

BIODIVERSITY PROTECTION ARTICLES

INCENTIVES FOR BIODIVERSITY CONSERVATION IN NSW, AUSTRALIA*

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I. INTRODUCTION

In the state of New South Wales (NSW), Australia, incentives for biodiversity conservation primarily involve financial incentives and taxation concessions. Disincentives to discourage impacts on biodiversity have primarily been procedural and regulatory. However, the new Biodiversity Banking and Offsets Scheme (BioBanking) in NSW aims to introduce market-based incentives both to encourage conservation and discourage impacts on biodiversity.¹

“The conservation of endangered animals, plants, and ecosystems is one of the greatest environmental challenges facing Australia today.”² In NSW, around 1,000 plants, animals, and eco-

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1. NSW Govt., Dept. Env. & Climate Change, *BioBanking*, <http://www.environment.nsw.gov.au/biobanking/> (Nov. 20, 2008) [hereinafter *BioBanking*].

2. *Id.*

logical communities are listed as threatened.³ “The key reason is habitat degradation and loss, initially from over-grazing and clearing for agriculture, and more recently from the clearing of native vegetation for urban development.”⁴ From 2006 to 2007, the total reduction in the area of woody vegetation in NSW was 243,155 hectares, of which 202,437 hectares were attributable to fire, 18,667 to cropping pasture and thinning, 18,246 hectares to forestry, and 3,805 to rural and major infrastructure (including roads, buildings, powerlines, water pipelines, and mine development).⁵

To address biodiversity loss, the NSW State Plan identifies targets for better outcomes for native vegetation, biodiversity, land, rivers, and coastal waterways.⁶ This includes increasing the extent and condition of native vegetation, improving the sustainability of native fauna populations, and increasing the recovery of threatened species, populations, and ecological communities, as well as reducing the impact of invasive species.⁷ However, the State Plan also recognizes other priorities such as a commitment to economic growth, increasing business investment, and ensuring a supply of land and housing that meets demand.⁸

Innovative approaches are therefore needed to tackle the challenge of balancing development needs (to provide the community with new housing, jobs and amenities), while also conserving biodiversity for the future.

II. FINANCIAL INCENTIVES

Australian State and Federal Governments have provided substantial funds as incentives for “natural resource manage-

3. *Id.* at <http://www.environment.nsw.gov.au/natureconservation.htm>.

4. *Id.* at <http://www.environment.nsw.gov.au/biobanking/>.

5. Woody vegetation is defined as “woody communities with 20% crown cover or more (e.g., woodlands, open forests and closed forests) that are taller than about 2 metres.” NSW Govt., Dept. Env. & Climate Change, *NSW Woody Vegetation Change, 2006 to 2007 Report, Woody Vegetation 2*, <http://www.environment.nsw.gov.au/resources/vegetation/Woodyvegchange2006-07.pdf> (Mar. 2008).

6. NSW Govt., Dept. Env. & Climate Change, *A New Direction for NSW: State Plan Summary 7*, 52, http://www.nsw.gov.au/stateplan/pdf/Summary_complete.pdf (Nov. 2006) [hereinafter *A New Direction for NSW*].

7. *A New Direction for NSW*, *supra* n. 6, at 53.

8. *Id.* at 7.

ment,” which usually means managing environmental issues associated with agriculture (including biodiversity), giving little attention to other industries such as mining.⁹ For example, one federal government program, known as the Natural Heritage Trust (NHT), invested \$3 billion, and aimed to promote “an integrated, long-term approach to the conservation and sustainable management of Australia’s land, water, native vegetation, and biodiversity.¹⁰ The NHT has three overarching objectives.”¹¹ These were the following:

- (1) [b]iodiversity conservation—the conservation of Australia’s biodiversity through the protection and restoration of terrestrial, freshwater, estuarine and marine ecosystems and habitat for native plants and animals;
- (2) [s]ustainable use of natural resources—the sustainable use and management of Australia’s land, water and marine resources to maintain and improve the productivity and profitability of resource based industries; and
- (3) [c]ommunity capacity building and institutional change—support for individuals, landholders, industry and communities with skills, knowledge, information and institutional frameworks to promote biodiversity conservation and sustainable resource use and management.¹²

Another significant, related federal government program was the National Action Plan for Salinity and Water Quality (NAP).¹³ This program committed funds of \$1.4 billion by the Australian government—state and territory—from 2000 to 2008 to fund the “development of integrated regional or catchment natural resource management plans and implementation of targeted high

9. Stefan Hajkowitz, *The Evolution of Australia’s Natural Resource Management Programs: Towards Improved Targeting and Evaluation of Investments*, 26 *Land Use Policy* 471 (2009) (available at www.Elsevier.com/locate/landusepol) (copy on file with *Stetson Law Review*).

10. Australian Govt., Dept. of Env., Water, Heritage & the Arts, *Portfolio Budget Statements 2006–07* 4.1, <http://www.environment.gov.au/about/publications/budget/2006/pbs/deh-s4.html> (last updated Oct. 4, 2008) [hereinafter *Portfolio Budget Statements*].

