NSW GOVERNMENT | Office of Environment & Heritage

Biodiversity Legislation Review

OEH Paper 3: Conservation Action

This paper was first considered by the Independent Biodiversity Legislation Review Panel in September/October 2014 at which time the information prepared was the most current and accurate.

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ISBN 978 1 74359 851 1
OEH 2014/0862
December 2014

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1 Purpose of this paper

The Minister for the Environment has commissioned the Independent Biodiversity Legislation Review Panel to review the native vegetation, threatened species and related biodiversity legislation in NSW.

As part of this process, the Office of Environment and Heritage has prepared a series of six background papers. These are Office of Environment and Heritage papers, rather than products of the panel. The panel will set out its views in its final advice to government.

This paper examines the laws, policies and programs that provide incentives and support for conservation actions that sustain and enhance biodiversity across land tenures, including actions to save threatened species and voluntary conservation efforts on private land. This includes actions taken under the *Threatened Species Conservation Act 1995* and conservation mechanisms available under the *National Parks and Wildlife Act 1974,* the *Native Vegetation Act 2003* and the *Nature Conservation Trust Act 2001.*

The roles and contributions of national parks and reserves established under the *National Parks and Wildlife Act 1974* and of other Crown lands such as travelling stock reserves are not considered in this paper.

2 History of conservation action in NSW

Conservation action began in NSW with the first natural resource management laws. The *Western Lands Act 1901* was enacted to ensure the appropriate management of the fragile lands in the Western Division of NSW. As recognition increased about the damage (such as soil erosion and salinity) resulting from clearing trees and native vegetation, the *Soil Conservation Act 1938* was introduced. This resulted in the introduction of the Soil Conservation Service and objectives to conserve soil and farm water resources.

The first half of the 20th century also saw changes in attitudes towards native flora and fauna and the emergence of laws to protect biodiversity, with the *Birds and Animals Protection Act 1918* and the *Wildflowers and Native Plants Protection Act 1927.* The growing interest of government in conservation was reflected in the *Fauna Protection Act 1948*, which offered limited protection of habitat and established a wildlife refuge mechanism to help landholders manage areas for wildlife habitat on their property. The first wildlife refuge was proclaimed in 1951, and this scheme remains one of the longest-running mechanisms of supporting conservation on private land in Australia. Today there are 678 wildlife refuges in NSW covering 1.9 million hectares of land.

The second half of the 20th century saw the need to establish national parks and other reserves for conservation. However, government began to recognise the need to broaden conservation on private land and the need for a cost-efficient and flexible way of expanding this to complement the reserve system. In 1987 the government amended the *National Parks and Wildlife Act 1974* to introduce a voluntary conservation covenanting mechanism. The first conservation agreement in NSW was established in 1990, and today there are 396 conservation agreements in NSW protecting 146 000 hectares of private land.

The *Nature Conservation Trust Act 2001* established the Nature Conservation Trust and the revolving Trust Fund. The work of the Nature Conservation Trust was intended to complement conservation agreements and expand conservation on private land via a non-government organisation that could engage landholders more effectively than could government. The first Nature Conservation Trust agreement was established in 2005, and there are currently 91 Nature Conservation Trust agreements in NSW protecting 24 886 hectares of private land.

The Threatened Species Conservation Act commenced in January 1996. This Act provided for the listing of threatened species, populations, ecological communities and key threatening processes. The Act, as introduced, mandated a requirement for a recovery plan to be

prepared for every listed threatened species, population and endangered ecological community, as well as a threat abatement plan for each key threatening process.

However, as the numbers of threatened species, populations and ecological communities and key threatening processes listed under the *Threatened Species Conservation Act 1995* grew, the mandatory requirement became increasingly unworkable.

The amount of government investment in preparing plans was also disproportionately high compared with investment in recovery and threat action (Office of Environment and Heritage 2013b). In recognition of this, the *Threatened Species Conservation Act 1995* was amended in 2004 to introduce a threatened species priorities action statement. The priorities action statement provided for a simple list of recovery and threat abatement strategies for *all* listed entities so that action could be delivered faster and more effectively.

To maximise the number of threatened species that can be secured in the wild, the government has now moved beyond the legislative framework and has developed a contemporary programmatic approach focusing on prioritisation, although it still relies on the priorities action statement provisions as the legislative mechanism for this new approach. The Saving our Species program, introduced at the end of 2013, provides an overarching framework for threatened species management in NSW. It defines more targeted management, clearly articulates objectives, and provides a transparent and objective process for prioritising action that is accessible to all stakeholders in NSW. The program-wide objective for Saving our Species is to 'maximise the number of threatened species that can be secured in the wild in NSW for 100 years'.

Positive private land conservation mechanisms focused on managing the impacts of development on biodiversity have emerged as a result of land-use regulation. Property vegetation plans under the *Native Vegetation Act 2003* can include proposals to enable landholders to obtain financial incentives for managing natural resources. These 'incentive' property vegetation plans make it easier for farmers to receive incentive payments from Local Land Services in return for protecting native vegetation and taking agreed-on management actions.

More recently, new opportunities for market-based private land conservation incentives have been developed. The BioBanking Scheme, which was introduced under the *Threatened Species Conservation Act 1995* in 2010, has opened up new opportunities for landholders to enter paid private land conservation agreements through the operation of the BioBanking Trust Fund. By protecting biodiversity under agreements over their properties, landholders generate biodiversity credits, which are then sold to developers who need credits to offset development impacts. The BioBanking Scheme is a market-instrument approach that was the first of its kind in Australia.

3 Current mechanisms for delivering conservation action in NSW

The public reserve system and other Crown lands such as travelling stock reserves are managed and protected for their environmental importance. In addition, the current framework for conservation action is delivered via three main channels:

- Saving our Species—the current policy and programmatic framework for threatened species management in NSW
- government support for private land conservation—including a broad range of mechanisms, each differing in the level of commitment required, the incentives available, and the targeted ecological outcomes
- the work of the Nature Conservation Trust, a stand-alone statutory entity that reports to the Minister for the Environment and has its own Act.

Table 1 is an overview of the primary mechanisms used for conservation action. It demonstrates the complex range of legislation, programs and related activities.

Table 1. Overview of the current conservation action framework in NSW

Mechanism	Description
Programs for saving threatened species	
Recovery plans	Under the *Threatened Species Conservation Act 1995*, recovery plans may be prepared for a species or a group of species or for part of the range of a species. Recovery plans outline detailed actions that will be undertaken, including the cost and time frame and the agency responsible for carrying out each action.
Priorities action statement	Under the *Threatened Species Conservation Act 1995*, a priorities action statement must be prepared to organise and prioritise threatened species recovery action through a more cost-effective action planning process. The priorities action statement must be publicly exhibited and reviewed every 3 years.
Saving Our Species	The Saving our Species program aims to provide an overarching framework for threatened species management in NSW and to provide a transparent and objective process for prioritising management. Saving our Species establishes six management streams to better target and deliver each species needs. Introduced in 2013, Saving our Species now implements the priorities action statement provisions of the *Threatened Species Conservation Act 1995*.
Threat abatement plans	A threat abatement plan can be prepared for key threatening processes listed under the *Threatened Species Conservation Act 1995*. Threat abatement plans outline actions to reduce or eliminate key threatening processes. Ministers and public authorities are required to take any appropriate action to implement the measures in the plan.
Joint management agreements	The Chief Executive of the Office of Environment and Heritage may enter into a joint management agreement under the *Threatened Species Conservation Act 1995* with another public authority. The purpose of a joint management agreement is to manage, regulate or restrict an action that is jeopardising the survival of a threatened species, population or ecological community. Only one joint management agreement has been established in NSW.
Government support for voluntary conservation on private land	
Wildlife refuges	A wildlife refuge is a voluntary agreement between a landholder and the Office of Environment and Heritage to protect wildlife and its habitat on their land. A wildlife refuge is established under the *National Parks and Wildlife Act 1974* and is proclaimed in the Government Gazette. A wildlife refuge is noted on the property title and can be revoked by the landholder.
Conservation agreements	Conservation agreements are legally binding agreements established under the *National Parks and Wildlife Act 1974* between the Minister for the Environment and a landholder. They are a commitment by landowners to protect and conserve areas of their land with significant natural and/or cultural conservation value and are registered on the property title in-perpetuity.
Incentive property vegetation plans and management agreements	Incentive property vegetation plans are legally binding agreements established under the *Native Vegetation Act 2003* between a landholder and Local Land Services that describe how native vegetation will be managed. Incentive property vegetation plans provide landholders with a financial incentive to manage the natural resources on their properties. Incentive property vegetation plans may be established in perpetuity. Management agreements are a shorter-term contract-based mechanism that may be established between a landholder and Local Land Services. They are used to provide funding to landholders to undertake specified land management activities within a defined timeframe.

Table 1 *continued*. Overview of the current conservation action framework in NSW

Mechanism	Description
Government support for voluntary conservation on private land continued	
BioBanking	BioBanking is a market-based scheme designed to help conserve biodiversity and streamline the biodiversity assessment process for development. It provides an opportunity for landowners to generate income by managing land for conservation and establishes a market for the delivery of biodiversity services. BioBanking agreements are established in perpetuity.
The Nature Conservation Trust	
Nature Conservation Trust agreements	A Nature Conservation Trust agreement is a legally binding agreement established under the *Nature Conservation Trust Act 2001* between a landholder and the Nature Conservation Trust. It is a commitment by a landowner to protect the natural features of their property. Nature Conservation Trust agreements are registered on the property title in perpetuity.

3.1 Programs for saving threatened species

Recovery plans

When it was introduced in 1995, the *Threatened Species Conservation Act 1995* made recovery plans mandatory for all listed endangered and vulnerable species, endangered ecological communities and endangered populations[1]. Similarly, threat abatement plans for all listed key threatening processes were also mandatory.

The *Threatened Species Conservation Act 1995* prescribes the contents of recovery plans. Plans must identify the government agencies responsible for implementation. Those agencies must be consulted, must agree to implement actions, and must formally endorse the plan. Recovery plans must also be publicly exhibited and must be subject to review at a date specified in the plan.

By 2004 it became apparent that the government was not meeting the Act's requirements for recovery plan preparation, let alone implementation. The rate of recovery plan preparation was not keeping pace with the rate at which new species were listed. The amount of government investment in preparing plans was disproportionately high compared with the investment in recovery action. At this time about 60 recovery plans had been approved—a figure well short of the legislative requirement for about 900 plans. To address this, the *Threatened Species Conservation Act 1995* was amended in 2004, including changes that made recovery plans optional.

In total, 90 recovery plans have been approved since the introduction of the *Threatened Species Conservation Act 1995*. Collectively, these plans describe management actions for 14 per cent of threatened species, 17 per cent of endangered populations and 12 per cent of threatened ecological communities.

Of the 90 recovery plans approved in NSW, six contain actions for more than one threatened entity. These are known as 'multi-species plans'.

Recovery plan preparation has slowed since the 2004 *Threatened Species Conservation Act 1995* amendments were introduced. Only two recovery plans have been approved in the past 5 years.

[1] Endangered populations are populations of a plant or animal species that are facing a very high risk of extinction in NSW in the near future. Populations of a species listed as vulnerable, and otherwise common species, can be listed as 'endangered'.

How effective is recovery planning?

It is difficult to assess how effective these plans have been overall, as species' responses to recovery actions have not been monitored or reported in any systematic way. Significant achievements can be demonstrated for a small number of listed species. The past 20 years have also seen the development of a number of successful partnerships with community groups and scientific institutions, as well as extensive efforts to prepare and approve plans.

Since the *Threatened Species Conservation Act 1995* was introduced, no species have been removed from the threatened species list as a result of recovery efforts. This is also the case at the national level (State of the Environment 2011 Committee 2011). Only one species, Gould's petrel, has been moved to a less threatened category as a result of recovery action in NSW, which increased the bird's numbers from fewer than 250 breeding pairs in the early 1990s to about 1000 pairs. Translocation of nestlings has resulted in the successful establishment of a new colony (Priddel et al. 2006). Through these actions, in 2009, the species was downlisted from endangered to vulnerable.

A recent research paper examined the effectiveness of recovery plans for threatened species across Australia by comparing the recovery rates of species *with* recovery plans with the recovery rates of those *without.* The study found that recovery planning has had no discernible impact on actual recovery rates overall (Bottrill et al. 2011). However, consistently low levels of monitoring and reporting made it difficult to reach any firm conclusions. The paper also noted that low levels of funding for implementation could be the cause of the lack of observable benefits.

These findings were partly echoed in submissions to the 2013 Commonwealth Senate Inquiry. Many submissions commented on poor progress in achieving positive results for threatened species. For instance, Professor David Lindenmayer claimed that 'the vast majority of programs to conserve threatened species are unsuccessful or ineffective' (Lindenmayer 2012). Peter Cosier (2013) went further in critiquing the role of recovery plans:

> The focus of biodiversity conservation in Australia, on threatened species conservation, is writing recovery plans. Does anyone seriously believe that preparing 1790 recovery plans is the appropriate way to manage landscape health in this country? No. We do not need more strategies … To have 1790 listed species in Australia in 2013, which is about the same number as we had 20 years ago, suggests it has been a complete failure.

The priorities action statement

When the *Threatened Species Conservation Act 1995* was amended in 2004 to make recovery and threat abatement plans optional, a new set of provisions was introduced to establish a priorities action statement. The priorities action statement was intended to organise threatened species recovery action through a more cost-effective action planning process covering all species.

The priorities action statement provisions of the *Threatened Species Conservation Act 1995* require the Office of Environment and Heritage to:

- set out strategies for promoting the recovery of each threatened species, population and ecological community to a position of viability in nature and for managing each key threatening process
- establish relative priorities for the implementation of recovery and threat abatement strategies
- establish performance indicators to facilitate reporting on achievements in implementing recovery and threat abatement strategies and their effectiveness
- include a status report on each threatened species, where information is available
- set out clear timetables for recovery and threat abatement planning and achievement.

