen as a good first step in engaging support of local councils.

- The endorsement of key industry groups was also essential. Some concern was raised about the level of likely charge and its impact on affordability of housing. Infrastructure charges need to be seen as a cost to homeowners and not to developers. It was suggested that the likely level of charge per household could be estimated but is unlikely to be high. Key industry groups to be contacted were UDIA and PCA.

- Inequity in allocation of charges was raised as a concern particularly for future resident use of existing capacity and existing resident use of new capacity. It was proposed that this could be addressed through working with local government parks mangers (eg Regional Parks Working Group) or other means to quantify these dimensions and ensure transparency of conclusions reached. Some local councils were experiencing difficulty in defining how to allocate charges beyond local parks and were looking at a rate base or other levy to fund higher order parks. There was a lack of consistency in specified desired standards of service across councils and probably low confirmation with community needs/preferences. These issues could be picked up in developing regional desired standards of service for regional parks. Inequity of state funding of outdoor recreation already applied highlighted by significant State funding of peak sport stadiums where "recreationists" sit and watch others recreate while there is little State funding for actual nature-based recreation. The declining availability of State Forest for a spectrum of outdoor recreation also highlighted emerging displaced user needs on one hand and the need for an equitable response on the other.

- Infrastructure charges could not be used to provide leased areas of exclusive use or where fees were charged for exclusive use. It was suggested the definition of regional parks could exclude such scenarios. User fees for small "component" use of a site such as camping fees at Glen Rock were not seen as a concern.

- Efficient mechanisms for collection of infrastructure charges and disbursement need to be demonstrated.

4.0 The Way Forward

Recommendations

- That the Regional Parks Working Group be convened to consider the use of infrastructure charges.

- That members of the RLSAC provide comment on the use of infrastructure charges to the Regional Landscape Unit by 30 October 2002

- That the RLSAC support in principle the use of infrastructure charges to support provision of regional open space for outdoor recreation needs arising from the anticipated population growth of SEQ.

APPENDIX F
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