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Sectoral Integration of Biodiversity in Australia

Contents

1. Introduction

Australia reported[1] that in the past decade, partnerships have evolved and strengthened between governments at different levels, and between governments and industry. The developments in NRM are among the most significant of these partnerships for biodiversity conservation. The CoAG agreements in water management that include environmental flow allocations as a central tenet, and the bilateral agreements between the Australian, state and territory governments for implementation of the NHT and NAP are key examples.

In the past few decades, industries across all sectors have been proactive in development of strategies to address environmental issues and to implement environmental management. Several industries are at the forefront of developing accreditation and best management practice systems, many of which involve practices that impact positively on biodiversity. Examples include:

- the mining industry in relation to protection of the surrounding environment and rehabilitation post mining
- the cotton industry in relation to management of chemicals
- intensive animal industries in relation to waste and water quality management
- the rice industry in relation to groundwater accessions and efficient water management.

Environmental management activity relating to the manufacturing sectors is dealt with largely by Australian, State and Territory legislation aimed at reducing pollution and environmental impacts. As such, environmental issues are considered on a case-by-case basis as they relate to specific projects or operations. In the service industries, including tourism, the trend towards eco-markets and environmentally sound management is becoming stronger, encouraged by an increasingly informed market and customer demand for demonstrable commitment by firms to environmental values.

In the primary industries, the growing commitment to environmental management is also driven to some extent by new legislation. This is particularly the case in relation to chemicals, product safety, health and safety, water management, off-farm pollution from intensive industries, resource security and vegetation management. But there is also a strong stewardship ethos among landholders and a common desire to look after both the natural resources and the farm environmental values.

Several primary industries have developed best practice guidelines and are implementing programs to encourage adoption by members. Some have progressed to accreditation systems that provide incentives for members to achieve higher levels of environmental management. A few industries have

[1] Australia (2009). Australia's fourth National Report to the United Nations Convention on Biological Diversity, March 2009, 146 pp.

been able to capitalise on premium prices for produce produced under accredited branding that requires meeting environmental management standards.

The organic produce industry, growing at an estimated 30 per cent per annum globally, has successfully developed a premium market based on consumer preference for food grown with minimal chemicals. Despite problems with accreditation systems, including a lack of consistent standards, the organic produce industries have responded to and further promoted a rapidly growing premium market.

Some of the major buying chains are also responding to growing consumer demand for higher quality produce and a preference for food and other products produced without degrading natural resources, including water and land. Buying chains are expanding their accreditation systems to include environmental performance criteria and are increasingly seeking to secure suppliers who can become accredited to produce food that meets environmental standards.

Some key industries are working closely with governments to develop practical systems that will enable their businesses to meet environmental and NRM legislative requirements through best practice accreditation. The cotton industry is one example. In Queensland, the state government and peak industry body, the Queensland Farmers Federation, has signed a memorandum of understanding that sets the basis for development of industry accreditation. It is focused on meeting the raft of state regulations relating to water, threatened species and vegetation management. Other partnerships to meet regulatory requirements include:

- the Victorian vegetable growers and the Victorian Environment Protection Agency
- members of the Greenhouse Challenge and the Australian Government
- rice growers and the NSW Environment Protection Agency
- individual landholders, state governments and regional natural resource management groups engaged in negotiated agreements relating to native vegetation.

A range of industry policies were reviewed to examine as part of the Griffen study to see how well they align with national biodiversity policy and objectives. These are listed in Table 1.

Table 1: Industry biodiversity/environment policy reviewed for the study

Industry/industry association	Biodiversity policy
Cotton industry	Sustainability policy relating to river health, vegetation management, soil health, salinity, climate change and biotechnology
Rice industry	A Biodiversity Strategy for the Australian Rice Industry (2002)
Dairy industry	Dairying for Tomorrow: A National Strategy for Sustainable Resource Management
Wine industry	Sustaining Success: The Australian Wine Industry's Environment Strategy (2002). Advocates a national approach, integrated across industry component, proactive and focused on education. Water to Wine – a policy for water management in the wine industry. Advocates building knowledge regarding water use and requirements in the industry, water conservation, efficiency measures and re-used options.
Tourism industry	Independent accreditation systems include nature conservation standards and monitoring

Sugar industry	Cane Growers Public Environment Report 2005
Forest industries	Biodiversity protection and sustainable forest management are key elements of the Australian Forestry Standard (2007)
Coal industry	No specific biodiversity policy Coal in a Sustainable Society (CISS) Cooperative Research Centre for Coal in Sustainable Development

The industry policies and strategies reviewed for the Griffen study give a reasonably representative view of the range of responses emerging in recent times. While highly variable in breadth and focus, they share a number of features in common including:

- they target issues of perceived highest risk (e.g. resource security, product health and safety, operational health and safety)
- they are generally focused on production parts of chain where legislation is operating
- cradle to grave approaches are rare
- mechanisms for implementation include best practice, environmental management systems, accreditation/branding
- they focus on demonstrating credentials and lobbying
- there is a push pull response to legislation
- a very strong focus on research and development and strong links with research and development agencies such as Cooperative Research Centres and the CSIRO
- the responses are primarily voluntary and regulation is resisted.

