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Integrating biodiversity planning into regional NRM plans



Integrating biodiversity into regional natural resource management plans

Guiding Integration

This is a supporting document to *Guidelines for developing a Regional Natural Resource Management Plan and Regional Investment Strategy in Queensland*. Its purpose is to:

- help guide regional bodies in developing regional natural resource management (NRM) plans that meet accreditation criteria for biodiversity conservation (accreditation criteria http://www.nrm.qld.gov.au/regional_planning);
- provide direction on practical approaches for incorporating the best available information and advice on biodiversity conservation into planning processes and implementation actions; and
- provide a reference point for State priorities on biodiversity conservation.

Biodiversity and Biodiversity Values

There are many definitions of biodiversity. Implicit in every definition is the concept that every living thing is reciprocally dependent on other living things for survival. The use of the term “biodiversity” is usually restricted to the organisms naturally occurring in an area and does not generally include introduced plants and animals.

A definition of biodiversity used internationally and that is endorsed by the Commonwealth and Queensland governments is:

“The variability among all living organisms from all sources including terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems”.

International Convention on Biological Diversity (1992)

Queensland’s *Nature Conservation Act (1992)* deals with four levels of biodiversity:

- **regional diversity** - the diversity of the landscape components (including landforms, soils, water, climate, wildlife and land uses) of a region, and the functional relationships that affect environmental conditions within ecosystems;
- **ecosystem diversity** - the diversity of the different types of communities formed by living organisms and the relations between them;
- **species diversity** - the diversity of species in an area; and
- **genetic diversity** - the diversity of genes within each species.

Biodiversity values identified as important will vary from region to region depending on the context, for example a major corridor connecting areas of remnant habitat is important in a landscape that has been subject to intensive clearing or habitat alteration but may be of limited relevance in areas where the native vegetation cover is more or less intact..

Specific biodiversity values should be used as a basis for determining priorities for management action. Example biodiversity values that may warrant protection through targeted action include

- Large diverse areas of habitat in good condition;
- Corridors;
- Habitat of species that are naturally rare or that have become rare due to habitat modification or competition from invasive species;
- Areas that are species-rich; and
- Areas that act as refuges from wildfire or climate change.

Setting the direction for biodiversity planning

The planning measures needed for biodiversity conservation in any region will depend on the type of landscape and the threatening processes that occur. In Queensland, the landscape can be divided into two zones: *intensive use zone*, and an *extensive use zone*, as shown map.



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In the intensive use zone of Queensland, where the natural vegetation cover has already been reduced and changed by human activity, planning for biodiversity conservation should take into account the spatial configuration of the remaining native vegetation. Vegetation protected under legislation and vegetation in areas unsuited to clearing (such as mountain ranges) shapes the current extent and location of remnant native vegetation. These areas form a basic skeleton that is reasonably well protected under current plans and policies and can make a significant contribution to meeting specific targets for biodiversity conservation. It is also desirable to protect areas that lie outside of the basic skeleton as priorities for biodiversity conservation. Determining these areas must be on the basis of good science such as surveys, mapping studies and ecosystem function.

In the extensive use zone of Queensland there is still a more or less continuous cover of native vegetation. Core areas for biodiversity conservation can still be identified based upon factors such as topography and ecosystems that are in good condition. It is also desirable to include areas that are a priority for biodiversity conservation that lie outside of the core areas as determined by good science.