11. *Id.*

12. *Id.*

13. *Id.*

priority actions to address salinity, particularly dryland salinity, and deteriorating water quality in priority regions across Australia.”¹⁴ This program provided limited incentives for biodiversity conservation where biodiversity was affected by salinity.¹⁵

More recently, federal government programs began to focus more directly on biodiversity outcomes alone—not just as a subset of natural resource management. In 2008, the new Caring for Our Country program was announced, integrating natural resource management programs and providing \$2.25 billion in funding over five years, from 2008 to 2013.¹⁶

The program focuses

on achieving strategic results and invests in six national priority areas:

- a national reserve system,
- biodiversity and natural icons,
- coastal environments and critical aquatic habitats,
- sustainable farm practices,
- natural resource management in remote and northern Australia, and
- community skills, knowledge and engagement.¹⁷

Although the Caring for Our Country program is in the early/transitional stages of implementation, an example of how the program will provide incentives for biodiversity conservation is the Box Gum Grassy Woodland Project.¹⁸ This type of woodland is listed under the Environmental Protection and Biodiversity Conservation Act 1999 and provides habitat for nineteen threat-

14. *Id.*

15. *Id.*

16. Australian Govt. Natl. Resource Mgt. Team, *Caring for Our Country*, <http://www.nrm.gov.au/funding/future.html> (last updated Dec. 9, 2008) [hereinafter *Caring for Our Country*].

17. *Id.*

18. *Id.* at <http://www.nrm.gov.au/stewardship/box-gum/index.html> (last updated Dec. 14, 2008).

ened species.¹⁹ The Project provides stewardship payments to landowners for conserving and managing the woodland on their property through long-term contracts (up to fifteen years).²⁰

The NSW Government has also established programs to provide incentives for natural resource management. In response to concerns about the level of clearing in NSW and its associated impact on biodiversity, water quality, and soil conservation, the NSW Government established a \$436 million plan to help farmers protect native vegetation.²¹ This program was in response to a proposal from the Wentworth Group of concerned scientists for a “radical new way of managing native vegetation in NSW.”²²

The Wentworth Model for Landscape Conservation had five interdependent components:

1. [s]trengthening and simplifying native vegetation regulations, ending the broadscale clearing of remnant vegetation and protected regrowth;
2. [s]etting environmental standards and clarifying responsibilities for native vegetation management which will, over time, create healthy rivers and catchments;
3. [u]sing property management plans to provide investment security, management flexibility and financial support for farmers;
4. [p]roviding significant levels of public funding to farmers to help meet new environmental standards and support on-ground conservation; and

19. *Id.*

20. Australian Govt. Natl. Resource Mgt. Team, *Fact Sheet 1, Stewardship Payments to Conserve Box Gum Grassy Woodland* 1, <http://www.nrm.gov.au/stewardship/pubs/bggw-factsheet1.pdf>.

21. NSW Govt., Dept. Env. & Climate Change, *Native Vegetation Management*, <http://www.environment.nsw.gov.au/vegetation/nvmanagement.htm> (last updated Oct. 2, 2008).

22. Stuart Smith, *Native Vegetation: An Update* 7, <http://www.parliament.nsw.gov.au/prod/parlment/publications.nsf/key/NativeVegetation:AnUpdate> (June 2006).

5. [r]estructuring institutions by improving scientific input into policy setting, improving information systems, and regionalizing administration.²³

These reforms also establish thirteen regional Catchment Management Authorities (CMAs) to deliver the \$436 million in financial support from the NSW and federal governments to help farmers and other local groups repair damaged rivers and landscapes.²⁴ At the same time, the federal NHT and NAP programs were providing the majority of their funding through CMAs.²⁵ To deliver the funding provided by state and federal governments, the CMAs administer grant programs focusing mainly on individual landowners and community groups.

The CMAs use a variety of mechanisms to distribute incentive payments for biodiversity. Tender or reverse auction mechanisms are used by CMAs to provide transparency in decision-making and improve efficiency. As a result, substantial areas of native vegetation have been conserved or improved, including approximately 500,000 hectares between December 2005 and December 2007.²⁶

Delivering tangible changes and measuring the impact of these incentive programs on the condition of natural resources is very difficult.²⁷ Hajkowics suggests that this is due to insufficient evaluation, targeting, and monitoring of investments, partly because of increasing program expenditures directed at hard-to-quantify environmental outcomes, which have outstripped scientific and economic research capability.²⁸

23. *Id.*

24. *Catchment Management Authorities Act 2003—Schedule 1*, http://www.austlii.edu.au/au/legis/nsw/consol_act/cmaa2003316/sch1.html (accessed Apr. 24, 2009) (listing the thirteen regional CMAs); NSW Govt., Hawkesbury-Nepean Catchment Management Authority, *New Native Vegetation Laws Welcomed by CMA*, <http://www.hn.cma.nsw.gov.au/news/2433.html> (last updated Nov. 16, 2005).

25. *Portfolio Budget Statements*, *supra* n. 10, at 4.1.

26. NSW Govt., Dept. Env. & Climate Change, *NSW Native Vegetation Report Card 1 July to 31 December 2007*, <http://www.environment.nsw.gov.au/resources/vegetation/JulyDec2007reportcard.pdf> (Apr. 2008).