In relation to biodiversity specifically, the industry policies and strategies have the following characteristics:

- a tendency to be aspirational
- limited use of targets
- a reticence to create green markets
- almost all industry development in this area is co-sponsored by government
- a growing integration with regional natural resource management groups in linking best practice on farm with incentives to achieve regional biodiversity targets.

Table 2: Industry biodiversity targets

Industry	Targets

Cotton industry	BMP criteria and accreditation No specific biodiversity targets
Rice industry	Participation targets, best practice targets Specific biodiversity targets in level three of the Environmental Champions Program
Dairy industry	Dairying for Tomorrow best practice targets encompass a range of water, land, soil and vegetation management practice that will impact on biodiversity
Seafood industry	No specific biodiversity targets
Wine industry	No specific targets but action plans proposed could have targets
Tourism industry	No specific targets
Sugar industry	Targets in relation to riparian vegetation conservation and reduced nutrient and soil run-off to the Great Barrier Reef
Forest industries	Biodiversity targets were set during the establishment of a Comprehensive, Adequate and Representative Forest Reserve System
Coal industry	No specific biodiversity targets
Meat and livestock	No specific biodiversity targets
Wool	No specific biodiversity targets
National Farmers Federation	No specific biodiversity targets
Queensland Farmers Federation	No specific biodiversity targets

Source: Industry interviews and documents 2006, data in Griffin Study (soon to be published)

Table 3: Alignment of industry environment policy with NBS and national objectives

Industry	Key focus and links to biodiversity policy	Mechanisms for implementation
Cotton	Primarily focused on chemical residues, weeds and diseases, water use efficiency. To a lesser extent, protection of native plants and animals and soil health, linked to state water management legislation and development controls, linked with pesticide residue standards	BMP criteria and accreditation No specific biodiversity targets
Rice	Integrating production and biodiversity conservation. Ultimately will be linked to water license conditions and state water sharing plans and catchment targets.	Environmental Champions Program to integrate environmental management and productive rice farming including research and development, piloting and implementation Flexible, voluntary, industry-based environmental management system
Dairy	Effluent management and water use efficiency. To a lesser extent grazing and soil management, greenhouse emissions and management of riparian areas. Linked with state pollution control and water quality legislation.	Dairying for Tomorrow partnerships between industry, farmers association, government and regional natural resource management groups Murray Diary Action Plan proposes an Environmental Quality Assurance System
Seafood industry	Minimising bycatch and improving technology to target cohort/size and maximise recruitment to breeding. Includes environmental issues - protected areas, marine pests and diseases.	Environmental management system supported by partnership between the Australian Government Department of Agriculture, Fisheries and Forestry, Fisheries Research and Development Corporation and the industry
Wine	Water quality and waste water; waste management and chemicals Priority issues include enhancing ecological systems and protecting biodiversity	Propose environmental standards and guidelines and a national environment wine reporting system Propose benchmarking
Tourism	Independent accreditation systems include nature conservation standards and monitoring	Accreditation systems for tourism – e.g. the EarthCheck system used by Green Globe
Sugar	Biodiversity issues include impacts on the Great Barrier Reef and fisheries Raising awareness and increasing engagement by farmers in the codes of practice and FMS Specific targets in relation to riparian vegetation conservation and reduced nutrient and soil runoff to the reef	Code of Practice (1998) – need new program to promote more change Proposed development of a Farm Management System

Forests	Biodiversity and sustainable forest management are key elements of the Australian Forestry Standard Consistent with RFAs and National Forest Policy Statement	Comprehensive codes of practice and regulations apply in each jurisdiction. Independent certification and accreditation systems – e.g. Australian Forestry Standard, Forest Stewardship Council, ISO 14000 series of environmental management standards, and Joint Accreditation System of Australia and New Zealand
Coal	No specific biodiversity policy Broadly consistent with Australian Government climate change policy Greenhouse, improve image of coal and produce clean coal	Emphasis on research and development and communication Greenhouse Challenge partner Extensive partnerships in the Cooperative Research Centre
Meat and Livestock	Focus is strongly industry-based Key issue is product safety and quality Various programs have biodiversity objectives – e.g. Grain and Graze Research and Development project	Research and development into grazing systems, pasture management and natural resource management Product quality standards
Wool	Improvements in productivity while retaining native vegetation and habitat Consistent with policy for development of industry best practice that includes biodiversity conservation	It is a research and development program aimed at developing best practice guidelines and provide inputs to an accreditation scheme in the future. There are several documented case studies (2005) showcasing ways woolgrowers are conserving biodiversity and increasing productivity – e.g. Traprock Wool Association has an environmental management system - the Traprock Integrated Management System.