Shortly after the priorities action statement amendments were implemented, an online database of priority actions for all threatened species was published on the Office of Environment and Heritage website and the relative priority of actions for each species was identified. This database represented the first attempt in NSW to map out the breadth of actions required for the recovery of all threatened species in NSW and marked a significant widening of scope (in terms of the number of species covered) compared with previous recovery planning.

In 2013 the priorities action statement was reviewed (Office of Environment and Heritage 2013c). The review found that:

- a large amount of worthwhile, on-ground activity for threatened species occurred during 2007–2010
- the extent to which these activities have benefited threatened species is unclear
- objectives and performance measures were not defined for priority actions
- many threatened species (30 per cent) received little or no management—where species did receive management, for most of them some actions, but for few of them all actions, had commenced
- the priorities action statement listed and prioritised all actions that would benefit each species
- actions were chosen for implementation on a regional basis
- opportunities for species-wide partnerships that crossed administrative boundaries and tenures were not always harnessed
- uptake of the priorities action statement was lower than expected (both within the Office of Environment and Heritage and externally) because of the difficulties of ongoing coordination and resourcing
- stakeholder surveys revealed that priority actions were not specific enough to be useful in planning and implementing projects for the recovery of threatened species
- the priorities action statement recovery database did not deliver on the reporting needs of the program.

Saving our Species

The 2013 priorities action statement review led to a new programmatic approach to threatened species management in NSW. The Saving our Species program was launched in 2013 and now underpins threatened species management in NSW. It also implements the priorities action statement provisions of the *Threatened Species Conservation Act 1995*.

Key features of the program are:

- making monitoring and reporting mandatory for funded projects
- increasing transparency by publishing monitoring results
- specifying a location, timing and costs for all actions
- introducing a greater focus on community and cross-sector engagement and partnership
- organising species into management streams to ensure that the species get the management they require (not all species require site-specific management actions)
- creating projects that contain all actions required to meet a standard objective
- prioritising projects for Office of Environment and Heritage investment, rather than individual actions
- providing an avenue for funding species projects that may not be particularly cost-effective but have a high value to society (i.e. iconic species).

Improvements in conservation status large enough to achieve down-listing, let alone full species recovery, are often difficult and costly, require long time periods, and are almost never achieved in practice. For these reasons, delisting and down-listing are poor indicators of success against program objectives. The Saving our Species program therefore aims to 'maximise the number of threatened species that can be secured in the wild in NSW for 100 years'. To achieve this goal, species projects for site-managed species specify the minimum actions, at the minimum number of sites, that are needed to ensure that a species will be viable in the wild for 100 years, but no more. By identifying a minimum set of actions and sites, additional funds can be freed up to secure more species.

This objective has attracted criticism from some quarters, including the NSW Scientific Committee, which argues for a higher standard of recovery for each species. However, no matter where the objective is set, current resourcing will not deliver full recovery for all species, so trade-offs are being made. At present, the NSW Government funds 'security in the wild' actions for 19 per cent of the State's site-managed species projects[2], with a further $10 million recently announced through the Environmental Trust partnerships grants program.

The Saving our Species program introduced requirements to monitor and report on outcomes for all funded projects. All Saving our Species monitoring data are being fed into a centralised database and, over time, the Office of Environment and Heritage will be able to assess the overall success of its threatened species actions and adapt its future management strategies. Monitoring actions include basic data on outputs (Was the action successfully carried out?) and outcomes (Did the species respond positively to the action?).

The Saving our Species program does not currently extend to threatened ecological communities or endangered populations, although the intention is to do so in the future.

Case study: recovery planning in New Zealand

The New Zealand system provides an interesting contrast to the recovery planning processes of most Australian jurisdictions. New Zealand has more than 2700 threatened species and subspecies.

However, New Zealand has no legal framework for threatened species recovery, no legal arrangements for listing threatened species and no objective in law for preventing species extinctions. The national threatened species list is published in peer-reviewed journals (rather than in the Schedules of an Act). Listing processes are set out in a policy, namely the *New Zealand Threat Classification System.* An expert panel oversees the listing process, assesses the conservation status of all New Zealand species, and undertakes a systematic review of the conservation status of each of the 23 taxonomic groups every 3 years.

Since implementing a new framework for planning and prioritising threatened species management, the New Zealand Department of Conservation has been able to actively manage 42 more threatened species than in previous years and has improved the security of 238 threatened species at one or more sites.

An improved understanding of the status of, and threats to, 287 threatened species has also been gained via targeted surveys, monitoring and research.

Although it is too early to see significant responses in the numbers of these species, monitoring programs are in place to measure the success of the program over the coming years. The Office of Environment and Heritage worked closely with New Zealand government officers in developing the Saving our Species program.

Is the Saving our Species program cost effective?

Each species has been allocated to one of six management streams on the basis of ecological characteristics, scientific knowledge and imminent threats. Priorities for action under Saving our Species are species in the site-managed, iconic, data-deficient and landscape-managed species management streams. Projects have been developed for species in the site-managed, iconic and data-deficient species management streams, and

[2] These are species that require specific site-based action to remain viable. There are six different management streams for species under the Saving our Species program. See OEH (2013a) for more information.

species within these streams have received initial funding. As projects are developed for landscape-managed species, these projects will also be considered as priorities for funding.

For site-managed species, projects are assessed for cost-effectiveness by generating a priority score using estimates of the cost, benefit and feasibility of running each site-managed species project. Projects are then placed into five bands on the basis of their cost effectiveness. Office of Environment and Heritage investment is targeted towards the higher priority bands. In 2013–14:

- 16 per cent of investment for site-managed species was directed towards the highest band
- 13 per cent was directed to the second highest
- 5 per cent was directed to the third highest
- 10 per cent was directed to the fourth highest
- 16 per cent was directed to the lowest priority band.

The priority bands are driving some funding decisions but not all. The cost-effectiveness assessment approach has only recently been adopted, and there will be a time lag in transitioning to the new model for decision-making. There are also other factors that are considered when selecting projects for implementation, including the strength of existing relationships with landholders; interest and commitment from the community (particularly for species with a long history of volunteer involvement); and the feasibility of access to management sites.

Scale of investment

Under the Saving our Species program, and for the first time in NSW, it is possible to estimate the total cost of preventing extinction of threatened species that require site management and in turn to estimate how much funding is actually being invested.

In NSW, the estimated cost per year of implementing all 369 projects that have been developed for Saving our Species site-managed species would be $9.8 million (for a total of 50 years if fully funded).

There are gaps in the estimation: it does not include 36 site-managed species that have not yet been assessed under the program; species in management streams, other than site-managed species; or funding for endangered ecological communities and endangered populations.

In terms of investment to meet this challenge, the NSW Government is currently spending at least $1 million a year to secure 19 per cent of all site-managed species in NSW. In addition, the NSW Environmental Trust has recently announced it would spend an additional $10 million over 6 years on a ‘partnership grants program’ to implement Saving our Species site-managed species projects (see Appendix B).

It should be noted that this investment figure is an underestimate, as it does not include the work done by local government, the NSW National Parks and Wildlife Service, Local Land Services or the community at large that benefits threatened species but are not explicitly linked to the Saving our Species program. In addition, Local Land Services receive funding through State Government programs such as Catchment Action NSW, as well as Commonwealth funding to implement natural resource management programs that will also benefit threatened species and threatened ecological communities. Nevertheless, the Saving our Species framework provides the basis for the collective effort of all work to be captured over time; in this way a progressively clearer picture of our progress towards preventing extinctions should emerge.

Does Saving our Species effectively harness partnership opportunities?

The Saving our Species program aims to encourage, record and celebrate volunteer participation in threatened species projects. Because the program has only recently started, it is difficult to assess how effectively it is engaging volunteers. The Saving our Species database currently identifies volunteer opportunities at 20 sites for seven species; these numbers should increase over time. Of the more than 400 conservation projects for threatened species already established under Saving our Species, about 75 are located on private land permanently protected by either a conservation agreement, a Nature Conservation Trust agreement or a BioBanking agreement.

The Saving our Species program requires a whole-of-community effort to make it work. The Office of Environment and Heritage already has a large number of partnerships that have been developed through previous work under recovery plans and the priorities action statement. At last count, there were about 320 partnerships with groups such as universities, councils, Local Land Services, non-government organisations, and Aboriginal Land Councils. The Office of Environment and Heritage aims to strengthen these partnerships and foster new ones with the large number of organisations that engage in threatened species recovery work through the Saving our Species program.

Threat abatement plans for key threatening processes

A key threatening process can be listed under the *Threatened Species Conservation Act 1995* if it:

- adversely affects threatened species, populations or ecological communities, or
- could cause species, populations or ecological communities that are not threatened to become threatened.

There are currently 38 key threatening processes listed in NSW. They cover a broad diversity of threats, many of which are threats within the landscape that are a problem for multiple species.

When it was introduced in 1995, the *Threatened Species Conservation Act 1995* made threat abatement plans mandatory for all listed key threatening processes. When the *Threatened Species Conservation Act 1995* was amended in 2004, the preparation of threat abatement plans became optional. The *Threatened Species Conservation Act 1995* prescribes the content of threat abatement plans. Similar to recovery plans, threat abatement plans must identify the government agencies responsible for implementation. Those agencies must be consulted and must formally agree to implement the relevant actions in the threat abatement plan. The plan must also be publicly exhibited.

Three threat abatement plans have been approved in NSW: Bitou Bush and Boneseed; Predation by the Red Fox (*Vulpes vulpes*); and Predation by the Plague Minnow (*Gambusia holbrooki).* The *Threatened Species Conservation Act 1995* requires that each threat abatement plan must set a date for its review. The Bitou Bush and Boneseed Threat Abatement Plan was reviewed and updated in 2011 and the Predation by the Red Fox Threat Abatement Plan was reviewed and updated in 2010. The Predation by the Plague Minnow Threat Abatement Plan was published in 2003, and although its review was required within 5 years of its commencement it has not been reviewed.

How effective is threat abatement planning?

Some successes have been reported with the implementation of threat abatement plans. In 2012, a positive response of native fauna to fox control was detected at 35 per cent of priority sites. The 2011 review of the Bitou Bush and Boneseed Threat Abatement Plan showed that, at sites where monitoring data were sufficient and control programs had been implemented over a number of years, an increase in the abundance of native plant species

could be achieved. Another key success of this threat abatement planning is the cooperation that it has achieved across the landscape between major stakeholders.

Threat abatement plans can be effective mechanisms for guiding and prioritising positive, on-ground management actions for preventing species extinctions by addressing threats across the landscape. They also include preventive measures that can protect other non-listed biodiversity from becoming threatened if the threat is not managed. In this sense, the management of key threatening processes does facilitate additional threat management over and above what the Saving our Species approach can currently achieve. This is because the threat abatement planning process provides an approach for delivering the recovery of multiple native species under one plan through the abatement of a common threat.

In response to the large number of weed key threatening processes, the Office of Environment and Heritage has adopted a prioritisation approach in threat abatement planning, because it is difficult to prioritise effort individually for each weed species. An overarching threat abatement strategy dealing with multiple weed key threatening processes (Biodiversity Priorities for Widespread Weeds) has been developed. This strategy encompasses the existing Bitou Bush and Boneseed Threat Abatement Plans as well as the national Plan to Protect Environmental Assets from Lantana (developed under the Weeds of National Significance Initiative). The strategy uses a triage and site-management approach, but it also prioritises widespread weed management by taking into account the risks from all widespread environmental weeds. In places where widespread weed management is implemented, with the limited resources available the most cost-effective option is to prioritise by biodiversity impact and likelihood of effective control. Such prioritisation is followed in the threat abatement plans and the Biodiversity Priorities for Widespread Weeds.

Although consideration is given to ensuring that the management actions in threat abatement plans are complementary and are linked to relevant species management actions under the Saving our Species program, threat abatement planning could be strengthened by improving its alignment with the cost-benefit approach of Saving our Species site-managed species. This could be achieved, for example, through the future addition of a key-threatening-process stream in the Saving our Species program.

Joint management agreements

Joint management agreements are little-used provisions in the *Threatened Species Conservation Act 1995*, provided for under Part 7. Only one joint management agreement has been put in place (the NSW Shark Meshing (Bather Protection) Program).

Joint management agreements are made between the Office of Environment and Heritage and one or more public authorities for the management, control, regulation or restriction of an action that is jeopardising the survival of a threatened species, population or ecological community. Refer to Appendix G for information about the NSW Shark Meshing joint management agreement.

3.2 Government support for voluntary conservation on private land

Less than 10 per cent of the state is within the public reserve system and more than 70 per cent is under private ownership or Crown leasehold. Threatened species, populations and ecological communities occur across all land tenures, and conservation efforts on privately owned land (i.e. ‘private land conservation’) are critical to maintaining healthy, functioning and connected landscapes across NSW.

The NSW Government has made a substantial investment in supporting positive conservation action outcomes on private land. The government directly administers

conservation agreements and wildlife refuges under the *National Parks and Wildlife Act 1974.* It also administers the BioBanking Scheme under the *Threatened Species Conservation Act 1995* and the remaining registered property agreements that were established under the now-repealed *Native Vegetation Conservation Act 1997*. The administration of 'incentive' property vegetation plans under the *Native Vegetation Act 2003* is delegated to Local Land Services.

BioBanking is discussed in detail in *Biodiversity Legislation Review Office of Environment and Heritage paper 5: Conservation in development approval processes*. We consider it here insofar is at relates to the voluntary establishment of BioBanking agreements by a landholder.

Status of private land conservation in NSW

Currently, about 3.1 million hectares, or 3.9 per cent of NSW, is protected under some form of conservation agreement over private land.

Table 2 shows the range of private land conservation mechanisms and programs that contribute to this total. Included are the more secure statutory mechanisms that are within the scope of the biodiversity legislation review: these are conservation agreements, Nature Conservation Trust agreements, incentive property vegetation plans, BioBanking, registered property agreements and wildlife refuges. The others are non-statutory programs and vary in their capacity to protect biodiversity values. Note that organisations such as the Humane Society International, the Australian Wildlife Conservancy and Bush Heritage have also utilised conservation agreements.