27. Hajkowics, *supra* n. 9; Australian Natl. Audit Off., *Regional Delivery Model for the Natural Heritage Trust and the National Action Plan for Salinity and Water Quality, Audit Report No. 21 2007–08*, http://www.anao.gov.au/uploads/documents/2007-08_Audit_Report_21.pdf.

28. Hajkowics, *supra* n. 9.

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Increasing awareness of these issues is likely to change incentive programs in the future. The Caring for Our Country program, for example, is taking “a business approach to investment.”²⁹ This means:

- being explicit about desired outcomes;
- directing funding to achieve those outcomes;
- choosing the “most efficient and effective ways of taking action and the organi[z]ations that are best placed to deliver” (rather than funneling all funding through regional CMAs, enabling non-government, regional, local government, and state and federal agencies to gain access to a greater proportion of funds to help achieve national priorities);
- setting short, one to three year targets;
- simplifying and streamlining administration;
- being “accountable to our stakeholders for our actions and achievements; and
- focus[ing] on achieving results and reducing red tape.”³⁰

III. TAXATION CONCESSIONS

The Australian government has introduced a number of incentives for conservation as taxation concessions under the Income Tax Assessment Act of 1997.³¹ For example, income tax deductions or capital gains tax exemptions are available to landowners who voluntarily donate property to an eligible environ-

29. *Caring for Our Country*, *supra* n. 16.

30. *Id.*

31. Australian Govt., Dept. of Env., Water, Heritage & the Arts, *Tax Incentives for Conservation—Fact Sheet*, <http://www.environment.gov.au/biodiversity/publications/fact-sheets/incentives.html> (last updated Jan. 19, 2009).

mental organization.³² Property includes land, buildings, shares, vehicles, and machinery.³³

There are also incentives under the Act for landowners who enter into a conservation covenant.³⁴ An income tax deduction is available for any “decrease in land value as a result of entering into a conservation covenant (provided the landowner receives no payment for entering into it); and, where a conservation covenant is entered into, CGT provisions will apply as if it were a sale or gift of the land.”³⁵ The amount claimable as a deduction is the difference between the market value of the land just before the covenant was entered into and its “decreased market value just after that time, but only to the extent that the decrease is attributable to you entering into the covenant.”³⁶

This potentially significant form of taxation concession is available to landowners without donating land to an environmental organization; however, a conservation covenant must hold the following features:

- a. be in perpetuity and, where possible, attached to the title of the land;
- b. be approved by the Minister for the Environment and Water Resources (either directly or through being part of an approved conservation covenant program);
- c. result in a loss of market value of more than \$5000 (or be attached to land acquired less than 12 months before the covenant was attached); and
- d. be entered into with a deductible gift recipient or the Commonwealth, a State, a Territory or local governing body or an authority of the Commonwealth, a State or a Territory.³⁷

32. *Id.*

33. *Id.*

34. *Id.*

35. *Id.*; *Income Tax Assessment Act 1997* (NSW) (available at http://www.austlii.edu.au/au/legis/cth/consol_act/itaa1997240/).

36. Australian Tax Off., *Conservation Covenant Concessions*, <http://www.ato.gov.au/nonprofit/content.asp?doc=/content/19507.htm> (last updated Aug. 6, 2008).

37. Australian Dept. Env., Water, Heritage, and Arts, *Tax Incentives for Conservation—Fact Sheet*, <http://www.environment.gov.au/biodiversity/publications/fact-sheets/>

To gain the status of an approved conservation covenant program, a conservation covenant must be “permanent and registered on the title to the land” (binding on all successors in title).³⁸ The conservation covenant “restricts or prohibits certain activities on the land that could degrade the environmental values of the land.”³⁹ A management plan for the land must be formulated, “setting out management actions binding on, and to be carried out or adhered to by, the land owner and/or the administering body.”⁴⁰

The administering body of the covenanting program is also required to “provide ongoing assistance to the landowner,” such as “access to management/technical advice and assistance in return for conservation management activity,” and there may be “financial assistance for specific management actions.”⁴¹ The administering body is to have strategies for monitoring compliance with the terms and conditions of a conservation covenant and plan of management and is to be “empowered, through legislation, to enforce the terms and conditions of a conservation covenant and plan of management.”⁴² “Varying or terminating a conservation covenant” is generally only available in exceptional circumstances.⁴³

In addition to the tax concessions provided by the Australian federal government, in NSW there are also exemptions to land taxes and relief from local government rates for land to which a conservation covenant applies.⁴⁴

incentives.html (last updated Jan. 19, 2009).

38. *Income Tax Assessment Act 1997* (Cth) s. 31-5(5)(b) (available at <http://www.comlaw.gov.au/ComLaw/Legislation/ActCompilation1.nsf/TOC/795881B7EB4C4424CA256F71004EF200?OpenDocument&ID=C2004C00441!>; *select* 31-5: Deduction for Entering into Conservation Covenant).

39. *Id.* at s. 31-5(5)(a).