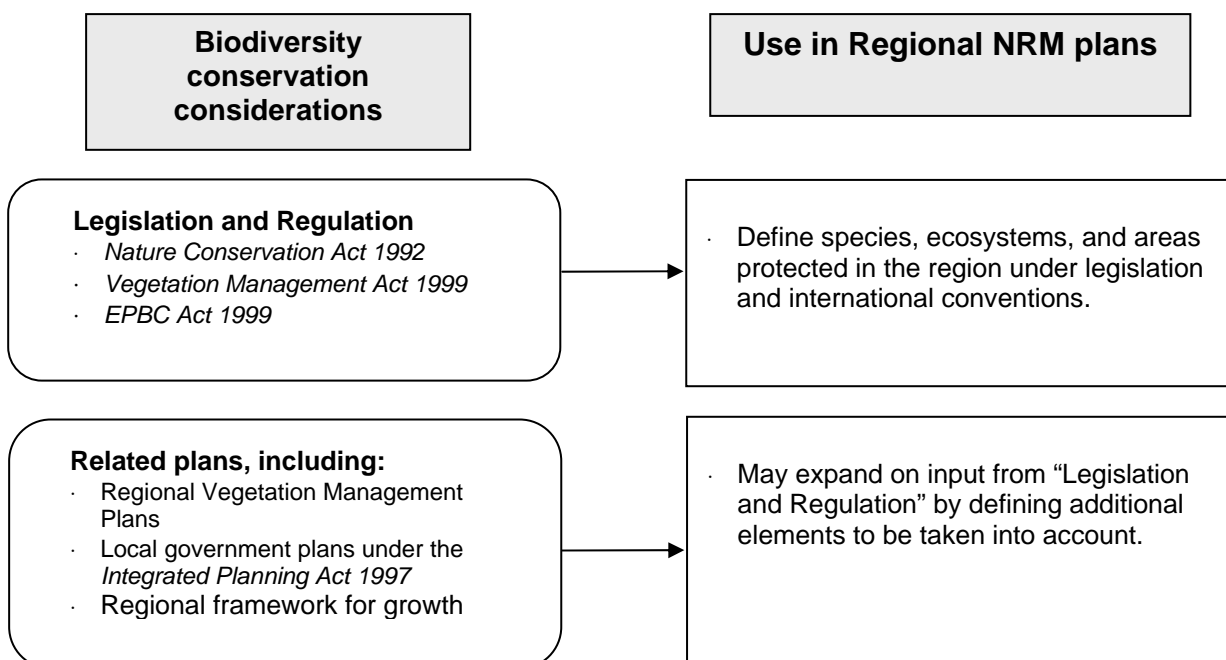
Addressing biodiversity conservation in regional NRM plans

To meet accreditation criteria for biodiversity conservation, NRM plans will need to address the following:

- describe and document the biodiversity values of the region. Values may be of international, national, State, regional or local significance. Values should be determined in view of local and adjacent regional biodiversity values;
- identify information gaps and how to address them for those areas of likely significance for biodiversity conservation taking account of bioregional boundaries and any cross jurisdictional boundaries;
- determine the relative significance of the biodiversity values present in the region;
- identify the relevant threats to biodiversity in the region (e.g. land clearing, weeds, and pests);
- define and prioritise resource condition and management action targets for biodiversity conservation in the region taking account of adjacent regional biodiversity values and targets;
- provide for the predicted impacts of human-induced climate change on biodiversity as scientific information relevant to a region becomes available;
- determine management actions for biodiversity conservation such as studies, conservation areas, species recovery plans; and
- describe how biodiversity condition and outcomes will be monitored through time and adjustments made to regional NRM initiatives.

Biodiversity values and targets for conservation should be determined at a landscape and regional ecosystem scale for coordinated local action. Regional boundaries and jurisdictions should not be a barrier to integrated biodiversity conservation planning and action.

The following diagram illustrates how the various facets of biodiversity and biodiversity conservation can be addressed in a regional NRM plan.



Linkages & integrated management

Existing legislation, plans and policies contain provisions about biodiversity and biodiversity conservation that need to be reflected in regional NRM plans. Some examples include:

Legislation

- *Environment Protection and Biodiversity Conservation Act 1999* including recovery plans, threat abatement plans, world heritage properties and RAMSAR wetlands;
- *Nature Conservation Act (1992)* including conservation areas and species protection measures;
- *Land Act (1994)* including leasehold land conditions and vegetation clearing;
- *Marine Parks Act (1982)* including zoning plans for marine parks; and
- *Vegetation Management Act (1999)* including regional vegetation management plans and State assessment code.