The Office of Environment and Heritage supports the non-statutory Land for Wildlife program as part of its Conservation Partners Program. Land for Wildlife is managed by the Community Environment Network and is an educational property registration scheme that has easy entry and exit, providing valuable information, resources and contacts for landowners. However, it does not provide any legal protection for the environmental values of the land, nor does it specify any management outcomes.

Table 2. Areas of NSW covered by private land conservation mechanisms

Conservation mechanism	Number	Area protected (hectares)
Conservation agreements	396	146 000[3]
Wildlife refuges	678	1 936 358
Nature Conservation Trust agreements	91	24 886
Incentive property vegetation plans	1885	860 258
Registered property agreements	336	52 606
BioBanking agreements	32	4 845
Land for wildlife	1125	87 242
Indigenous protected areas	9	16 000
Total		**3 128 195**

[3] Note that this area includes 64 000 hectares of Australian Wildlife Conservancy reserves that are secured under a conservation agreement (the Australian Wildlife Conservancy reserves protect a total of 64 733 hectares); 1571 hectares of Bush Heritage reserves that are secured under a conservation agreement (Bush Heritage reserves protect a total of 17 000 hectares); and 4609 hectares of Humane Society International Trust agreements that are secured under a conservation agreement (the Humane Society protects a total of 12 962 hectares under their agreements).

Appendix C overviews the mechanisms that are used in other jurisdictions.

Wildlife refuges

There are currently 678 wildlife refuges established in NSW, covering about 1.9 million hectares of land, or 2.4 per cent of NSW.

Wildlife refuges date back to 1948 and were the primary voluntary private land conservation mechanism in existence in NSW until conservation agreements were introduced in 1987. Their popularity may be in part due to their simplicity: they are free and easy to establish and do not commit the landholder to an in-perpetuity agreement.

Compared with the benefits of conservation covenanting mechanisms, the overall long-term conservation benefits of wildlife refuges are hard to measure. They offer less protection than other mechanisms because they can be revoked by the landholder at any time. When a wildlife refuge is established, some basic baseline data are collected about the property and its conservation values. A Scheme of Operations is prepared, setting out basic management activities such as weed and pest control. Monitoring is limited and ad hoc; it is primarily done by the landholder unless there are issues to be investigated. Enforceability is limited to the offences relating to the harm of fauna or flora under the *National Parks and Wildlife Act 1974.* The Office of Environment and Heritage provides support in terms of management advice, publications, signage and on-site visits when warranted (and when resources are available).

There is some evidence that wildlife refuges may provide a way for landholders to 'step into' conservation. To date, 52 landholders have 'upgraded' from a wildlife refuge to a conservation agreement. However, with a lack of secure funding there is limited incentive for landholders to upgrade. Wildlife refuges may also bridge a gap in providing a more flexible mechanism aimed specifically at landholders with altruistic conservation interests who do not want to enter into an in-perpetuity agreement. There are few, or no, financial incentives provided to help landholders. (Limited grant funding may be available from the Foundation for National Parks and Wildlife.)

There is some evidence that wildlife refuges are highly valued by the landholders who have established them on their properties. Although they offer a lower level of security than other mechanisms, they are part of a suite of mechanisms that cater for a range of landholder needs and interests. It is understood that formal recognition through legislation adds significance to the agreement, and this significance is valued by landholders. However, there is no compelling reason why government should be responsible for the future delivery of wildlife refuges. Although there is merit in retaining the wildlife refuge mechanism in legislation, the delivery of wildlife refuges could be more suitably managed by a non-government organisation.

Conservation agreements

A conservation agreement is a joint agreement established in perpetuity between landholders and the Minister for the Environment under the *National Parks and Wildlife Act 1974*. There are currently 396 agreements in place in NSW, covering approximately 146 000 hectares of land.

The agreement provides permanent protection for the special features of land, including cultural and Aboriginal heritage values. The area under the agreement is registered on the title of the land, ensuring that if the land is sold the agreement and management requirements remain in place. A management plan or management requirements are included in the agreement, which is legally binding and enforceable. Baseline data are collected and included in the agreement, including photo points to help assess condition over time. The Office of Environment and Heritage is responsible for monitoring the terms and conditions of the agreement and ensuring that the conservation values are maintained. With limited

resources available, the Office of Environment and Heritage in most cases relies on the landholder to do self-monitoring and reporting of the property's condition over time.

As part of the Conservation Partners Program, the Office of Environment and Heritage helps landholders with the following:

- property management planning advice
- biodiversity surveying and assessment help
- information and practical advice about conservation management strategies
- signs
- access to education programs and activities
- programs to help support the implementation of management plans.

Landholders who enter into conservation agreements may be eligible for rate relief and tax deductions (although this is outside the Office of Environment and Heritage's control). Survey costs associated with the agreement are met by the Office of Environment and Heritage.

Incentive property vegetation plans and management agreements

A property vegetation plan provides for the management of native vegetation on the land to which it applies. Although a property vegetation plan is generally used as a regulatory mechanism (e.g. to approve the clearing of native vegetation), it can also make it easier for landholders to get financial incentives for managing natural resources. Although not referred to as such in the *Native Vegetation Act 2003,* these are generally called 'incentive' property vegetation plans. Local Land Services sometimes establishes a management contract with a landholder as an alternative to a property vegetation plan. These are generally known as 'management agreements' and are contract-based funding arrangements, not a legislative mechanism.

There are currently 1885 incentive property vegetation plans in place in NSW covering approximately 860 258 hectares of land. Note that the Office of Environment and Heritage manages the remaining registered property agreements that were established under the now repealed *Native Vegetation Conservation Act 1997.* Of these, there are 237 in-perpetuity and 99 fixed-term agreements covering 44 149 hectares and 8457 hectares, respectively.

Incentive property vegetation plans provide a medium to high level of security, depending on whether or not the plan is registered on title in perpetuity. Management agreements are shorter-term contracts. Both have similar objectives and outcomes and are intended as mechanisms to give landholders Local Land Services funding to take management actions in accordance with the relevant Catchment Action Plan. Unlike the case with incentive property vegetation plans, however, the enforceability of management agreements is limited: they are enforceable only under contract law and are not binding on future landholders.

There is no strategy guiding the use of incentive property vegetation plans and management agreements. Some Local Land Services bodies prefer to use incentive property vegetation plans, whereas others prefer management agreements. The mechanism they use depends upon how each individual Local Land Services body chooses to manage its governance and accountability for funding delivered under the respective Catchment Action Plan. For example, some Local Land Services manage the majority of their grant programs through incentive property vegetation plans, whereas others use them only for large (i.e. $100,000+) incentive projects. Some do not use them at all, opting instead to use contract-based management agreements.

Some Local Land Services bodies have found that registration on-title for conservation projects is an incentive to landholders because of landholder perceptions that greater security and longevity equal more money. Others have found that developing projects by using

incentive property vegetation plans is complex and a disincentive to the participation of land managers in on-farm projects.

Although management agreements may be less complex, one main criticism of them is that they are temporary; thus the environmental benefits achieved after the contract has expired may be reversed.

BioBanking

BioBanking agreements are established in perpetuity (i.e. they are attached to title) and offer some key advantages for biodiversity protection over other conservation arrangements:

- BioBanking uses a repeatable methodology based on sound science (the BioBanking Assessment Methodology) to calculate the offsets required to maintain or improve biodiversity values
- It provides secure annual funding to fulfil specified management actions for the care and enhancement of biodiversity on the site by the landholder.

Assuming that landholders sell their credits, BioBanking provides an ongoing funding source for conservation action independent of government. Although incentive property vegetation plans and management agreements provide some incentives, they are tied to the availability of government funding. In this respect, BioBanking agreements fill a critical gap in the conservation action framework, because they:

- pay for management actions undertaken on a long-term basis
- pay for lost opportunity costs
- are designed to provide a reliable stream of income for farmers to help smooth out income over good and bad years
- recognise (particularly in disturbed environments) that conserving biodiversity costs money (i.e. it can't be expected to be achieved for nothing).

The case study below provides an example of the funds that can be generated through the sale of BioBanking credits.

Case study: BioBanking Agreement

Brownlow Hill is a farm in South-west Sydney that contains a 24-hectare biobank site.

The landowner submitted an expression of interest and then progressed with a full site assessment and application for a BioBanking agreement. Assessment costs were about $20 000. No prospective credit purchasers were identified at the outset, but some were quickly found. Within 5 months of finalising the agreement, the landowner had sold all 246 credits to two buyers: the first buyer paid $8000 per credit and the second buyer paid $9500 per credit. The total paid into the BioBanking Trust Fund was approximately $1.4 million, and the landowner received $700 000 in additional funds.

The biodiversity outcomes of the agreement were the conservation and revegetation of Cumberland Plain Woodland, control of weed infestation, and ongoing active management for improved biodiversity (Office of Environment and Heritage 2012).

Monitoring and evaluation are done by the Office of Environment and Heritage and landholders to track the implementation of BioBanking agreements; to help inform an adaptive management approach to BioBanking agreements; and to help the Office of Environment and Heritage measure the overall effectiveness of the scheme. BioBanking agreements may be varied if monitoring indicates that minor alterations to management actions are required to improve biodiversity. Specifically, the monitoring framework for BioBanking agreements includes:

- accredited assessors collecting baseline data by applying the BioBanking Assessment Methodology at proposed biobank sites

- landowners undertaking regular monitoring of biobank sites, including photopoint surveys and visual inspections to collect information and report annually to the Office of Environment and Heritage on the implementation of management actions
- comprehensive auditing of biobank sites by the Office of Environment and Heritage every 7 years to determine compliance with biobanking agreements.

BioBanking agreements are fully enforceable and have the added benefit of both audit and failure-to-deliver clauses. This means that the Office of Environment and Heritage can direct third parties to complete required management actions if necessary. However, because the scheme has been in operation for only 4 years, the monitoring, evaluation and enforcement processes for BioBanking agreements are yet to be fully exercised. There are currently 32 BioBanking agreements covering 4845 hectares.

3.3 The Nature Conservation Trust

The Nature Conservation Trust is a stand-alone statutory entity established under the *Nature Conservation Trust Act 2001.* The Nature Conservation Trust is managed by the Trust Board, which consists of between five and nine members who are appointed by the Minister for the Environment. Their work is guided by a business plan, prepared every 5 years, which must contain:

- the conservation priorities of the Nature Conservation Trust
- the criteria for identifying land appropriate for acquisition by the Nature Conservation Trust
- the criteria that the Nature Conservation Trust will meet when entering into Nature Conservation agreements
- the performance indicators by which the Nature Conservation Trust's achievement of its objectives is to be measured
- the remuneration (if any) to be paid to the members of the Board.

The business plan must be referred to the Minister for endorsement of the conservation priorities.

The Nature Conservation Trust facilitates private land conservation in two ways. It uses a covenanting program, entering into Nature Conservation Trust agreements with existing landholders who have an interest in conservation. It also uses a revolving fund, established under the *Nature Conservation Trust Act 2001*, to purchase high-conservation-value properties that become available in the market and are subsequently on-sold with a Nature Conservation Trust agreement on title. Money generated from sales is used to purchase more high-conservation-value land.

In addition to funds generated through the revolving fund, the Nature Conservation Trust receives funding from the NSW and Commonwealth governments, from donations (it has charity status) and for project-specific work from various Local Land Services and government agencies (such as Roads and Maritime Services) that require a conservation action 'broker' to secure offsets.

There are currently 91 Nature Conservation Trust agreements in place in NSW, protecting 24 886 hectares of land.

Nature Conservation Trust agreements versus conservation agreements

Nature Conservation Trust agreements and conservation agreements are virtually identical mechanisms. When the *Nature Conservation Trust Act 2001* was introduced in 2001, the two mechanisms were intended to operate alongside each other, not in competition. The logic was that Nature Conservation Trust agreements would complement conservation

agreements, enabling an expansion of private land conservation to a market that government could not reach. This included, for example, landholders who would prefer to deal with a non-government body. Through the introduction of the revolving fund, the Nature Conservation Trust was also given the means to purchase, covenant and on-sell high-conservation-value land, enabling it to be strategic and self-funded in its conservation focus.

The principal similarities between the two mechanisms are that both:

- offer a high level of legal protection (both are in-perpetuity covenants)
- have similar objectives and outcomes
- are deemed to have the status of a regulatory instrument for the purposes of the NSW planning laws
- can be established on freehold or leasehold land and on both private and public land
- are enforceable
- limit activities that may damage the land, such as agriculture or clearing of vegetation
- provide limited (if any) funding help (e.g. to help with set-up costs such as fencing); currently, limited grant funding may be available via the Foundation for National Parks and Wildlife.

Principal points of difference include the following:

- Proportional local government rate exemption is available only for conservation agreements. (However, both Nature Conservation Trust agreements and conservation agreements are exempt from State Land Tax.)
- Conservation agreements can be used to protect historic and Aboriginal heritage values on private lands.
- The Nature Conservation Trust has the ability to raise its own funds.
- The Nature Conservation Trust has a stronger capacity to undertake marketing campaigns and promotional activities.
- The Nature Conservation Trust can purchase, covenant and on-sell high-conservation-value properties through its revolving fund.

A major point of difference between conservation agreements and Nature Conservation Trust agreements is the degree of monitoring and evaluation undertaken. The Office of Environment and Heritage relies mostly on self-monitoring by landholders, whereas the Nature Conservation Trust runs a more intensive monitoring program. Landholders are contacted by phone annually to discuss any issues. The Nature Conservation Trust makes monitoring visits to properties at least once every 5 years, providing an opportunity to monitor compliance and identify any adaptive management requirements. Monitoring is done more regularly where covenant programs include funds (e.g. from Local Land Services) for landholders to undertake specific activities or for offset programs where a higher level of monitoring is required. Some baseline information is recorded.

The existence of two secure conservation covenanting mechanisms, both of which are underpinned by legislation and are very similar in force and effect, has created duplication and competition in the marketplace. There is some evidence that some landholders value the establishment of an agreement with government, whereas others prefer an agreement with an independent organisation such as the Nature Conservation Trust.