Among the industry strategies, there are notable examples of highly developed policies and codes of practice that stand out in relation to biodiversity. These strategies specifically address biodiversity conservation as an issue (Table 1). They are linked to implementation programs such as best practice and accreditation systems. They include:

- the rice industry – A Biodiversity Strategy for the Australian Rice Industry (2002)
- the dairy industry – Dairying for Tomorrow: A National Strategy for Sustainable Resource Management
- the wine industry – Sustaining Success: The Australian Wine Industry's Environment Strategy (2002)
- the forest industry – Australian Forestry Standard and Forest Stewardship Council as independent third party forest certification standards for Australia's production forests.

It is common among industry implementation environmental management programs to operate a tiered system for accreditation. For example, the rice industry Environmental Champions Program takes producers through five levels of development from basic industry standards, beyond industry standards, putting plans into action, trade, innovation and eco-efficiencies and regional/catchment partnerships. Biodiversity conservation comes into effect in the third tier.

Similarly, the environmental framework for the wine industry includes a tiered approach to environmental accreditation. It begins with identification of the various elements of a grower's operations that can impact on the environment and an analysis of the impacts, culminating in an independently certified environmental management systems. The viticulture framework focuses on ensuring that growers are confident they have reached a tier that meets their business needs.

Industry monitoring indicates that the majority of growers participating in these programs do not progress to the higher levels of accreditation (the levels that more fully encompass biodiversity conservation). While there are exceptions, most industry associations are satisfied that their members meet the needs of their businesses and comply with legislation. The drivers to encourage producers to extend to higher levels of accreditation seem to remain relatively weak in many industries.

An examination of the dairy industry example provides interesting insight into this issue. The dairy industry strategy—Dairying for Tomorrow: A National Strategy for Sustainable Resource Management—identifies industry best practice targets encompassing a range of water, land, soil and vegetation management practice that will impact on biodiversity. As part of the program, the dairy industry recently funded a study that examined how to convert regional natural resource management targets into on-farm practice. The study then ranked the practices according to cost/benefit estimates of implementing the practices. The cost/benefit rankings resulted in all but one of the biodiversity targets being dropped from the priority list because the practices to achieve them (e.g. fencing remnants, off-stream watering) were deemed to be high cost to the producer relative to the benefits on-farm.

This study has important implications for the place of biodiversity conservation in industry accreditation systems. It highlights the mandatory requirement for cost sharing between governments and industry to ensure that biodiversity is affordable as part of industry best practice.

The last decade has seen the development of substantial, wide-ranging partnerships between industry, government and the non-government sector to achieve adoption of best practice on-farm that takes account of the range of public benefit as well as private environmental issues. Examples include:

- Partnerships in regional areas to meet catchment targets, in which biodiversity is a key element. Many industries are engaging with regional groups to develop on-farm programs to achieve the targets. Notable examples include the NSW Property Vegetation Planning system which enables landholders and regional natural resource management groups to negotiate agreed plans for conservation of native vegetation (including conservation offsets for permitted clearing).

- Partnerships between governments and individual landholders to conserve high value biodiversity through cost shared covenanting arrangements.

- A memorandum of understanding between the Queensland Government and the Queensland Farmers Federation to develop farm management systems that will assist landholders to meet a suite of regulatory requirements including those relating to conservation of native vegetation and threatened species.

- The Greenhouse Challenge partnership between the Australian Government and a number of partner industries (e.g. the coal industry).

- Integrated Area Wide Management in the cotton industry. Groups of farmers work together on pest control, pesticide reduction and broader catchment issues.

CASE STUDY - LEADING PRACTICE SUSTAINABLE DEVELOPMENT PROGRAM FOR THE MINING INDUSTRY

PROGRAM BACKGROUND

The Leading Practice Sustainable Development Program for the Mining Industry, launched in 2006, supports the sustainable development of the Australian minerals industry. The Program is consistent with the objectives set out in the Vision of the Ministerial Council on Mineral and Petroleum Resources (MCMPR), and in the Minerals Council of Australia's Enduring Value, the Australian mining industry framework for sustainable development.

The program has been endorsed by the Coal Mining Task Force of the Asia Pacific Partnership as a key work priority, and is designed to promote leading practice across the minerals industry in Australia and to build Australia's leading practice profile among international stakeholders.

PROGRAM OBJECTIVES

The program seeks to promote industry self regulation through the pro-active adoption of leading practice principles. Its objectives are to:

INFORM – provide credible information of leading practice sustainable development in the Australian mining industry for the purpose of building greater capacity and understanding to those who have an interest in Australia's mining industry including non-government organisations, mining communities, students and international stakeholders

INFLUENCE – seeking commitment to leading practice sustainable development principles from high level decision makers in key organisations such as mining companies, government agencies, regulators, industry bodies, and mining contractors and service providers

IMPLEMENT – practically implementing leading practice sustainable development practices at the operational level by on-site mine management and consultants, academics and regulators who work at the site level provide training for those working at site level or regulating the mining industry.