40. See Australian Dept. Env., Water, Heritage, and Arts, *Conservation Covenanting Program—Application for Ministerial Approval* § 5, <http://www.environment.gov.au/biodiversity/programs/covenanting/guidelines.html> (last updated Feb. 11, 2007) [hereinafter *Conservation Covenanting Program*] (discussing the plan of management requirements and how the plan should be structured).

41. NSW Govt., Dept. Env. & Climate Change, *Conservation Agreements: A Voluntary Option for Landholders with Land of Very High Conservation Value*, <http://www.environment.nsw.gov.au/resources/cpp/07256conservagreements.pdf> (Sept. 2007).

42. *Conservation Covenanting Program*, *supra* n. 40, at § 7.

43. *Id.* at § 8.

44. See e.g. *Land Tax Management Act 1956* (NSW) s. 10 (setting forth the NSW tax exemption); *Local Government Act 1993* (NSW) div. 3, s. 555 (calling for public benefit

To date, biodiversity incentives delivered as taxation concessions have had only limited uptake. As of June 30, 2006, 204 landowners in NSW had entered into conservation covenants (a total of 17,049 hectares or 0.0002% of the total area of NSW).⁴⁵ As of 30 June 2006, on a per area basis, landowners are expressing a preference for establishing non-binding wildlife refuges to protect and conserve wildlife (total area 1,930,885 hectares).⁴⁶ Taxation concessions are not available for wildlife refuges.⁴⁷ The requirement for a legally binding covenant over the land may be a significant disincentive to entering into a conservation covenant despite the taxation concessions.

IV. MARKET-BASED APPROACHES

The New South Wales Department of Environment and Climate Change (DECC) is also establishing a new program to provide incentives to landowners to manage land for biodiversity without relying on taxation concessions or government funding.⁴⁸ This new program is known as the Biodiversity Banking and Offset Scheme (BioBanking). BioBanking establishes a market in biodiversity credits to reward landholders for managing land for conservation.⁴⁹

BioBanking is established under Part 7A of the Threatened Species Conservation Act of 1995 (TSC Act).⁵⁰ The Act establishes the BioBanking Assessment Methodology and the BioBanking Trust Fund; it provides the framework to create biobank sites, issue biobanking statements, and manage biodiversity credit transactions.⁵¹ This legal framework provides for the creation of

assessments).

45. NSW Govt., Dept. Env. & Climate Change, *Statistics about the Conservation Partners Program*, <http://www.environment.nsw.gov.au/cpp/ConservationPartnersStatistics.htm> (updated Sept. 5, 2008).

46. *Id.*

47. NSW Govt., Dept. Env. & Climate Change, *Wildlife Refuges*, <http://www.environment.nsw.gov.au/cpp/WildlifeRefuges.htm> (last updated Mar. 10, 2008).

48. *See generally BioBanking*, *supra* n. 1 (providing a brief and general description of the NSW BioBanking initiative).

49. *See id.* (answering the question, "What is Biobanking?").

50. *Threatened Species Conservation Act 1995* (NSW) pt. 7A(127A)(1) (establishing the BioBanking system).

51. *Id.* at pt. 7A(1)(127A)(2).

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biodiversity credits that can be sold on the open market.⁵² It also provides comprehensive monitoring and compliance arrangements that offer an escalating response to non-compliance.⁵³ The TSC Act also establishes public registers for biodiversity credits, biobank sites, and biobanking statements as well as a review of the scheme after two years of operation (in 2010).⁵⁴

BioBanking commenced on July 11, 2008 with the publication of the BioBanking Assessment Methodology⁵⁵ and the Threatened Species Conservation (Biodiversity Banking) Regulation, 2008.⁵⁶ The level of participation by landowners (and therefore the success of the scheme in providing biodiversity incentives) is not yet known. Within two months of scheme commencement, thirteen landowners had registered expressions of interest to establish biobank sites.

The level of participation will be determined by the perceived benefits of establishing a biobank site. The benefits include the following, which enable landowners to:

- secure funding for conservation management into the future;
- ensure biodiversity values are conserved in the future;
- retain land in private management and ownership;
- gain profit from the biodiversity credits sale proceeds (over and above the funds needed for management of the site); and
- use the land for other compatible purposes (e.g. ecotourism, cultural uses, and carbon sequestration).⁵⁷

52. *Id.* at pt. 7A(3).

53. *Id.* at pt. 7A(2)(127L)–(127R).

54. *Id.* at pt. 7A(9).

55. NSW Govt., Dept. Env. & Climate Change, *BioBanking Assessment Methodology*, <http://www.environment.nsw.gov.au/biobanking/assessmethodology.htm> (last updated July 11, 2008).

56. *Threatened Species Conservation (Biodiversity Banking) Regulation 2008* (NSW) (available at <http://www.legislation.nsw.gov.au/viewtop/inforce/subordleg+291+2008+FIRST+0+N/>).

57. See generally NSW Govt., Dept. Env. & Climate Change, *BioBanking: Biodiversity Banking and Offsets Scheme, Scheme Overview 2–5*, <http://www.environment.nsw.gov.au/>

The market price and demand for credits will also be significant factors in participation rates and the success of the scheme in providing biodiversity incentives. These aspects will not be known for some time; however, the two-year review of the scheme will provide an opportunity to review these aspects, as well as evaluate barriers to entry.