The need for two similar state-based conservation covenanting programs requires evaluation. On the surface, there appears to be a case to rationalise the two programs. Streamlining to a single conservation covenanting mechanism and outsourcing its delivery would be consistent with Commission of Audit recommendations, particularly those

concerning the devolvement of government programs and an increased focus on outsourcing and partnerships.

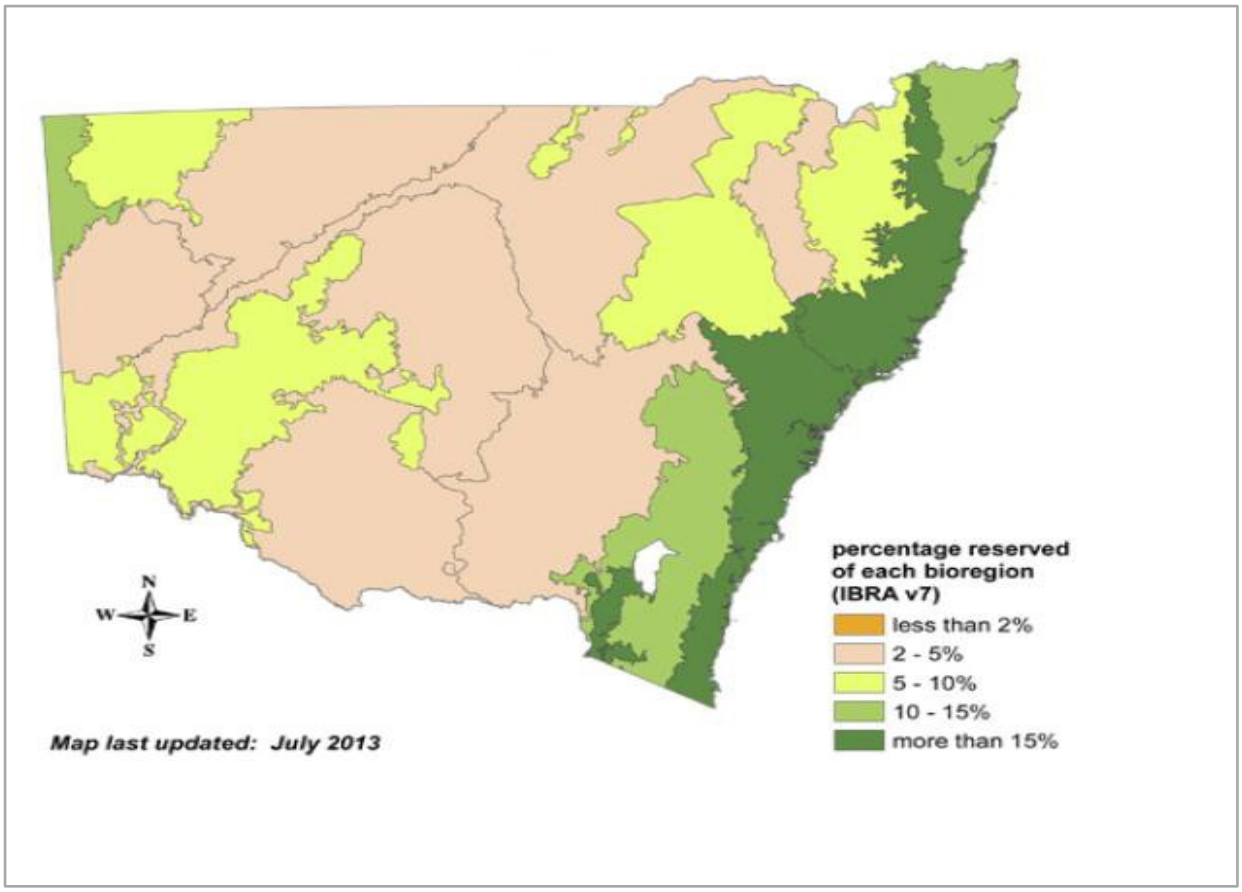
The Nature Conservation Trust may be well placed to deliver such a state-wide single covenanting mechanism, given that it is already a well-established covenanting body; it can generate a proportion of its own funds; and its activities are transparent and measurable (insofar that it is answerable to a Board of Management and reports annually on its activities to the Minister for the Environment).

4 Conservation targets

The protection of lands through the public reserve system is the central pillar of conservation in NSW. National parks and reserves cover an area of almost 9 per cent of the state (Environment Protection Authority 2012). There are 18 Interim Biogeographic Regionalisation for Australia (commonly referred to as 'IBRA') bioregions in NSW. Of these, only 4 bioregions have more than 15 per cent of their total areas protected by public reserves (and so are considered to be well represented in public reserves). Of the remaining 14 bioregions:

- 3 bioregions have between 10 and 15 per cent of their total area protected by public reserves
- 4 bioregions have between 5 and 10 per cent of their total area protected by public reserves
- 7 bioregions have less than 5 per cent of their total area protected by public reserves (Office of Environment and Heritage 2013b; Figure 1).

Figure 1. Reservation of IBRA bioregions under the *National Parks and Wildlife Act 1974*



Overall, the bioregions located along the coast up to the Great Dividing Range are relatively well represented in the reserve system, whereas those in the central and parts of western NSW are underrepresented. However, to effectively understand representativeness we need to look at a finer scale. Each of the 18 bioregions has been more finely broken up into component sub-bioregions. Many of these remain poorly reserved, even within the apparently well-reserved eastern bioregions. The best-protected NSW landscapes are generally those on the steep ranges of eastern NSW, as well as many of the coastal landscapes and those in the Australian Alps. The poorly protected landscapes include most of those in far western NSW, on the northern, central and southern highlands and western slopes, and on the flat and fertile coastal lowlands (Office of Environment and Heritage 2013b).

One of the primary objectives of private land conservation is to help build a protected area system that is comprehensive, adequate and representative (i.e. a 'CAR' system). This is consistent with the National Reserve System's scientific framework (Department of Environment 2014) to ensure Australia progressively extends protection to examples of all of our ecosystems. Specifically, CAR means (Department of the Environment 2014):

Comprehensive: inclusion in the National Reserve System of examples of regional-scale ecosystems in each bioregion. (The targets for 'comprehensiveness' are nationally agreed upon)

Adequate: inclusion of sufficient levels of each ecosystem within the protected area network to provide ecological viability and to maintain the integrity of populations, species and communities. (There are no targets for 'adequacy'.)

Representative: the inclusion of areas at a finer scale to encompass the variability of habitat within ecosystems, i.e. at the sub-bioregional level. (The targets for 'representativeness' are nationally agreed upon)

The goal of a CAR system of reserves for Australia was endorsed by all Australian governments as signatories to Australia's Biodiversity Conservation Strategy 2010–2030 (National Biodiversity Strategy Review Task Group 2010) and the National Forest Policy Statement (Commonwealth of Australia 1992).

In NSW, the formal protection of land in the reserve system is guided by the New South Wales National Parks Establishment Plan (DECC 2008). This is consistent with the National Reserve System and identifies priorities for building the reserve system in each bioregion and sub-bioregion of NSW. In particular, the plan acknowledges that the establishment and management of public reserves alone cannot ensure the achievement of healthy and sustainable ecosystems, and that achieving this can occur only through a broad range of conservation activities across the whole landscape on both public and private land.

Landscape connectivity is also an important conservation target, and private land conservation efforts play a key role in linking public reserves. The Great Eastern Ranges initiative is a good example of a collaborative, cross-border program with a conservation target of linking and restoring fragmented habitats along the Great Dividing Range across public and private land (see Appendix D). Both the Office of Environment and Heritage and the Nature Conservation Trust are partners in this program.

An additional way to evaluate whether we are prioritising conservation effort appropriately is to look at the broad condition of native vegetation across the landscape of NSW. The Native Vegetation Management Benefits Analysis is a tool for prioritising biodiversity and threatened species benefits to help target conservation actions towards areas where they are most required and where they will deliver the greatest benefits for investment. Considered in conjunction with the reservation status of bioregions in NSW (see Figure 1) and the Saving our Species program priorities, this shows at a broad level where private land conservation mechanisms may have the most conservation benefit.

A series of maps in Appendix A show the locations of various private land conservation mechanisms (conservation agreements, wildlife refuges, Nature Conservation Trust agreements and incentive property vegetation plans) mapped against the Native Vegetation Management Benefits map and against IBRA sub-bioregions.

4.1 Potential of science to improve prioritisation

A more integrated and targeted approach to private land conservation could result in improved biodiversity outcomes. As is shown by overlaying various conservation mechanisms with Native Vegetation Benefits maps and IBRA sub-bioregional maps (see Appendix A), the potential exists to identify high-priority areas of the landscape. Combined with the consideration of National Reserve System CAR targets and Saving our Species program priorities, this would help prioritise the use of government funds in those areas that need it most. The development of a state-wide framework or strategy for private land conservation in NSW could set long-term priorities. The Office of Environment and Heritage has started preparing a 5-year plan to guide private land conservation in NSW. A number of states have taken a strategic approach to private land conservation: for example, the Victorian Trust for Nature has recently prepared a strategy for its conservation efforts (see Appendix F).

A significant effort towards state-wide prioritisation of conservation action was made through the development of the first NSW Biodiversity Strategy, which was in place from 1999 to 2003. The strategy created a framework for a range of government agencies to work together to conserve biodiversity in NSW by enabling government, local communities, researchers and industry to work together to increase knowledge and capacity for conservation action. Guided by the goal 'to protect the biodiversity of NSW', the Strategy presented a series of objectives, including identifying and tackling threats and involving landowners and communities in conservation action.

The strategy was important at the time in terms of:

- more effective targeting of existing public and private investment in biodiversity conservation through the identification of state-scale priority areas for investment
- using existing regional structures and mechanisms, such as Catchment Management Authorities (now Local Land Services), local government and other public authorities, to deliver biodiversity outcomes, thus avoiding the need for new arrangements
- acknowledging and continuing support for existing programs that were delivered by many government and non-government partners and resulted in significant outcomes for biodiversity
- recognising the importance of partnerships across public and private sectors to deliver biodiversity outcomes based on the best available science.

In 2008, work began on a second NSW Biodiversity Strategy that would span the period 2010–2015. However, in 2011 work on the strategy was discontinued following major reforms in government priorities for biodiversity conservation, changes to the structure of agencies administering the legislation and delivering investment and programs, and the implementation of NSW 2021 as the overarching framework of the NSW Government.

Although much of the information developed under the second draft Biodiversity Strategy was, and remains, useful, ultimately its contribution to achieving the objects of the *Threatened Species Conservation Act 1995* were not clearly established. This contributed to its discontinuation.

The Office of Environment and Heritage is currently identifying priority Biodiversity Investment Opportunities across NSW by creating a 'BIO Map'. These are areas where investment will return the greatest conservation benefits. BIO Map does not identify all state

and regional priority investment areas: it is focused on identifying priorities for government offset and grant programs[4].

5 Funding models for conservation action

5.1 Are sufficient incentives available?

Both the Office of Environment and Heritage and the Nature Conservation Trust generally consider financial barriers to be the key impediments to private landholders entering into in-perpetuity covenants.

An equitable framework is needed to pay for conservation on private property. The incentives offered to landholders to set aside and manage their land for conservation are limited and vary among the different mechanisms. One of the primary approaches to paying for conservation on private property in NSW has been through short-term incentives or grant payments to landholders via:

- small private land conservation grants available from the Foundation for National Parks and Wildlife for landholders with conservation agreements, Nature Conservation Trust agreements and wildlife refuges
- some tax and rate exemptions or concessions (e.g. land under a conservation agreement is exempt from local rates and State Land Tax; Nature Conservation Trust agreements and BioBanking agreements are exempt from State Land Tax)
- some funding provided by Local Land Services for incentive property vegetation plans and management agreements
- large and small grants provided by the Environmental Trust for projects such as restoration and rehabilitation or green corridors
- in-kind support (e.g. management advice from staff).

Private landowners who voluntarily establish in-perpetuity conservation covenants provide an extremely important public service, often at considerable financial cost to themselves. The importance of this commitment will increase over the coming years, as the highest-priority conservation land (such as the critically endangered grassy box woodlands) is generally now in private rather than public hands. BioBanking is currently the only mechanism that provides landholders with annual payments in perpetuity to enable them to do conservation work and be compensated for foregone land-use opportunities.

5.2 Funding models

Financial incentives differ across the various conservation action mechanisms. The two main mechanisms available to pay for conservation on private property in NSW involve direct payments to landholders through short-term grants (e.g. from the Foundation for National Parks and Wildlife) or individually negotiated contracts (e.g. with Local Land Services).

Management agreements are contracts that are usually offered over a fixed term (e.g. for 5 years). Fixed-term agreements provide less assurance that environmental outcomes will be achieved and sustained in the long term, but they can attract higher levels of landholder participation.

Perpetual agreements provide greater security that conservation outcomes will be sustained. However, depending on the productivity of the land concerned, landholders may require

[4] http://www.environment.nsw.gov.au/conservationprograms/biomap.htm

larger incentives to participate, as management flexibility over the property is reduced and they are required to do ongoing management in perpetuity. Landholders may also want larger incentives for entering into perpetual agreements, as their property values may be affected (or they may have the perception that they will be affected).

The Saving our Species Partnership Grants program is an example of a contestable grant program in NSW (refer to Appendix B). Funded by the NSW Environmental Trust, the program encourages partnerships among government, the community, non-government organisations and corporations to protect and conserve threatened entities. A total of $10 million over 6 years is available under the grants program. Individual grants of between $300,000 and $1 million are available.

Victoria runs two successful auction programs (BushTender and EcoTender), which provide payments for environmental services under agreements signed with the Victorian Department of Environment and Primary Industries. More information about these programs is provided in Appendix E.

The alternative and more secure approach is achieved by creating new markets for ecosystem services (e.g. a market for biodiversity credits). This provides incentives for landholders to provide conservation services that benefit the broader community. NSW has used this approach through the BioBanking Scheme. The market for biodiversity credits is likely to be significantly increased through the implementation of the government's new Biodiversity Offsets Policy for Major Projects, which commenced on 1 October 2014. The Policy mandates the use of BioBanking agreements to secure offset sites for major projects. It is discussed in detail in *Biodiversity Legislation Review Office of Environment and Heritage Paper 5: Conservation in development approval processes*.