HANDBOOKS

The program's primary output is in the form of handbooks that are published in hard copy and are available online (http://www.ret.gov.au/sdmining).. There are 14 themes in the LPSDP series including Biodiversity Management; Community Engagement and Development;; Mine Rehabilitation; Stewardship; Tailings Management, Working With Indigenous Communities and Water Management,.

PROGRAM MANAGEMENT

The program is managed by a Steering Committee chaired by the Australian Government Department of Resources, Energy and Tourism (RET). It includes representatives from state and Northern Territory mining departments, the Minerals Council of Australia, the Australian Centre for Mineral Extension and Research (a unit of the Sustainable Minerals Institute), DEWHA and the Chairs of the program's current working groups.

CASE STUDY – NATIONAL LANDSCAPES – CONSERVATION PARTNERSHIPS WITH THE TOURISM INDUSTRY

PROGRAM BACKGROUND

National Landscapes is a partnership between Tourism Australia and Parks Australia to promote sustainable nature-based tourism and conservation outcomes. The first eight National Landscapes were announced in June 2008 and include Australia's Red Centre, the Australian Alps, the Green Cauldron, the Great Ocean Road, Kakadu, Australia's Coastal Wilderness, the Greater Blue Mountains and the Flinders Ranges. Each National Landscape is locally managed by a steering committee of interested stakeholders. Local steering committees include protected area management agencies, local and state government, regional tourism organisations, Indigenous representatives, tourism operators, NGOs and community members.

To be selected as a National Landscape, an area must have strong management arrangements in place to ensure tourism returns benefits to the regional community and doesn't threaten natural values.

PROGRAM AIMS

The program seeks to promote tourism and conservation outcomes through strong partnerships, a landscape-scale approach and the adoption of best practice. The program aims to:

- populate Brand Australia with iconic natural and cultural experiences matched by high quality visitor experiences, outstanding interpretation, facilities and services
- enhance the role of protected areas in the national and regional economies
- enhance conservation outcomes through planning and effective management
- connect Australia's global target audience (the experience seeker) with landscapes and experiences, achieving high yielding and high dispersing tourism outcomes.

PROGRAM MANAGEMENT

The program is managed by a Reference Committee including representatives of the Australian Tourism Export Council, Ecotourism Australia, the Tourism and Transport Forum, Indigenous Tourism Australia, the World Commission on Protected Areas, the Department of Resources Energy and Tourism, Tourism Australia and DEWHA.

Nature-based tourism provides significant benefits to Australia's economy. Domestic and international visitors undertaking at least one nature-based tourism activity in Australia spent $26.8 billion—$11.8 billion for international visitors, $13.6 billion for domestic visitors and $1.4 million for domestic day-trip visitors.

The natural environment is a key motivator for international visitors to travel to Australia, with 56 per cent being influenced to visit based on their intent to visit a natural area. Australia has the largest number of endemic mammal species of any country, the second largest number of

endemic birds and the third largest number of endemic plants. Australia's biodiversity is increasingly recognised by the tourism industry as a competitive advantage. A number of state and territory tourism strategic plans acknowledge the need to protect the integrity of the natural environment and protect biodiversity values to promote sustainable growth or this sector.

2. Working with States and Territories

The Australian Government and state and territory governments both maintain lists of threatened species. Species Information Partnerships aim to achieve consistency between these lists, and to increase exchange of information in the listing and recovery of threatened species. The Australian Government has partnerships with South Australia, Western Australia, the Northern Territory, Tasmania and Victoria to prepare information on threatened species listed under state and territory legislation. The information provided is used as the basis for assessment of species by the Threatened Species Scientific Committee, for listing by the Minister as threatened under the EPBC Act. The partnerships help to focus limited conservation resources to achieve the best possible conservation outcomes for threatened species.

Both the Australian Government and most of the state and territory governments have mechanisms to identify and protect threatened ecological communities/habitats. Threatened ecological communities that are protected at a national level under the EPBC Act are generally broad communities that can extend over more than one state or territory. Consequently, many of the listed ecological communities, and those that are currently being considered for national listing, equate to many more smaller communities or regional ecosystems that receive varying levels of protection by the states and territories. To address confusion that may arise from multi-jurisdictional protection of ecological communities and to ensure that those ecological communities under greatest threat are protected, the Australian Government adopted the following two approaches:

- descriptions of national ecological communities which include clear cross-references to state and territory vegetation classification systems

- a process to identify priority ecological communities listed by states and territories that are under the greatest threat and would benefit most from additional national protection under the EPBC Act.

3. Greenhouse gas emissions trading and biodiversity

As well as stress from climate change itself, actions to mitigate and adapt to climate change may also impact positively or negatively on biodiversity. Australia's 'Carbon Pollution Reduction Scheme' will primarily focus on contributing to the Government's mitigation objectives. The Government considers that Australia's natural resource management and protection legislation, policies and programs will be adequate and effective to prevent or mitigate any perverse impacts on biodiversity arising from the operation of the Scheme. Measures complementary to the natural resource management and protection legislation may also be considered if required.