A. Drawing on Experience to Develop the BioBanking Scheme

DECC has drawn on its experience in developing and using economic instruments to provide constructive solutions to environmental problems, particularly when they involve trade-offs between economic development and environmental sustainability.⁵⁸ This approach allows development to occur in a sustainable way without putting extra stress on the environment. This experience includes the establishment of the following:

- (1) the Hunter River Salinity Trading Scheme, which has halved salinity while four new mines have opened, expanding coal mining by [46] percent, creating [eight hundred] new jobs, and adding \$1.4 billion per year of additional production;⁵⁹
- (2) the South Creek Bubble License in Western Sydney, which has reduced total phosphorus by [88] percent.⁶⁰ Sydney Water estimates that it will have saved [\$45] million by 2008 under a Bubble License compared to conventional approaches.⁶¹

resources/biobanking/biobankingoverview07528.pdf (Nov. 2007) [hereinafter *Biodiversity Banking*] (providing a detailed overview of the anticipated benefits drawn of the NSW BioBanking Scheme).

58. See NSW Govt., Dept. Env. & Climate Change, *Load-Based Licensing: A Fairer System that Rewards Cleaner Industry*, <http://www.environment.nsw.gov.au/resources/licensing/lbl/lblbooklet.pdf> (Apr. 2001) (evidencing the Department's experience in using economic instruments in solving environmental problems).

59. *Id.* at 11 (discussing the Hunter River Salinity Trading Scheme).

60. *Id.* (discussing the Department's experience with the South Creek Bubble Licensing).

61. *Id.* (documenting the success of the South Creek Bubble Licensing by showing the change in concentration of certain pollutants over time).

DECC has also drawn on learnings from the United States, which has led mitigation and conservation banking since the 1980s. This has involved creating new wetlands to provide compensation for wetlands lost to development where avoidance or on-site mitigation is not feasible.⁶² Conservation banking also applies to endangered and threatened species.⁶³ This involves a conservation easement on land containing particular listed species that are conserved and managed in perpetuity.⁶⁴ Credits for species are sold to offset impacts occurring elsewhere to the same species.⁶⁵

The United States environmental banking industry, particularly in areas such as California, Florida, and North Carolina, has secured thousands of hectares for conservation at the same time that development pressure is increasing.⁶⁶ The industry has been responsible for private investment in conservation in advance of the impact and has often been more effective than on-site mitigation.

Conservation banking has been used to establish fauna corridors on private land between national parks, and to create specialized reserves for species such as the Aleutian Canada Goose, Burrowing Owl, Giant Garter Snake, and San Joaquin Kit Fox.⁶⁷ Commercial and not-for-profit organizations are active participants in the industry. Not-for-profit organizations often take on responsibility for the long-term management of conservation ar-

62. See Env'tl. Def., *Mitigation Banking as an Endangered Species Conservation Tool* 3, http://www.edf.org/documents/146_mb.PDF (Nov. 1999) (tracing some of the earlier principles of conservation banking schemes to their origins in the United States by examining wetland mitigation).

63. See *id.* at 8 (discussing the similarities and differences between mitigation of wetlands and endangered species). In the same way that the wetland mitigation programs in Florida and California blazed the path for the recent BioBanking schemes to protected ecosystems in NSW, the United States mitigation programs also enabled the extension of BioBanking schemes to endangered or threatened species. See *id.* at 8, app. I (providing case studies of selected endangered species mitigation banks).

64. See generally *id.* at 10, 20 (describing the credit system applied to species and giving concrete examples).

65. *Id.* at 2, n. 2 (discussing acreage in the context of North Carolina's purchase of woodpecker credits in anticipation of offsetting the future construction of a highway through a protected woodpecker habitat elsewhere).

66. *Id.*

67. See Wildlands, *Ecosystem and Mitigation Banking, Bank Listing*, <http://www.wildlandsinc.com/ecosystem.html> (accessed Apr. 24, 2009) (providing a table illustrating several prominent wildlife conservation banks).

was supported by non-wasting endowments established through sales of credits.

The success of conservation banking in California has been attributed to the relatively high number of threatened species that created opportunities for banking, strong enforcement of biodiversity protection laws, and strong development pressure; this results in the demand for quick and effective ways to counterbalance ecological impacts and transfer liability for long-term habitat management.⁶⁸

Many lessons have been learned about the need for robust enforcement and openness to competition. These have been addressed in the BioBanking Compliance Assurance Strategy⁶⁹ as well as the design of the credit market, enabling competitive supply and purchase of credits.

During its development the DECC also looked at the Victorian Government's BushTender⁷⁰ and Bush Broker programs as well as conservation auctions in the Liverpool Plains and Southern Rivers of NSW.⁷¹ Experiences from carbon trading programs have also been used to develop the scheme.

The scientific basis for this new market-based approach, as set out in the BioBanking Assessment Methodology, draws from the rapid techniques for biodiversity and threatened species assessment developed for the Property Vegetation Plan process under the Native Vegetation Act of 2003.⁷²

The design of the BioBanking Scheme is being developed to specifically address the requirements of NSW, based on its cur-

68. See Env'tl. Def., *supra* n. 62, at 1–2 (discussing generally California's success in mitigation banking).

69. NSW Gov't., Dept. Env. & Climate Change, *Compliance Assurance Strategy*, <http://www.environment.nsw.gov.au/biobanking/compliancestrategy.htm>; (July 17, 2008) [hereinafter *Compliance Assurance Strategy*].