Local, Regional, State and National Planning

- Review of the National Strategy for the Conservation of Australia's Biological Biodiversity 2001 <http://www.deh.gov.au/biodiversity>
- Local government planning schemes and supporting local laws and policies
- <http://www.ipa.qld.gov.au/> also see specific local government web sites
- Regional Nature Conservation Strategy for South East Queensland (2003 – 2008) Environmental Protection Agency, Queensland Government, September 2003 http://www.env.qld.gov.au/nature_conservation/biodiversity/conserving_biodiversity/regional_nature_conservation_strategy/
- State and regional coastal management plans
- <http://www.epa.qld.gov.au/>
- Reef Water Quality Protection Plan Department of the Environment and Heritage, Australian Government, October 2003 <http://www.thepremier.qld.gov.au/reefwater/downloads/rwqpp.pdf>
- Queensland Biodiversity Policy Framework "Sustaining Our Natural Wealth" Queensland government September 2003
- <http://www.epa.qld.gov.au/>
- Guidelines such as "Biodiversity Conservation in Regional NRM Planning" Land & Water Australia Research November 2003
- <http://www.lwa.gov.au/sirp>

Emerging information on climate change and biodiversity including:

- "Queensland Greenhouse Policy Framework: A climate of change" Environmental Protection Agency, Queensland Government, 2001 <http://www.env.qld.gov.au/publications?id=546>
- "Developing a National Biodiversity and Climate Change Action Plan" Prepared by the National Task Group on the Management of Climate Change Impacts on Biodiversity convened under the NRM Ministerial Council's Land, Water and Biodiversity Committee Department of the Environment and Heritage, September 2003 <http://www.deh.gov.au/nrm/publications/biodiversity/>
- "Climate Change in Queensland under Enhanced Greenhouse Conditions" Reports on research undertaken for Queensland Departments of State Development, Main Roads, Health, Transport, Mines and Energy, Treasury, Public Works, Primary Industries, and Natural Resources. CSIRO, 2002. <http://www.climateimpacts.com.au/>

Biodiversity conservation is linked to all facets of natural resource management and this needs to be taken into account in the context of the other NRM Modules (e.g. Modules on coastal management, water environmental values, regional vegetation management plans and wetlands management). Resources for biodiversity conservation should be addressed in regional NRM planning and regional investment strategies.

Implementing NRM plans

Biodiversity conservation measures identified in regional NRM plans can be implemented through a range of mechanisms including:

- Through local government planning by ensuring planning scheme assessment codes, overlays and other measures include suitable provisions;
- Using conservation agreements under the *Nature Conservation Act (1992)*; and
- Including biodiversity issues in property management planning, and formally recognising these in lease conditions or covenants under the *Land Act 1994*.

These additional methods of achieving on-ground outcomes should be considered and identified as the NRM plan is developed.

EPA products and services

The Environmental Protection Agency, as the lead agency for biodiversity in Queensland, has developed the *Directory of Products and Services for regional natural resource management, planning and implementation* that provides guidance on the range of information and advice available from EPA supporting the making of NRM plans, including biodiversity conservation initiatives such as:

- Assessments of biodiversity (biodiversity planning assessments or BPAs) using a standard set of criteria. BPAs are available for approximately 50 percent of Queensland including the Mulga Lands, New England Tableland, Brigalow Belt, South-east Queensland and Central Queensland Coast bioregions. BPAs presently map information at a scale appropriate for landscape planning (1:100 000). The assessments include mapped information for threatened species and regional ecosystems with an endangered and of concern status;
- Assistance with determining biodiversity values relevant to a specific plan area;
- Training in use of the Biodiversity Planning Assessments;
- Guidance on addressing data and information gaps such as data collection methods and standards, use of expert knowledge to augment limited data, methods for assessing biodiversity;
- Provision of data and information including vegetation and regional ecosystem maps, plant and animal point location information and ecological information about rare and threatened species. This information will be particularly useful in parts of the state that do not have a biodiversity planning assessment at present;
- Provision of information about recovery planning for threatened taxa and ecosystems; and
- Tenure information about the EPA/QPWS protected area estate, and details of management programs for fire, pests, threatened species on conservation reserves and state forests.

The *Queensland Biodiversity Policy Framework – Sustaining our Natural Wealth*

http://www.epa.qld.gov.au/nature_conservation/biodiversity provides an overview of the Queensland Government's commitment to biodiversity protection. The policy framework establishes a vision and principles to support existing programs and future directions for the sustainable management of biodiversity in Queensland.

Important contacts, support and further information

The *Directory of Products and Services for regional natural resource management, planning and implementation* can be found at: <http://www.epa.qld.gov.au/publications?id=735>

More information on BPAs can be found at: http://www.epa.qld.gov.au/nature_conservation/biodiversity

The EPA contact officers listed below can assist regional NRM Bodies with queries.

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