4. Integration of Biodiversity into Sectoral and Cross-sectoral Strategies and Plans

Australia faces major challenges in ensuring the sustainable use of water resources and the protection of aquatic biodiversity in the face of drying climate and rising demand for water. The Australian Government is investing $12.9 billion over 10 years through Water for the Future to address four key priorities:

- taking action on climate change
- using water wisely
- securing water supplies
- healthy rivers and waterways.

Included in this investment is $3.1 billion to improve the health of river systems in the Murray-Darling Basin. As part of Caring for Our Country, nationally significant high conservation value aquatic ecosystems will be identified, managed and protected.

The management of Australia's water catchments and river basins is undertaken by the states and territories. Management agreements for the sustainable use of water resources include the Intergovernmental Agreement on a National Water Initiative (2004), the Commonwealth Water Act 2007, the Intergovernmental Agreement of Murray-Darling Basin Water Reform (2008), the Lake Eyre Intergovernmental Agreement (2000), the Great Artesian Basin Strategic Management Plan (2000) and the National Water Quality Management Strategy (1992 onwards). Through the Living Murray initiative, jurisdictions have committed $700 million over five years to improve the health of six icon sites of high ecological value. Jurisdictions have also committed $425 million over 10 years to improve the health of the iconic Snowy River.

As a signatory to the Ramsar Convention on Wetlands, Australia promotes the conservation and wise use of all wetlands. Australia currently has 65 wetlands of international importance. The Australian Government, with the states and territories, is progressively improving the management and reporting framework for Australia's Ramsar wetlands. Initiatives to support the management of Ramsar wetlands include the development and implementation of:

- National Guidelines for Ramsar Wetlands to improve implementation of the Ramsar Convention in Australia
- ecological character descriptions and management plans for Ramsar sites
- a Rolling Review approach to report on the condition of Australia's Ramsar sites and inform future management and investment priorities.

5. Environmental Stewardship

The Australian Government is providing ongoing support for environmental stewardship by committing $42.5 million over four years as part of Caring for our Country. The Environmental Stewardship Program

will use market-based incentives, such as tender and auctions, to conserve environmental assets on privately-owned land. The Australian Government recognises that using market-based incentives, such as those under environmental stewardship programs, can be an effective way of engaging land managers to protect and maintain environmental assets on private land. There is strong support among key stakeholder groups in the Australian community for stewardship payments as a means of protecting biodiversity and to meet specific biodiversity objectives.

The first environmental asset targeted under the Environmental Stewardship Program is the critically endangered 'White Box, Yellow Box and Blakely's Red Gum grassy woodland and derived grasslands ecological community', which stretches from southern Queensland through central NSW, the ACT and across north-eastern Victoria—covering about 405 000 hectares. The Box Gum Grassy Woodland also provides an important habitat for some of Australia's threatened species, such as superb parrots (Polytellis swainsonii), regent honeyeaters (Xanthomyzra Phrygia) and squirrel gliders (Petaurus norflocensis).

CASE STUDY – BIOBANKING

The NSW Biodiversity Banking and Offsets Scheme ('BioBanking') provides a market-based framework for conserving biodiversity. The scheme, commenced on 1 July 2008 and aims to reduce cumulative biodiversity losses caused by population growth and development pressures.

BioBanking provides a framework for offsetting the impact on biodiversity from development at one site through positive management actions at another site, provided that overall biodiversity values are improved or at least maintained. The scheme gives developers the option of obtaining a BioBanking statement if their development meets this 'improve or maintain' test. The statement sets out the number and class of biodiversity credits they need to purchase and retire for the development. These biodiversity credits must have been generated by biobank sites that have the same threatened species or ecological community as those being affected by the development.

Landowners can also establish a biobank site on their land under a BioBanking agreement and generate credits they can sell. The sale of credits will provide funding to carry out management actions for the ongoing protection and enhancement of biodiversity values at the site. The scheme provides that outcomes cannot be affected by change of land ownership, as BioBanking agreements will be registered on the land title and exist in perpetuity. Participation in the scheme is voluntary.

The BioBanking assessment methodology is used to determine the number and type of credits which must be purchased to offset the impacts of a development and the number and type of credits which can be generated by landowners who enter BioBanking agreements.

Developers who do not obtain a BioBanking statement will still need to comply with current threatened species assessment requirements.

More information is available at www.environment.nsw.gov.au\biobanking.

6. National Landcare Program

From its establishment in 1992 to 30 June 2008, the Australian Government's National Landcare Program (NLP) has committed almost $1 billion for activities targeted at the broad range of primary industries across Australia. These activities protect and improve the natural resource base and reduce off-farm impact for the benefit of all communities.