70. Victoria Gov't., Dept. Sustainability & Env., *BushTender—The Landholder Perspective: A Report on Landholder Responses to the BushTender Trial*, <http://www.dse.vic.gov.au/DSE/nrence.nsf/LinkView/A743FABE0C2E1D46CA25720C001EAA29BC26B51A1B54BE06CA2573B6001EFAEF>; *select* BushTender Landholder Report—2006 (last updated June 27, 2008).

71. *Id.*

72. Gibbons, P., Ayers, D., Seddon, J., Doyle, S. & Briggs, S., *BioMetric 2.0: A Terrestrial Biodiversity Assessment Tool for the NSW Native Vegetation Assessment Tool, Operational Manual* (July 2008) (available at http://www.environment.nsw.gov.au/resources/nature/NVAT_Biometric_manual_2.pdf).

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rent experience of using offsets and lessons learned elsewhere. The following learnings have been incorporated:

- (1) establishing a clear objective for biodiversity conservation under the scheme through the improve or maintain test;
- (2) ensuring there is a robust legal framework to protect sites conserved and managed under the scheme;
- (3) establishing clear enforcement mechanisms that should manage actions not properly carried out on a biobank site;
- (4) using accredited consultants for the collection of biodiversity data;
- (5) annual reporting mechanisms linked to payments to landowners to assist in managing and conserving biodiversity on their property;
- (6) linking with state, regional and local planning requirements, such as through the use of incentives to strategically place BioBank sites in priority areas, such as regional corridors (for example, by providing more credits to sites with both high site values and high landscape values under the assessment methodology);
- (7) providing transparent systems for recording and monitoring key elements of the scheme and reducing red tape involved with the administration of the scheme;
- (8) minimizing barriers to entry, including ensuring that there are sufficient resources to administer the scheme and support participation;
- (9) providing free and timely flow of market information.⁷³

73. See generally *Compliance Assurance Strategy*, *supra* n. 69, at 1 (discussing the comprehensive strategy of the scheme, taking into consideration the Department's experience and observations from other parts of the world).

B. How the BioBanking Scheme Works

“Credits are created when landowners enter into binding perpetual commitments to actively manage their land’s biodiversity values.”⁷⁴ This land is then known as a “biobank site.” “The agreements are attached to the land’s title,” and include provisions that require the current and future landowners to manage the site for conservation and prevent development or activities that would damage the biodiversity values.⁷⁵

“When [landowners] sell their credits, a specified minimum amount of the sale proceeds is paid into a trust fund.”⁷⁶ “[A]nnual payments are made to the landowner” from the BioBanking Trust Fund.⁷⁷ “This endowment runs with the land in perpetuity, benefiting current and then future owners.”⁷⁸

Reversing decline of biodiversity values on land requires active management. Achieving permanent improvement in biodiversity values requires adequate and ongoing financial support for biodiversity management. BioBanking has been designed to provide an ongoing income stream to current and future landowners through the sale of biodiversity credits generated on biobank sites, within a clear legislative framework to ensure the integrity and accountability of the scheme is upheld.⁷⁹

Under BioBanking, landowners earn income through generating biodiversity credits if they commit to enhance and protect biodiversity values on their land in perpetuity.⁸⁰ Landowners can decide which areas of their land they will include as the biobank site. This allows economic activities, such as primary production, to continue on other parts of their land, while earning an income from protecting and enhancing areas with biodiversity values.

Potential buyers of credits include developers or mining companies who wish to, or are required to offset the unavoidable impacts of their projects on threatened species.

74. *Id.*

75. *Id.* at 2 (providing the background to BioBanking in NSW).

76. *Id.* at 1–2.

77. *Id.* at 2.

78. *Id.* (describing the credit system for BioBanking).

79. *See id.* at 1–2 (discussing the compliance assurance mechanisms that are built into the BioBank framework).

80. *Id.* at 1.

Governments, [corporations,] or philanthropic organisations may also use the scheme to convert a one-off investment into a perpetually endowed conservation outcome.⁸¹

The overall price paid for each credit will be based on a “combination of the minimum price determined by the Total Fund Deposit” (the amount required to cover the management actions and reporting on the BioBank site in perpetuity) “and any additional return negotiated between the landholder and the buyer” to cover the establishment costs, field assessment, and preparation of management plans.⁸² The landowner may also consider the opportunity cost (for example, land value) and factor any potential profit/risk into the price.⁸³

DECC will provide guidance to landowners to help them price their credits.⁸⁴ In addition, the public register for biodiversity credits will help facilitate the biodiversity credit market by providing current information on the types of credits available and the price of recently sold biodiversity credits.⁸⁵

Monitoring compliance will involve:

- (1) requiring biobank site owners “to track and monitor their performance through record keeping, documentation, and reporting of results to the DECC for review and assessment.”⁸⁶
- (2) inspections by DECC targeted to ensure that the quality of information supplied in the annual reports is reliable, check progress with management actions and verify compliance responsibilities are being met by site owners;⁸⁷
- (3) compliance audits by DECC to independently and systematically verify the documented process used to assess the application of the BioBanking Assessment

81. *Id.* at 2.