BioBanking remains the only mechanism that can effectively compensate for high opportunity costs and high management costs once landholders sell their credits. However, BioBanking has high entry costs and demand for credits is not homogeneous across the State.

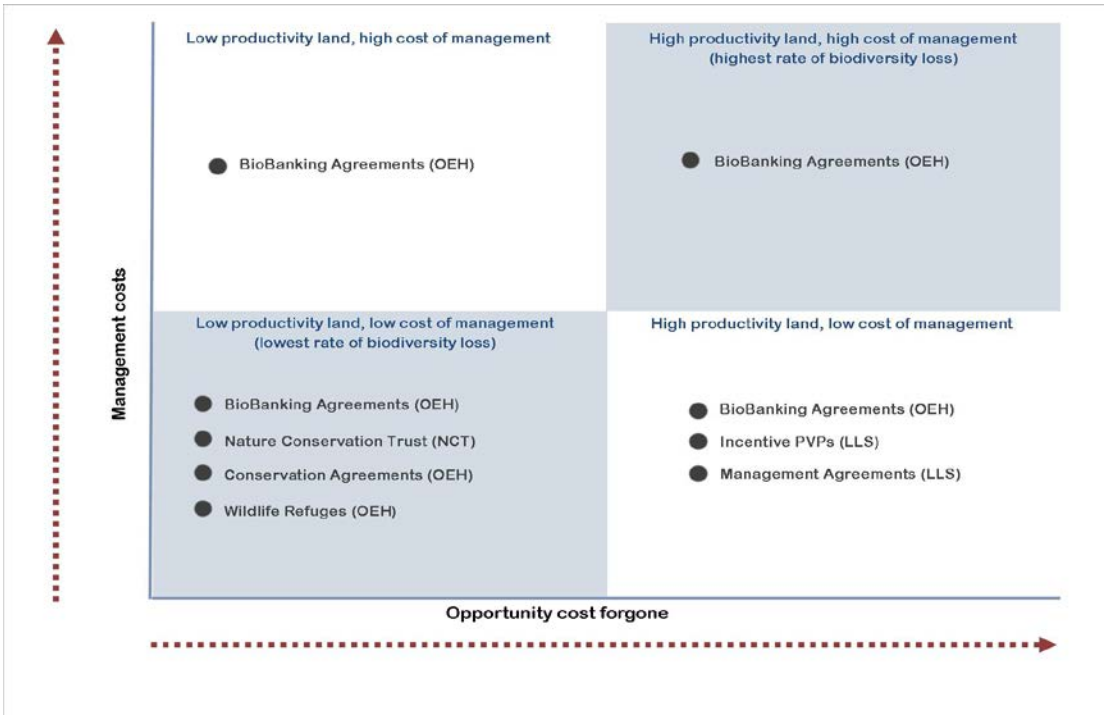
The matrix in Figure 2 shows the relationship between agricultural productivity and the:

- foregone opportunity costs of conservation management
- cost of conservation management actions
- urgency of conservation actions given the expected declines.

The matrix demonstrates the suitability of existing conservation mechanisms across low- to high-productivity landscapes. It is based on the security of funding available under these mechanisms and on the current spatial arrangement of existing conservation mechanisms across NSW.

Generally, the matrix shows that where there is least cost and need there are a number of private land-conservation mechanisms available. Conversely, where there is greatest need and cost there is only one mechanism that is suitable to compensate for high costs—namely BioBanking agreements. This suggests that there is a crowding of mechanisms at the low cost end of the market and a single mechanism that caters for the high-cost end of the market.

Figure 2. Opportunity costs and feasibility of voluntary conservation actions. OEH, Office of Environment and Heritage; LLS. Local Land Services



5.3 Funding private land conservation: the principle of additionality

An important feature of the current funding model for private land conservation is the principle of additionality. The general principle of additionally is that improvements to biodiversity made by undertaking management actions must be additional to other obligations for conservation that are attached to the land. In regard to funding for private land-conservation mechanisms, this principle ensures that incentive payments are not made for actions that are legally required or have been paid for through other programs.

The NSW BioBanking Scheme includes explicit rules for measuring additionality and allocating biodiversity credits. For example, if a biobanking agreement is entered into on land that is subject to an existing obligation, the allocation of credits for the biobank site is discounted according to the number and type of conservation measures required to be taken in relation to the existing obligation. The pricing of biobanking credits also factors in the estimated cost of management as well as the opportunity costs (e.g. land value) to take into account the fact that the land cannot be used for other purposes.

The principle of additionality has also been applied to the crediting of activities that reduce greenhouse gas emissions through storing carbon, i.e. the issuing of carbon credits. The Commonwealth's proposed Emission Reduction Fund plans to use approved methods to ensure that the Fund purchases genuine and real emissions reductions (Commonwealth of Australia 2014).

Other private land-conservation mechanisms do not have the same rules and safeguards for measuring additionality, largely because they do not have ongoing payment incentives. However, generally grant programs for private land conservation will include conditions to safeguard against the money being spent on activities already completed (Foundation for National Parks and Wildlife 2014).

6 Conclusion: Is the current framework effective?

6.1 Saving our Species

The Saving our Species program takes a contemporary approach to the planning and implementation of conservation action for threatened species, populations and ecological communities. Saving our Species has progressed beyond the legislative provisions for recovery planning and the priorities action statement, which were based on the management norms of the mid-90s.

Although it is still in the early stages of implementation, Saving our Species provides a sound basis for integrating and modernising the provisions of the *Threatened Species Conservation Act 1995* that take an overly prescriptive approach to planning and delivering conservation action (namely, Parts 4, 5 and 5A).

Streamlining these provisions to cater for the adaptive management approach taken by Saving our Species would achieve greater efficiency and effectiveness. It would build on the knowledge gained during the first decade of the Act's implementation by focusing conservation effort on activities that deliver outcomes most cost effectively.

Similarly, threat abatement planning could be strengthened by improving alignment with the cost-benefit approach adopted for site-managed species under the Saving our Species program. This could be achieved, for example, through the future addition of a key-threatening-process stream in the Saving our Species program.

6.2 Private land-conservation mechanisms

There are currently a number of private land-conservation mechanisms provided by multiple providers. These mechanisms can be duplicative and are dominated by inconsistent and opportunistic funding. Insufficient incentive is a factor influencing the lack of uptake by farmers. Additionally, the current framework of mechanisms has the potential to cause confusion in the marketplace and needs streamlining.

In addition, conservation agreements and Nature Conservation Trust agreements are very similar mechanisms aimed primarily at the low-opportunity-cost end of the market, attracting primarily landholders with altruistic motives. Only one such mechanism may be necessary at a state-wide level. Consolidation into a single mechanism may reduce costs and increase the efficiency and effectiveness of delivery, but it should be subject to a cost-benefit analysis.

Any mechanism or mechanisms retained for private land conservation need to be flexible to cater for landholders with a broad range of needs, from those driven by altruistic motivation to those with high opportunity costs who need an income to compensate for forgone productivity.

Improving strategies for conserving private land

Strategic integration of private land-conservation mechanisms

One of the problems facing private land conservation in NSW is that there is no strategic integration of voluntary agreements (currently implemented independently by both the Office of Environment and Heritage, Local Land Services and the Nature Conservation Trust) and offset agreements (currently implemented by developers).

The legislative review provides an opportunity for the establishment of one entity responsible for implementing private land conservation through both voluntary and offset mechanisms. The government is partially moving in this direction through the Biodiversity Offsets Policy for Major Projects and the Offsets Fund. This will allow developers to satisfy their offsets

requirements by making a monetary payment, which is in turn used by a third-party fund manager to locate and secure offsets more strategically.

As an independent body established under legislation, the Nature Conservation Trust already has relevant expertise and thus may be well placed to take on the role of delivering the consolidated conservation covenant mechanism as well as a biodiversity offset mechanism. Government may continue to provide periodic financial support via the Environmental Trust and may retain a role in strategy development.

The Trust for Nature in Victoria provides a good example of the successful devolution of private land conservation to an independent non-government organisation. The Trust for Nature operates voluntary and offset programs, providing a 'one-stop shop' for landholders. This has reduced confusion in the marketplace, built expertise in engagement and fundraising, and built the trust of landholders through longevity of outcomes.

Prioritisation

Although both the Office of Environment and Heritage and the Nature Conservation Trust currently use some forms of strategic planning to guide and prioritise private land conservation efforts, there is no overarching state-wide strategy or framework to coordinate these efforts. The development of such a framework for private land conservation may lead to more effective biodiversity outcomes. The framework would require criteria for identifying high-conservation-value land and would facilitate the prioritisation of resources towards conservation effort in a similar way to the approach being taken in the Saving our Species program.

The Office of Environment and Heritage may be better suited to focusing its role in developing such a state-wide framework, in consultation with the Nature Conservation Trust and Local Land Services, rather than undertaking on-ground delivery. The state-wide framework could build in a more streamlined approach to assessing the overall effectiveness of measures implemented. This could better accord with NSW Commission of Audit recommendations towards local delivery, devolvement of government programs, reduced duplication, evidence-based decision-making, improved collaboration and reduced red tape (NSW Commission of Audit 2012).

Maintaining a range of incentives

There is a need for a suite of incentives to motivate and maximise landholder participation in conservation action. Grant-style funding and market-based mechanisms are both appropriate models that appeal to a range of landholder motivations. Small grants are more suited to altruistic (low-opportunity-cost) landholders and play an important role in providing help with on-ground management activities such as weed and pest control. BioBanking is more suited to landholders with high opportunity costs who need payment for foregone land-use opportunities as well as active management of conservation values.

To strengthen the use of BioBanking as a broader conservation mechanism and to cater for landholders' needs, a number of issues need to be addressed, including:

- The costs of establishing a BioBanking site/agreement are high.
- The types of trades that can occur are constrained, thereby limiting the operation of the market (i.e. a high level of compatibility is required between the BioBanking site and the development site).

These factors may have contributed to the low numbers of landholders pursuing BioBanking as a viable payment option. The current review of the scheme, as well as the implementation of the new Biodiversity Offsets Policy, is expected to address these constraining factors and thus increase the scheme's potential as a broader conservation mechanism.

Security and longevity of outcomes

Two commonly raised concerns about voluntary private land conservation are security and longevity of outcomes.

Security is important for both the landowner and the body signing the agreement, as both require certainty for the future. Landowners want to ensure they will receive financial assistance for the conservation work they are undertaking and those bodies providing the funding are keen to ensure that conservation outcomes are being achieved to ensure they are receiving value for money.

From a conservation perspective, security means the highest form of protection for the longest possible term (in perpetuity). Conservation agreements, Nature Conservation Trust agreements, and BioBanking have the greatest security, as they are in perpetuity (attached to title). Time frames vary for incentive property vegetation plans, but they may also be established in perpetuity. Only moderate security is afforded to management agreements with Local Land Services bodies, as they are not binding on future landowners. Although wildlife refuges are noted on title they can easily be varied or revoked, although this has not occurred frequently in practice.

Longevity of outcomes is intrinsically linked to the mechanisms used, appropriate investment for managing land for conservation outcomes, and ongoing monitoring to ensure outcomes are being achieved. Nature Conservation Trust agreements, conservation agreements and BioBanking are likely to achieve the intended outcomes, as they each require management plans, reporting, monitoring and site visits. There is no doubt that mechanisms with in-perpetuity arrangements, good management plans and ongoing monitoring result in greater returns on investment.

Appendix A: Prioritisation of conservation action

The total area of land currently protected by private land-conservation mechanisms is in the order of 3.1 million hectares, or 3.9 per cent of NSW. With the amount of land currently protected by Nature Conservation Trust agreements set to double by the end of the year and a number of BioBanking agreements currently being developed, this figure will increase by the end of 2014.

There is currently no overarching framework or strategy that guides state-wide prioritisation of effort in building a private land-conservation network. The Nature Conservation Trust uses its 5-year business plan to guide its effort, as this plan must set out both the Trust's conservation priorities and the criteria it will use to identify land appropriate for its acquisition. In setting these priorities, however, the Nature Conservation Trust relies to some extent on the conservation priorities, such as the National Reserve System, which are identified by government. The Office of Environment and Heritage is currently developing a 5-year plan for private land conservation in NSW.

A primary objective of building the public and private conservation network in NSW is to protect examples of as many of the state's ecosystems as possible, including the natural processes, ecological communities and species they support. Sub-bioregions are valuable tools for biodiversity conservation planning and for measuring progress towards the protection of ecosystems (e.g. by using a 'CAR' system).

The Native Vegetation Management Benefits Analysis[5] is another valuable tool for targeting and measuring the success of conservation action. Focusing on improving the condition, extent and connectivity of vegetation formations, it recognises four types of management benefits (as reflected in the layers of the maps below):

- 'manage' benefits—areas of existing native vegetation in good condition and where the emphasis on management would be on maintaining this high condition
- 'improve' benefits—areas of existing native vegetation that require some form of active management to improve their condition
- 'revegetate' benefits—cleared areas where replanting or natural regeneration of species that previously occurred at the site would return the highest benefit
- 'consolidate' benefits—areas where emphasis on linking or retaining the current connectivity values of core remnants would provide the greatest benefit.

Conservation and Nature Conservation Trust agreements

Both the Office of Environment and Heritage and the Nature Conservation Trust seek to invest in conservation outcomes to contribute to the National Reserve System by targeting underrepresented bioregions. Also targeted are conservation values such as maintaining connectivity, buffering national parks and reserves, and protecting areas that have conservation priority as identified in the Native Vegetation Management Benefits Analysis.