The NLP has been a major program to support the community landcare movement and improve natural resource management at the farm, regional and national level. The engagement of producers, who manage 60 per cent of land and 70 per cent of diverted water across a vast range of landscapes, is essential to obtain public environmental benefits from privately-owned land.

Under the NLP Community Support component, between 2003–04 and 2007–08, the Australian Government provided $138 million for projects, many of which have resulted in outcomes which have benefited on-farm biodiversity.

Sustainable farming is one of the six national priority areas of the Australian Government's Caring for our Country initiative. Landcare is a vital component of this initiative and the Australian Government has allocated funding of $189.2 million for Landcare over the next five years.

7. Australia's Farming Future

The Australian Government's key climate change initiative for primary producers is Australia's Farming Future. It will provide $130 million over four years to help farmers adapt and adjust to the impacts of climate change and manage their emissions.

The primary industries sector is particularly vulnerable to the impacts of climate change and Australia's Farming Future will provide primary producers with the scientific and economic information to make important commercial decisions.

It comprises programs that support research, development and demonstration, communication and awareness activities, training, and professional adjustment advice and assistance, including for those who choose to leave farming.

The Australian Government also recognizes that best practices in biodiversity conservation will also contribute to climate change adaptation and mitigation.

The $46.2 million Climate Change Research Program is part of Australia's Farming Future. It will fund research projects and on-farm demonstration pilots that address the following priorities:

- reducing greenhouse pollution
- better soil management
- adapting to a changing climate, including research into new adaptation technologies and new techniques.

Case Study: The Australian Minerals Industry and Biodiversity Policy

In line with the mining industry's commitment to sustainable development, the Minerals Council of Australia (MCA) has developed *Enduring Value – The Australian Minerals Industry Framework for Sustainable Development.* Developed with the input of over 900 stakeholders, *Enduring Value* provides a framework for the integration of environmental, social and economic considerations into mining and minerals processing at the site level. Commitment to *Enduring Value*, including public reporting of implementation, is a condition of membership to the MCA.

MCA members, representing over 85 per cent of minerals production in Australia, have a long-standing commitment to sustainable development including the responsible stewardship of natural resources. As members of the MCA, over 30 leading minerals companies are signatories to Enduring Value (see www.minerals.org.au for a list of members). Enduring Value provides operational guidance on the implementation of the International Council on Mining and Metals' 10 principles of sustainable development.

Companies that are signatories to Enduring Value are required in their Australian operations to contribute to conservation of biodiversity and integrated approaches to land use planning through approaches such as:

- respecting legally designated protected areas
- disseminating scientific data on and promote practices and experiences in biodiversity assessment and management
- supporting the development and implementation of scientifically sound, inclusive and transparent procedures for integrated

approaches to land use planning, biodiversity, conservation and mining.

Although Enduring Value was only established in 2005, there are several examples of how biodiversity conservation has been mainstreamed for minerals operations. In 2008, the MCA released an updated land use policy to better-reflect land use, including biodiversity management activities of industry in the landscape (see http://www.minerals.org.au/enduringvalue and http://www.minerals.org.au/environment/Land_Use_Policy).

Several leading companies have also developed policy positions regarding biodiversity, which have direct influence over practices and impacts associated with biodiversity values. Many of these policies are explicit regarding the company's commitment to supporting and protecting World Heritage values, threatened ecological entities, and the approaches taken to avoiding, mitigating, and remediating any impacts. Some examples of company-specific biodiversity policy positions are:

- BHP Billiton: http://bhpbilliton.com/bb/sustainableDevelopment/environmentalCommitment/biodiversityAndLand.jsp
- Rio Tinto: http://www.riotinto.com/ourapproach/7195_biodiversity.asp
- Xstrata: http://www.xstrata.com/sustainability/environment/biodiversity/
- Barrick Gold Corporation: http://www.barrick.com/CorporateResponsibility/Environment/Biodiversity/default.aspx
- Newmont: http://www.newmont.com/en/social/environment/biodiversity/index.asp

To support operational implementation of these policies and principles, the mining industry has worked collaboratively with the Australian Government to provide implementation guidance to support the protection and conservation of biodiversity through mining operations. The Leading Practice Sustainable Development program has helped 'mainstream' biodiversity conservation, and further integrate its consideration into mining industry practices through a series of handbooks which provide leading practice guidance to operations.

Importantly, many of these handbooks have been translated into other languages, and are influencing landscape management practices in developing countries. Further information about the program is available at http://www.ret.gov.au/resources/mining/leading_practice_sustainable_development_program_for_the_mining_industry/Pages/LeadingPracticeSustainableDevelopmentProgramfortheMiningIndustry.aspx

Putting the Biodiversity Policy Framework into Practice

Most minerals operations are in regional and remote Australia. Many companies own or manage much larger tracts of land than those that are subject to extraction activities. Additionally, many companies undertake exploration activities across land owned or leased by others. In regional and remote Australia, minerals companies are a major contributor to natural resource management, including biodiversity conservation outcomes.