82. *Biodiversity Banking*, *supra* n. 57, at 12, 14.

83. *Id.* at 12.

84. *Id.* at 15.

85. *Id.*

86. *Compliance Assurance Strategy*, *supra* n. 69, at 5. “Yearly reports submitted by the landowner demonstrating compliance with the biobanking agreement will be directly linked to annual payments from the BioBanking Trust Fund.” *Id.*

87. *Id.*

Methodology and compliance with biobanking agreements;⁸⁸ and

- (4) notification of complaints made by members of the public to detect “certain types of non-compliance and for highlighting areas or issues of concern.”⁸⁹

Part 7A of the TSC Act provides a range of enforcement responses, which are likely to be used depending on the environmental significance of the non-compliance and the risk that it poses to the lawful and credible operation of the scheme.⁹⁰ An escalating response to non-compliance will be used, including “requests for remedial action, warning letters and inspections.”⁹¹

However, for more serious non-compliance, the TSC Act also includes provisions to:

- (1) withhold annual payments from the BioBanking Trust Fund where management actions have not been carried out;
- (2) direct the owner of a biobank site to carry out work at their own cost to rectify a breach of a biobanking agreement;
- (3) suspend or cancel a biodiversity credit;
- (4) allow the DECC to enter the land and carry out necessary work . . . to ensure compliance with the requirements of a biobanking agreement and recover the costs of conducting those works;
- (5) allow DECC to seek an award of damages against the owner of a biobank site for breaking a biobanking agreement;
- (6) apply to the Land and Environment court to have the land transferred to a more responsible land manager where a person has contravened a biobanking agreement; and

88. *Id.*

89. *Id.*

90. *Id.* at 3.

91. *Id.* at 7.

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(7) vary or terminate a biobanking agreement.⁹²

The scheme helps protect biodiversity through the improve or maintain test for biodiversity values established under the Bio-Banking Assessment Methodology.⁹³ This test means:

- avoiding important areas for conservation of biodiversity values on-site, including over-cleared vegetation types, endangered ecological communities and habitats for threatened species that cannot withstand further loss (because only a small number of populations remain or the remaining populations are essential for the survival of the species); and
- using credits to offset impacts on other areas.⁹⁴

V. INCENTIVES FOR AVOIDANCE OF IMPACTS ON BIODIVERSITY

In conserving biodiversity, incentives for avoidance of impacts are as important as positive incentives for conservation. In NSW, regulatory and procedural incentives have been used to encourage avoidance of impacts on areas of high biodiversity value.⁹⁵ The BioBanking Scheme will also introduce a market-based incentive for avoidance.⁹⁶

In NSW, different regulatory arrangements exist for rural areas (and associated agricultural activities) as opposed to urban areas and development activities.⁹⁷ In rural areas, landholders are generally required to obtain a property vegetation plan to obtain approval, although there are various exclusions to this requirement: for example, activities that are considered routine agricultural management activities.⁹⁸ The Act has achieved a dra-

92. *Id.*

93. *Biodiversity Banking, supra* n. 57, at 4.

94. *Id.* at 4, 11.

95. *Id.* at 2.

96. *Id.*

97. *Land Tax Management Act 1956* (NSW) s. 10AA.

98. *Threatened Species Conservation (Biodiversity Banking) Regulation 2008* (NSW) pt. 3(11)(c).

matic reduction in approved clearing.⁹⁹ Prior to the legislation coming into force, consents to clear native vegetation stood at around 100,000 hectares per year. Currently, approved clearing over two years from 2005 to December 2007 was 3,786 hectares.¹⁰⁰ This excludes management of invasive native scrub (native plant species that spread rapidly within their natural range): 922,510 hectares over this timeframe.¹⁰¹

The Native Vegetation Act of 2003 does not allow clearing of native vegetation to be approved unless it improves or maintains environmental outcomes.¹⁰² Under the environmental outcomes test, there are some absolute prohibitions, as well as a requirement for offsetting.¹⁰³ This means the impacts of the clearing must be offset by activities designed to counter-balance the impact, including cessation or management of grazing, removal of exotic plant species, and revegetating using local species. There is a scientific methodology used to determine whether clearing proposals meet the improve or maintain test.¹⁰⁴

Disincentives in rural areas, therefore, take the form of absolute prohibitions and an offset scheme requiring offsets relative to the impact of the clearing.¹⁰⁵ Landowners seeking to clear large areas of native vegetation in good condition are required to offset this impact.¹⁰⁶ This may involve managing even larger areas for conservation as only the marginal improvement on existing biodiversity values is taken into account.¹⁰⁷ For the 3,786 hectares ap-

99. See NSW Govt., Dept. Env. & Climate Change, *NSW Native Vegetation Report Card: 1 July to 31 December 2007* 1 fig. 1, <http://www.environment.nsw.gov.au/resources/vegetation/JulyDec2007reportcard.pdf> (Apr. 2008) [hereinafter *NSW Native Vegetation Report Card*] (showing the area of native vegetation that has been conserved, restored, managed, and approved for clearing from July 1 to December 31, 2007).