[5] http://www.environment.nsw.gov.au/vegetation/invest.htm

The Office of Environment and Heritage uses the NSW National Parks Establishment Plan[6] where possible in targeting strategic areas for conservation agreements. Figure A1 shows the locations of land under conservation agreements overlaid on the Native Vegetation Management Benefits map. This map shows that the highest concentration of conservation agreements has native vegetation consolidation benefits, reflecting reserve consolidation priorities. These areas tend to act as buffers to existing reserves in the national park system, and they also provide habitat connectivity. A much smaller number appear to provide some value in managing or improving native vegetation condition across the Central West, the Tablelands and the Riverina, which are underrepresented parts of the state.

Figure A1. Locations of land under Office of Environment and Heritage conservation agreements overlaid on the Native Vegetation Management Benefits Map

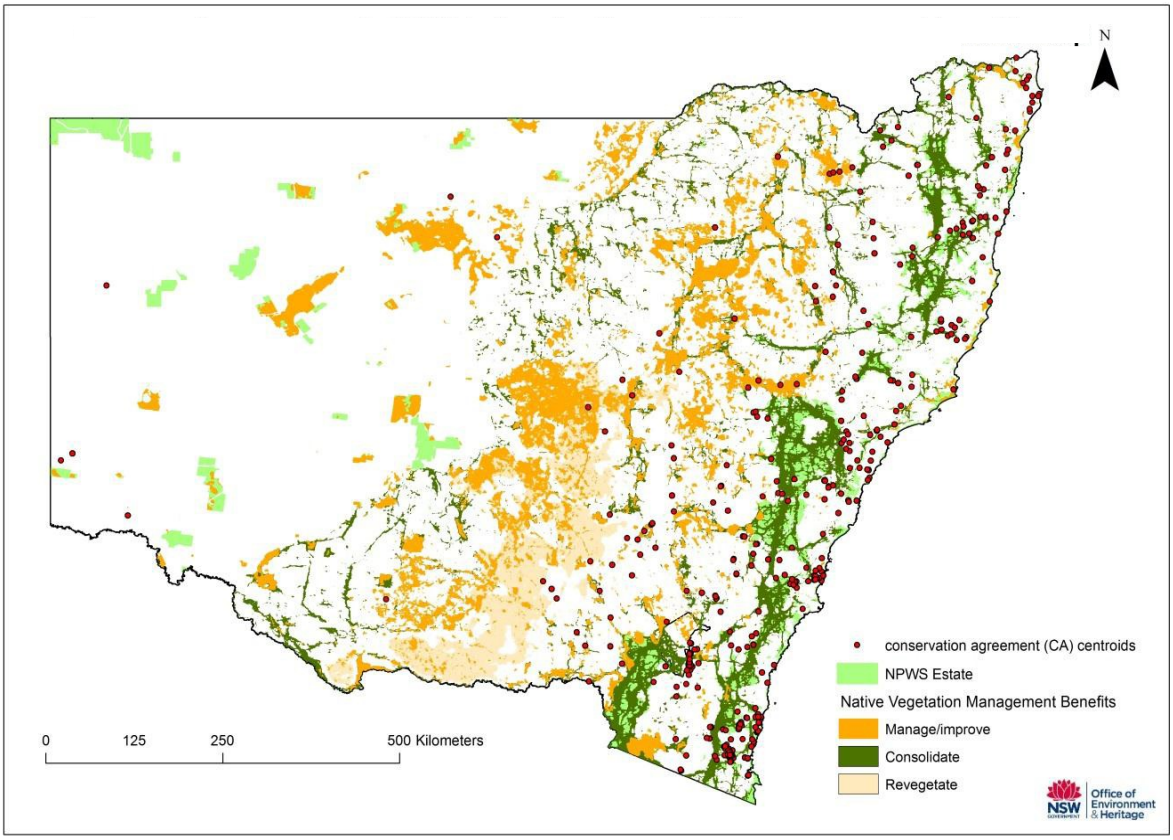


Figure A2 shows the locations of land under conservation agreements overlaid on the IBRA sub-region map. Although the highest concentration of conservation agreements occurs in bioregions that are already relatively well represented in the reserve system, there is also a concentration of conservation agreements in the underrepresented South Western Slopes and Darling Riverine Plains bioregions. At a sub-bioregional level, some conservation agreements are located in significant areas that are poorly represented, such as the Hunter sub-region (Sydney Basin Bioregion) and the Upper Hunter sub-region (NSW North Coast Bioregion).

[6] http://www.environment.nsw.gov.au/protectedareas/npestabplan.htm

In terms of a CAR protected area system, therefore, conservation agreements currently help achieve ‘adequacy’ targets and show some contribution towards achieving a comprehensive representative sample of underrepresented bioregions. This reflects past prioritisation of the consolidation of existing reserves. The Office of Environment and Heritage has identified as a future priority the targeting of high conservation value and underrepresented lands.

Figure A2. Locations of land under Office of Environment and Heritage conservation agreements overlaid on IBRA sub-regions

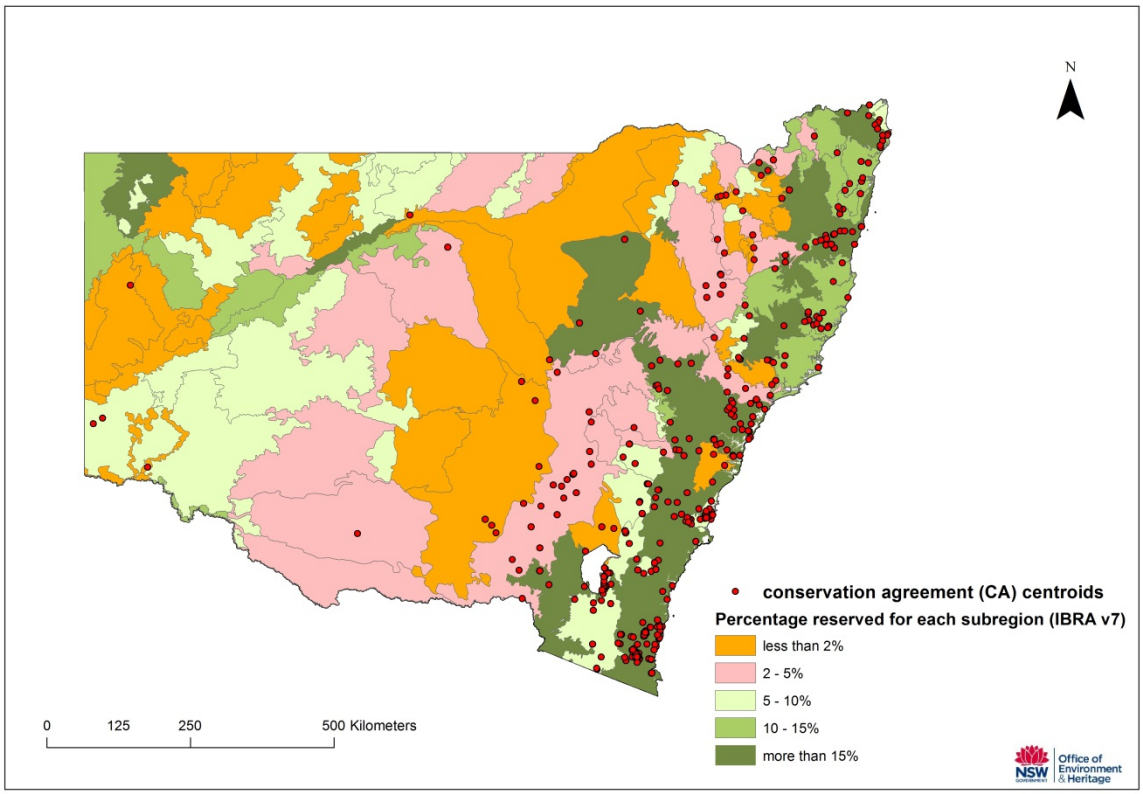


Figure A3 shows the locations of land under all Nature Conservation Trust agreements in NSW overlaid on the Native Vegetation Management Benefits map. Although there are currently relatively few Nature Conservation Trust agreements (the first was established 15 years after the first conservation agreement), they appear to be located in areas with native vegetation management, improvement and revegetation benefits.

Figure A3. Locations of land under Nature Conservation Trust agreements overlaid on the Native Vegetation Management Benefits map

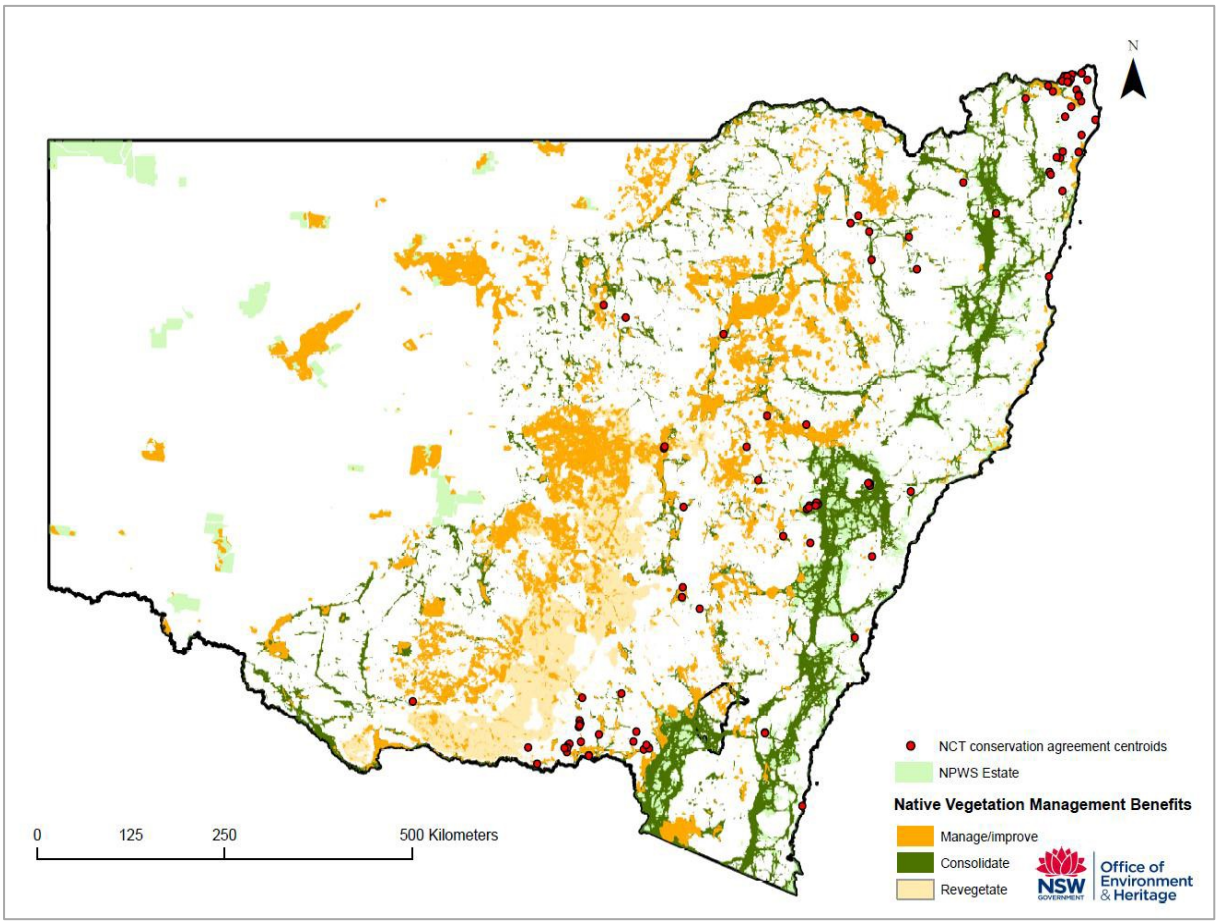
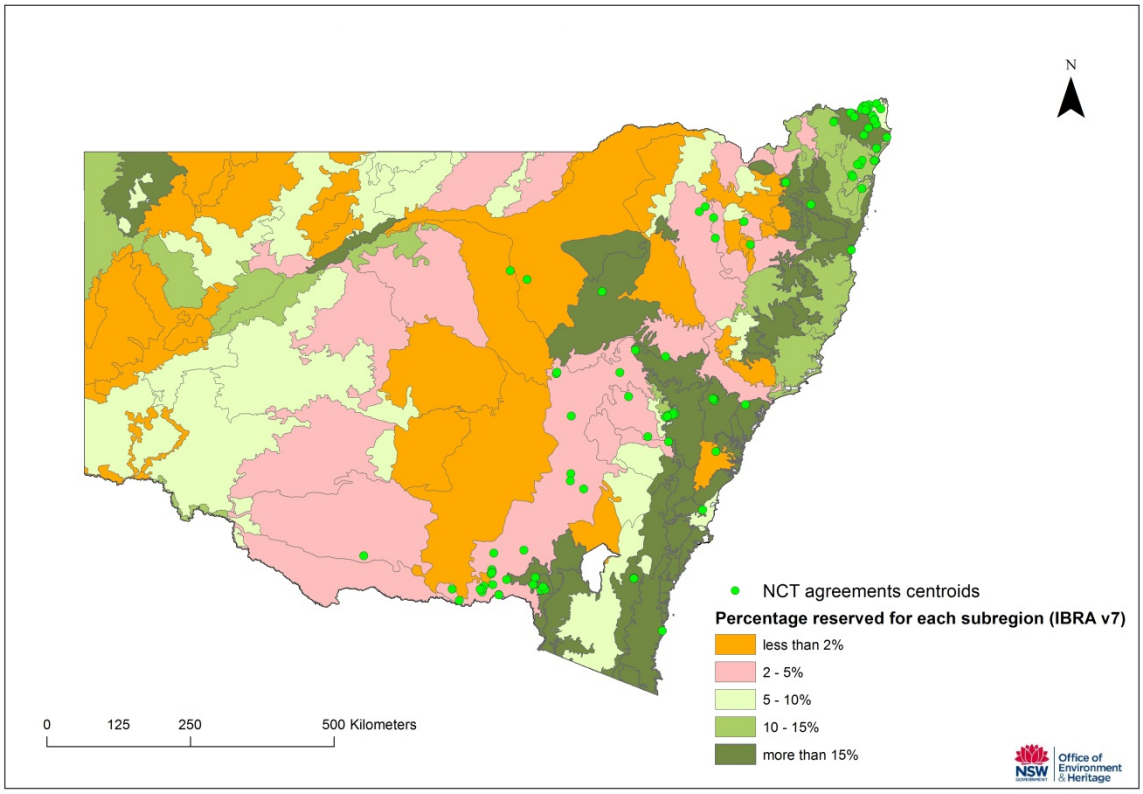


Figure A4 shows land under Nature Conservation Trust agreements overlaid on the IBRA sub-region map. As with the conservation agreements, there is a concentration in the underrepresented South Western Slopes (an area targeted by the Trust) and the Darling Riverine Plains Bioregions. There is also a high concentration of Nature Conservation Trust agreements in the well-represented South-eastern Queensland Bioregion, near Lismore (where the Nature Conservation Trust has also targeted its program). These appear to focus less on reserve consolidation and more on contributing to protecting ecosystems and comprehensive and representative targets.