Traditionally, the investment that mining operations made in landscape management was mandated by regulatory authorities through the impact assessment process, including the application of the EPBC Act. However, companies now recognise that initiatives to better-manage their non-operational lands beyond duty of care requirements reflect on their 'social license to operate'. Accordingly there has been an increasing effort by minerals companies to invest in landscape management far-beyond mandated requirements.

Appendix IV contains case studies of how the minerals industry in Australia has incorporated biodiversity conservation into its business operations. These are presented to parallel the major phases of industry's intersection with the landscape, and align with our land use policy: the planning and exploration phase; the land management phase; and the rehabilitation phase. Some of these examples include partnerships with Australian Government-funded bodies, and all include local community engagement.

8. How the ecosystem approach has been adopted and employed in mainstreaming biodiversity into sectoral and cross-sectoral strategies, plans and programs

The EPBC Act is the primary mechanism at the national level for ensuring that environmental considerations, including biodiversity, are considered in planning and decision-making processes across all sectors.

Caring for our Country is designed as an integrated initiative with a single clear objective—a business approach to investment with clearly articulated outcomes and priorities and improved accountability.

9. The extent to which biodiversity is included in environmental impact assessments and strategic environmental assessments undertaken at various levels

Level 1 – State Jurisdiction Environmental Impact Assessment (through development control)

All Australian states and territories include biodiversity (or related issues such as impacts on species and habitats) as a matter for consideration in environmental impact assessment (EIA). These considerations apply through development control regulations associated with land use planning, infrastructure development, and natural resource management laws. The regulations generally prescribe:

- a hierarchy of impact assessment processes with environmental impact statements (or their equivalent) as the peak EIA document
- the structure and content of development applications including environmental impact statements.

The threatened species laws of each state also apply EIA (or species impact assessment) aligned with planning, development and resource management laws through EIA standards and governance provisions.

Level 1 – State Jurisdiction Strategic Environmental Assessment (through planning and policy)

All Australian states and territories apply biodiversity principles (or related issues such as impacts on species or habitats) in the making of planning instruments and policies. Strategic environmental assessment (SEA) is generally developed through constraints analyses as a precursor to statutory regional and local land use or resource management planning. SEA may also apply to non-statutory instruments that execute policies at a broad scale and design criteria at the local scale. Application of SEA may be through planning regulations, Ministerial directions, state policies and administrative or design guidelines. Regulations, directions and policies generally prescribe:

- a methodology for SEA
- an outcome for SEA implementation
- a process for review and adaptive management.

Level 2 – Australian Government Jurisdiction Environmental Impact Assessment (through development control)

The Australian Government includes biodiversity (or related issues such as impacts on species and habitats) in EIA for matters of national environmental significance (NES) under the EPBC Act and Regulation. Relevant NES matters include:

- listed threatened species and ecological communities
- listed migratory species
- internationally important wetlands
- the Commonwealth marine environment

- World Heritage properties
- National Heritage places.

Excluding national heritage places, NES matters generally relate to Australia's international treaty obligations. Biodiversity including all species and habitats is applied through EIA on Commonwealth land and Commonwealth actions (development proposals).
The EPBC Act and Regulation prescribe:

- a hierarchy of impact assessment processes with environmental impact statements (or their equivalent) as the peak EIA document
- the structure and content of development proposals including environmental impact statements
- delegations for other agencies to assess impacts and approve proposals on behalf of the Federal Government.

Level 2 – Australian Government Jurisdiction Strategic Environmental Assessment (through planning and policy)

The Australian Government includes biodiversity principles (or related issues such as impacts on species or habitats) through strategic approaches outlined in the EPBC Act. SEA is generally applied through:

- Strategic assessments (accrediting other agencies SEA and EIA processes)
- Ministerial Declarations
- Conservation Agreements
- Threat Abatement Plans
- Conservation Advices
- Bio-regional Plans
- Recovery Plans
- Administrative Guidelines.

These approaches include statutory and non-statutory activities that apply SEA from regional to site scales. They generally prescribe:

- a methodology for SEA
- an outcome for SEA implementation
- a process for review and adaptive management

10. Outcomes achieved through implementation of these measures and the extent to which these measures contribute to the implementation of National Biodiversity Strategies and Action Plans

The Griffin Report explored the alignment of the National Biodiversity Strategy with relevant natural resource management policies and codes of practice and found that:

- The strategy was a ground breaking document for biodiversity conservation.

- State and territory government biodiversity strategies and programs were significantly aligned with the strategy, particularly at the level of overarching goals and strategic directions.

- There is evidence that industry is taking up biodiversity conservation in their business activities, though some specific industry sectors are still lagging. The mainstreaming of biodiversity conservation considerations into business is also being facilitated through partnerships between governments and industry.