100. *Id.* at 4 fig. 2(d).

101. See generally *id.* (graphically depicting the Act's two-year impact in NSW).

102. *Native Vegetation Act 2003 No 103* (NSW) pt. 1(3)(b).

103. NSW Catchment Mgt. Auths., *The NSW Government's Native Vegetation Assistance Package: Offset Pool 1*, <http://www.environment.nsw.gov.au/resources/vegetation/nvinfosheet16c.pdf> (May 2008) [hereinafter *Offset Pool*] (explaining the requirement to offset requirement under the Native Vegetation Act).

104. *Id.*

105. See e.g. *Native Vegetation Act 2003 No 103* (NSW) pt. 1–5 (excluding nearly all urban areas to the effect of an absolute ban on freely clearing vegetation in rural areas without participation in the offset scheme).

106. *Offset Pool*, *supra* n. 103, at 1.

107. *NSW Native Vegetation Report Card*, *supra* n. 99, at 2–3 (demonstrating and describing and each of the categories included in the report).

proved clearing in the two years from 2005 to December 2007, 13,385 hectares of land were conserved and managed to offset this impact.¹⁰⁸ This provides an incentive to avoid impacts, if the cost of supplying the offset outweighs the economic advantages from the clearing.

In contrast, urban development and other developments assessed under the Environmental Planning and Assessment Act of 1979 (EP&A Act), including mining proposals, are assessed under provisions of local plans, and where consent is required, decision-makers exercise broad discretion in weighing up social, economic, and environmental impacts and benefits.¹⁰⁹ There must be an assessment of whether the development is likely to have a significant impact on threatened species and, if so, a species impact statement and concurrence from the Minister for the Environment must be obtained.¹¹⁰ Some absolute prohibitions are contained in local environmental plans under the EP&A Act, but these are relatively rare.¹¹¹ Instead, incentives to avoid impacts on biodiversity and threatened species are primarily procedural. The process involves undertaking an assessment and obtaining concurrence from the Minister for the Environment; along with the potential threat of legal action from third parties, this may provide some incentive for avoidance. However, a determined proponent will be able to gain approval, as the legislation sets out, to promote orderly development, rather than provide incentives for avoidance of impacts to biodiversity values.¹¹²

Furthermore, there is no mandatory requirement for offsets.¹¹³ Offsets may be negotiated on a case-by-case basis. There is a significant amount of experience in negotiating biodiversity offsets to achieve positive environmental outcomes from development in NSW. However, negotiation of biodiversity offsets on a case-by-case basis can be resource intensive, slow, and may lead to inequities. This means the following offsets to urban development:

108. *Environmental Planning and Assessment Act 1979* (NSW) pt. 2 (available at http://www.austlii.edu.au/au/legis/nsw/consol_act/epaaa1979389/).

109. *Id.* at s. 78B.

110. *Id.* at pt. 4.

111. *See generally id.* (describing the local government plans).

112. *Id.* at s. 5. (setting forth the object of the legislation).

113. *Id.* at pt. 4.

- (1) are not necessarily equivalent to the losses sustained at development sites and therefore do not maintain current levels of biodiversity;
- (2) do not require conditions relating to ongoing maintenance of the offset site and can lead to the offset site being developed in the future; and
- (3) can lead to a lengthy and costly process for developers, with uncertainty regarding the terms of conditions that will be imposed on a development approval.

The BioBanking Scheme may provide incentives for avoidance by providing the development industry with the following benefits:

- (1) greater certainty in applying the methodology prior to land purchase to identify any potential threatened species constraints (areas of high conservation value) and forecast the cost of the potential offsets to include within the analysis of financial feasibility for a proposed development;
- (2) greater certainty in the cost and time associated with biodiversity assessments and offset calculations, as credit requirements can be estimated and purchased at any phase of the project proposal;
- (3) the ability to run different development scenarios and assess the likely costs to offset any biodiversity impacts using the Credit Calculator (the electronic software version of the methodology);¹¹⁴
- (4) greater certainty and confidence that all issues regarding the threatened species have been addressed where a Bio-Banking statement is obtained, as the consent authority is not required to consider the likely impacts of a development on threatened species in relation to section 79C of the EP&A Act;¹¹⁵

114. *Biodiversity Banking*, *supra* n. 57, at 6.

115. Environmental Planning and Assessment Act 1979 (NSW) s. 79C.

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- (5) establishes a market for biodiversity offsets (credits) and provides significant flexibility for credit purchasing;
- (6) no ongoing responsibility for providing offsets when biodiversity credits are purchased, because offsets are managed by landowners who have already established a Bio-Bank site and are committed to managing the land for conservation.

BioBanking is a way to ensure that offsets are implemented consistently and strategically. Most importantly, however, Bio-Banking encourages proponents to consider the impact of the development on biodiversity values and places a monetary value on offsetting that loss. As it is market-based, the market should develop to place a higher cost on impacts on biodiversity that are under greater threat and provide an incentive to avoid impacts on biodiversity.