Figure A4. Locations of land under Nature Conservation Trust Agreements overlaid on IBRA sub-regions



The maps suggest that, although overlap exists, that conservation agreements and Nature Conservation Trust agreements currently achieve some different benefits. Conservation agreements, in particular, have played a strong role in achieving consolidation and connectivity benefits. There are a number of factors that may contribute to the different benefits achieved by these two programs:

- the targeted programs delivered by the Nature Conservation Trust in underrepresented bioregions, including establishing partnerships with Local Land Services in operating the revolving fund and expanding the Trust's covenanting program, as well as involvement in national partnerships
- the Office of Environment and Heritage's prioritisation of reserve consolidation
- the motivation of landholders (particularly rural landholders) and their willingness (or otherwise) to engage with government
- compared with conservation agreements, stronger service delivery and funding support for Nature Conservation Trust agreements: the Nature Conservation Trust has a much stronger resource base, and currently the Office of Environment and Heritage Conservation Partners Program is being managed with minimal budget allocation
- the need for more certainty in funding for the management of conservation values on agricultural land
- the ability of the Nature Conservation Trust, through the revolving fund, to specifically target, purchase and covenant high-conservation-value land.

Wildlife refuges

Figure A5 shows the locations of land under wildlife refuges overlaid on the Native Vegetation Management Benefits map. This map shows that the locations of wildlife refuges are widely spread throughout NSW, with some very large properties in western NSW. Wildlife refuges currently cover around 2.4 per cent of the state. It should be noted that the wildlife refuge mechanism dates back to 1948 and its primary objective is to manage areas for wildlife habitat on private land. Therefore, although these areas appear well spread, the mechanism offers less protection, and therefore the native vegetation benefits on the ground may be limited. Also note that the Native Vegetation Management Benefits mapping does not cover the Western Division of NSW.

Figure A5. Locations of land under wildlife refuges overlaid on the Native Vegetation Management Benefits map

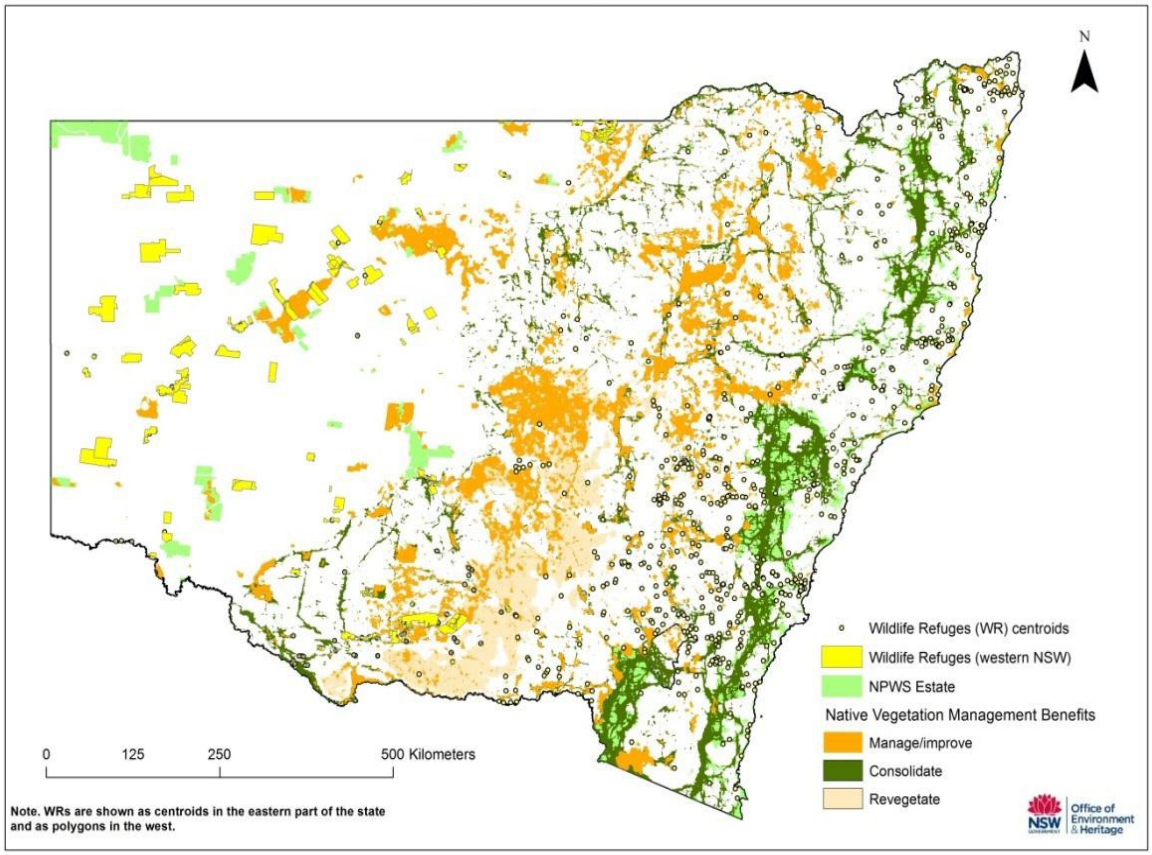
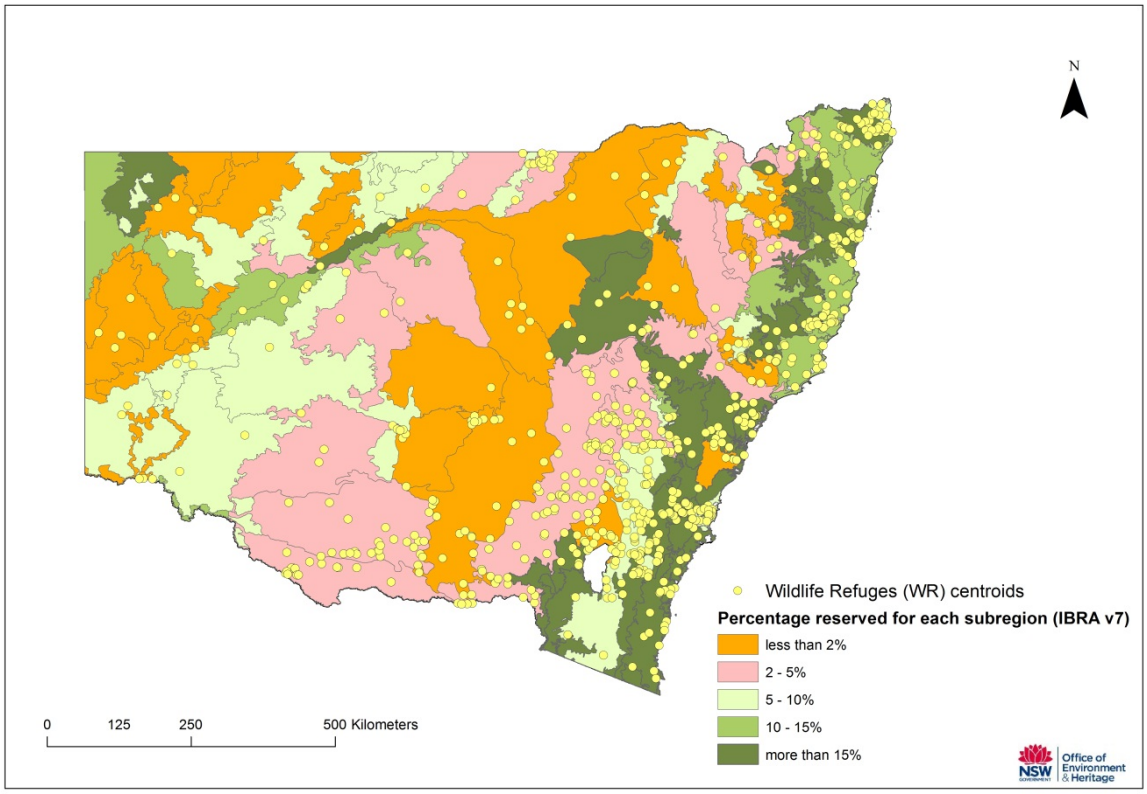


Figure A6 shows land under wildlife refuges overlaid on the IBRA sub-region map. It shows that large concentrations of wildlife refuges are located in underrepresented bioregions—in particular in the South West Slopes, Riverina, Cobar Peneplain, Broken Hill and Mulga Lands bioregions. On face value, wildlife refuges help to protect underrepresented bioregions. However, because they are not high-security conservation mechanisms (i.e. they are not established in perpetuity) they cannot be included in National Reserve System targets and measures.

Figure A6. Locations of land under wildlife refuges overlaid on IBRA sub-regions



Incentive property vegetation plans

The location of incentive property vegetation plans is heavily dependent on the individual Local Land Services. Some prefer to use incentive property vegetation plans and others management agreements to manage the governance and accountability of Catchment Action Plan funding. Figure A7 shows the heavy concentrations of land under incentive property vegetation plans in some parts of the state. There is an extremely high concentration in the Riverina, as well as in the South East, Murray, Western, Hunter and North Coast Local Land Services areas. Hardly any incentive property vegetation plans can be found in the Central Tablelands, Central West and North West Local Land Services areas.

Caution needs to be exercised in considering the benefits of the location of incentive property vegetation plans across the state: given that some Local Land Services bodies use them and others don't, their location is not strategic or targeted. Notwithstanding this, however, Figures A7 and A8 show that the incentive property vegetation plans located in the Riverina and Murray Local Land Services areas are likely to have the 'manage' and 'improve' native vegetation benefits and cover several underrepresented bioregions. Those located in the Hunter and North Coast Local Land Services areas, on the other hand, have native vegetation consolidation benefits even though they are located in relatively well-represented bioregions.

What Figure A7 does show clearly, however, is that there is a concentration of incentive property vegetation plans in areas of NSW with low uptake of conservation agreements and Nature Conservation Trust agreements (with the exception of those in the Hunter and North Coast Local Land Services areas). Although this may be due to many factors, incentive property vegetation plans are likely to fill these niches because they are used by some Local Land Services bodies to provide incentive payments to landholders to take management

actions in accordance with Catchment Action Plans. Unfortunately there are not adequate data to show the locations of management agreements, but they would likely fill the gaps in the remaining Local Land Service areas. (However, note that they offer lower security and shorter-term outcomes.)

Figure A7. Locations of land under incentive property vegetation plans overlaid on the Native Vegetation Management Benefits map (for the period 2005– 2012)