11. How biodiversity has been taken into account in programs of overseas development assistance (ODA), scientific and technical cooperation and technology transfer

Australia is engaged with several partnerships and initiatives to protect biodiversity in the context of developing alternative livelihoods and reducing poverty. Australia is currently developing a new Strategy on Development Assistance and the Environment which will describe how biodiversity is taken into account in Australia's International Development Program.

12. Scientific and Technical Cooperation and Technology Transfer

Australian is a financial member of the Global Biodiversity Information Facility (GBIF), a global effort to make specimen and observation data on biodiversity available on-line. Australia has made a concerted effort to make biodiversity data available on-line (see Global Taxonomy Initiative) and also provides information to the Catalogue of Life and is in partnership with the Encyclopedia of Life, global initiatives to make species information available. These global collaborations have been fundamental in allowing transfer of technological knowledge.

Australia provides bursaries via the National Taxonomy Research Grant Program (NTRGP) in the Australian Biological Resources Study for scientists to travel to conferences and workshops to present information on the taxonomy of Australia's biota, supporting scientific cooperation. The NTRGP has been restructured and now targets early career researchers and information transfer from senior researchers to junior researchers and students. It also provides research funding to any international scientists to study the Australian biota. In 2008, ABRS, the University of Adelaide, the Environmental Futures Network and the Atlas of Living Australia cofunded a national skills workshop for doctoral students pursuing research in taxonomy and systematics. The workshop was highly successful involving nearly 30 students from a range of institutions around the country.

In 2008, Australia hosted GBIF's Taxonomic Database Working Group, an international meeting of biodiversity infomatricians in Perth. A number of Australian institutions have provided technical support and training to sister institutions in Pakistan, South-east Asia and Oceania over the past two years.

Australia provides a member to the Diversitas Scientific Committee and the board of the Global Invasive Species Program (a clearinghouse mechanism for the CBD), and provides scientific expertise to the GEOBON working group.

Forests

Australia's $200 million International Forest Carbon Initiative is supporting international efforts to demonstrate that reduced emissions from deforestation and forest degradation (REDD) can be part of an equitable and effective future global outcome on climate change. A central element of the initiative is taking practical action on REDD through collaborative Forest Carbon Partnerships with Indonesia and Papua New Guinea.

Within IFCI, Australia's $15.8 million Asia-Pacific Forestry Skills and Capacity Building Program is supporting biodiversity outcomes by increasing forest management expertise—including encouraging forest rehabilitation and promoting legal and sustainable forestry practices.

Marine

The Australian Government contributes to a range of regional marine and coastal biodiversity related fora both financially and with technical assistance to enhance the conservation of marine and coastal biodiversity. These fora include:

- Participation in, and technical support for, the Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security (CTI), which is a recent collaborative partnership between Indonesia, Malaysia, the Philippines, the Solomon Islands, Timor Leste and Papua New Guinea to enhance the protection and conservation and sustainable management of marine and coastal biodiversity and resources.

- Membership of the APEC Marine Resources Conservation Working Group, which supports projects that bring together best practice frameworks for action on marine conservation and management issues.

- Collaborations with non-governmental organisations, such as one with the Nature Conservancy and the World Wide Fund for Nature on a study within Fiji, Indonesia and the Phillipines demonstrating the importance of marine protected areas as a conservation tool that brings benefits to local communities.

- Being a member and major donor of the Pacific Regional Environment Programme, supporting ongoing marine biodiversity conservation activities in the Pacific Region and providing technical and financial assistance to key marine biodiversity related activities. Activities such as the development of the Pacific Island Marine species Programme and Action Plans for Whales and Dolphins, Marine

Turtles and Dugongs (2008–2012) and in country training workshops on marine conservation techniques.

- A strong commitment to advancing practical actions in Pacific fisheries under the Vava'u Declaration on Pacific Fisheries Resources. Australia provides assistance to Pacific island countries to manage their fisheries resources through support for fisheries-related Pacific regional organisations, the Pacific Islands Forum Fisheries Agency and the Secretariat of the Pacific Community. These agencies provide high quality technical assistance to member countries to manage their coastal and oceanic fisheries. Australia is also working with the governments of several small island states in the Pacific region to strengthen national fisheries authorities.

- Conducting a number of capacity building workshops and technology transfer programs to assist developing states to conserve and manage their fish stocks. The Australian Government has also encouraged sustainable fisheries management in the region and globally through participation in the Pacific Islands Forum Fisheries Agency (FFA); the Regional Plan of Action to Promote Responsible Fishing Practices and Combat Illegal, Unreported and Unregulated Fishing in the Region—a cooperative arrangement between 10 south-east Asian countries and Australia; and through the High Seas Task Force, an alliance including Australia and seven other developed states, and the FFA, which has the primary aim of fostering effective actions against IUU fishing.

- Specific development assistance provided by the Australian Government to activities targeted at improving fisheries governance and compliance, particularly in the south-east Asian and South Pacific regions. Australia established the Pacific Patrol Boat program which provides South Pacific countries with a credible maritime surveillance capability, enhancing the capacity of these countries to protect their marine resources.