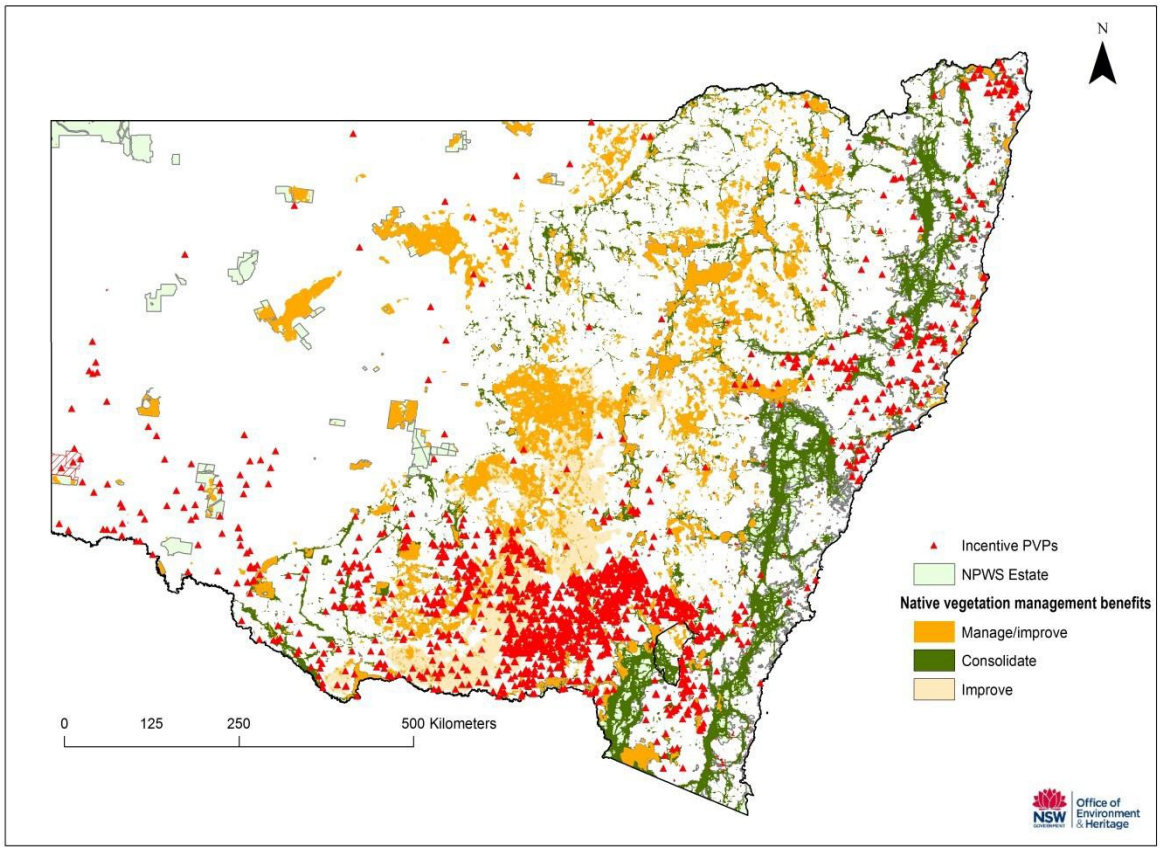
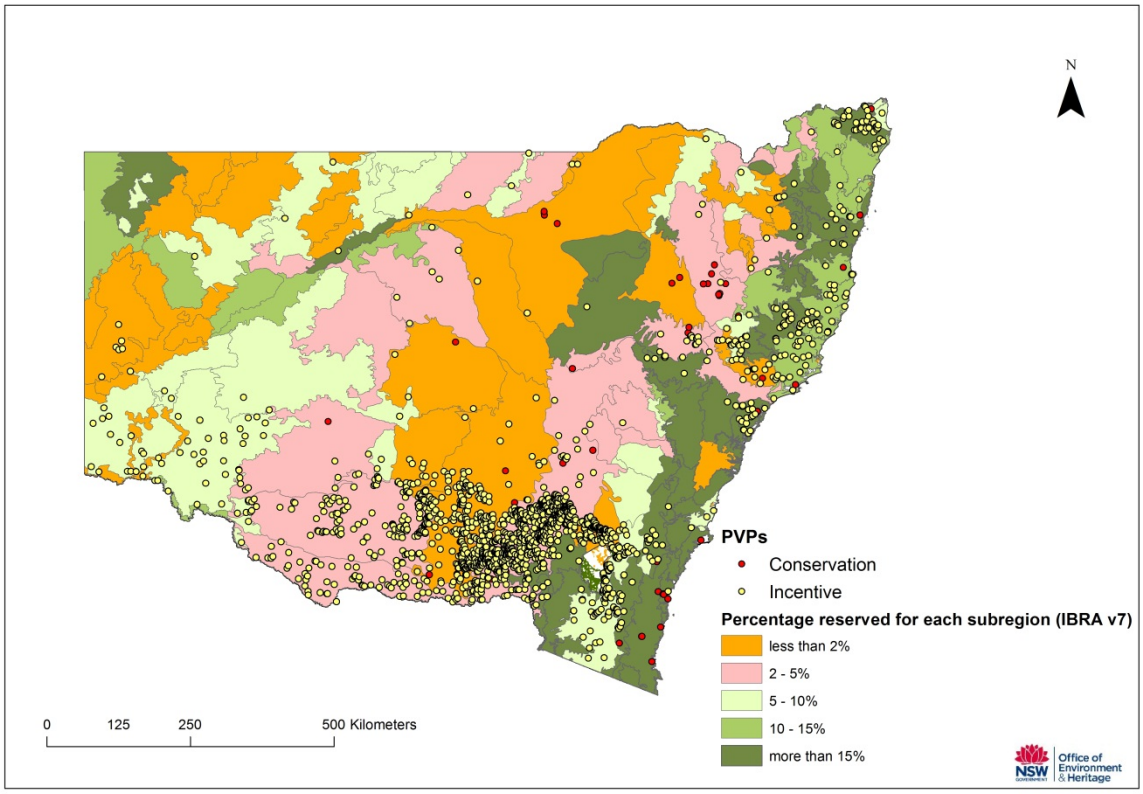


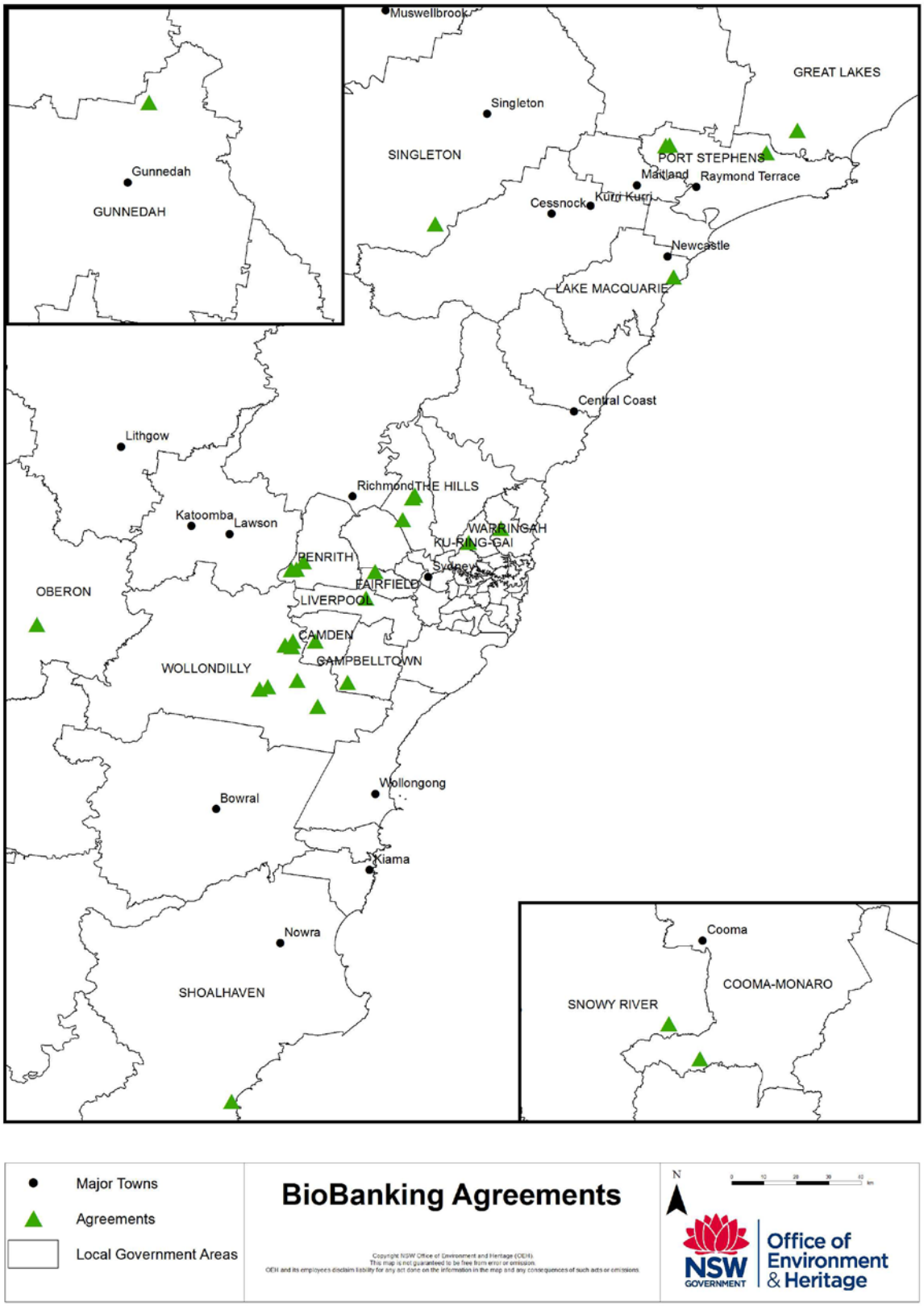
Figure A8. Locations of land under incentive property vegetation plans overlaid on IBRA sub-regions



BioBanking

Figure A9 shows the current distribution of land under BioBanking agreements in NSW. Given that BioBanking is currently primarily a market-based offsetting mechanism rather than a conservation program, the locations of the agreements are driven by offsetting needs for development, not by conservation targets. Increased landholder uptake of biobanking agreements is required throughout central NSW to increase native vegetation benefits and protection of underrepresented bioregions (BioBanking is in a developmental phase, having been in operation for only 4 years. To date, it is concentrated around development nodes in the Sydney Basin.)

Figure A9. Locations of land under BioBanking agreements in NSW



Appendix B: Saving our Species Partnerships Grants program

The Saving our Species Partnership Grants program is a contestable grants program seeking to achieve long-term outcomes for threatened species in NSW.

Funded by the NSW Environmental Trust, the program will encourage partnerships among government, the community, non-government organisations and corporations to protect and conserve our most threatened plants and animals.

Expressions of interest for Round 1 of the program were sought in September 2014.

Objectives

The objectives of the Saving our Species Partnership Grants program are to:

- help increase the number of threatened species, populations and communities secured in the wild in NSW through strategic co-investment
- encourage the alignment of efforts to manage threatened species and communities across NSW
- make decisions about the management of threatened species and communities on the basis of the best available evidence and evaluation of outcomes

The Saving our Species Partnership Grants program aligns with the NSW Government's Saving our Species program and framework.

How much is available?

A total of $10 million over 6 years is available under the grants program. Individual grants of between $300,000 and $1,000,000 are available. This includes seed funding of up to $15,000 for successful expressions of interest from applicants to develop detailed business plans for their projects.

Co-contributions

All projects must be for a minimum of 10 years. For the first 6 years of all projects the NSW Environmental Trust and the applicant must jointly fund up to 80 per cent of the total project cost. The remaining 20 per cent must be committed solely by the applicant over the remaining 4 years (via cash and/or in-kind contributions). This recognises that, in most ecological restoration projects, the point of completion (or minimal continued intervention) is usually around 10 years; about 80 per cent of resources are needed within the first 6 years.

Who can apply?

This program is specifically designed to encourage relevant and interested stakeholders to join forces to help protect and conserve threatened species. It will do that by funding partnerships between government, the community, non-government organisations and corporations. All applications must be partnerships between multiple stakeholders operating as coordinated consortia.

What will be funded?

The Saving our Species Partnership Grants program will fund on-ground actions and monitoring actions consistent with threatened species conservation projects developed by the

Saving our Species program. Applications must demonstrate that the project will deliver the full suite of actions identified within each Saving our Species conservation project.

Program priorities

In 2014, the Saving our Species Partnership Grants program focused on the site-managed species stream of the Saving our Species program. Expressions of interest were considered for large-scale individual Saving our Species Conservation Projects, with priority given to:

- projects that maximised co-investment and cost-effectiveness
- projects that could demonstrate ongoing commitment beyond the 10-year project period
- projects that delivered outcomes for multiple threatened species.

Other threatened species associated with the landscape management stream and threatened populations and ecological communities will be prioritised in Round 2. It is anticipated that Round 2 will open to applications in July 2015. Reintroduction projects for presumed-extinct species are not being considered as part of the Saving our Species Partnership Grants program.

Appendix C: Mechanisms used in other jurisdictions

Like NSW, all jurisdictions have a conservation covenanting program in place (Table C1), and in most cases this is the main mechanism used by governments to secure areas of high conservation value on private land. Similarly, all jurisdictions (except for the Northern Territory) provide the opportunity to enter into covenants with a non-government Trust. NSW is the only jurisdiction that offers a legislatively based wildlife refuge mechanism.

Each state has established a Trust that provides for public donation and purchase of private land. Each Trust, with the exception of Western Australia (its fund ceased in 2011) has an associated revolving-door fund. Commonly the Trusts do not protect large areas of land, but they provide a very secure form of private land conservation and often target high-priority areas.

Victoria's Trust for Nature's Revolving Fund is the oldest of its kind in Australia; it was established in 1972. Having had many years of development and refinement, the Fund is able to purchase high-conservation-value properties in Victoria. Similar to the Nature Conservation Trust in NSW, Victoria's Trust for Nature is supported by a mix of profit on property sales, private donations and government support.

NSW (BioBanking) and Victoria (Bushbroker) are the only two jurisdictions that use market-based mechanisms whereby landholders commit to enhance and protect biodiversity values on private land and can sell credits to generate income.

In Victoria, credits are purchased by those who are required by law to offset the clearing of native vegetation. BioBanking is a development offset scheme that differs slightly in that credits may be purchased by conservationists wishing to create a net gain for biodiversity conservation or by investors who trade the credits; moreover it is a mechanism for offsetting development.

Queensland and the Northern Territory differ from other jurisdictions in that they offer landholders more flexible 'multi-use' agreements. These allow landholders to manage their land for production purposes as well as for conservation. For example, under Queensland's covenanting program, conservation initiatives can be integrated with sustainable primary production activities such as grazing and pasture development. Arguably, these agreements may not provide as high a level of environmental protection as conservation agreements in NSW or Trust for Nature agreements in Victoria, but their greater flexibility may be more attractive to landholders and may encourage a greater rate of participation. For example, Queensland currently has over 3.5 million hectares of land protected by conservation covenants.

In 2006, the Queensland Government initiated a tendering scheme (NatureAssist), which has recently been discontinued. They found that the public call for expressions of interest didn't necessarily draw out the real environmental priorities and that landholders weren't always well placed to deliver the works. The Queensland Government has established a new approach, which is to identify target properties and work with landholders to determine what work is required. The work is then delivered under competitive procurement, thus still retaining an element of market competition.

Table C1. Some of the private land-conservation mechanisms available across other jurisdictions in Australia

Legislative	Mechanism	Legal protection	NSW	VIC	QLD	SA	TAS	WA	NT	Cwlth
	Conservation covenants	High	✓	✓	✓	✓	✓	✓	✓	✓
	Trusts (public donation)	High	✓	✓	✓	✓	✓	✓		
	Biodiversity credits (e.g. BioBanking)	High	✓	✓						
	Revolving-door funds	High	✓	✓	✓	✓	✓	✓		
	Tendering (competitive auction)	Med		✓		✓				✓
	Targeted tender (e.g. NatureAssist)	Med			✓					
	Wildlife refuges	Med	✓							
	Incentive property vegetation plans	Med	✓							
Non-legislative (programs)	Private land acquisition (e.g. Australian Wildlife Conservancy, Bush Heritage Australia)	Med-High	✓	✓	✓	✓	✓	✓	✓	
	Stewardship Payments	Low-Med					✓			✓
	Direct investment (i.e. grants)	Low	✓	✓	✓	✓	✓	✓	✓	✓
	Voluntary property registration (i.e. Land for Wildlife)	Low	✓	✓		✓	✓	✓		
	Partnership programs (e.g. Government/non-government organisations)	Varies	✓		✓	✓	✓		✓	

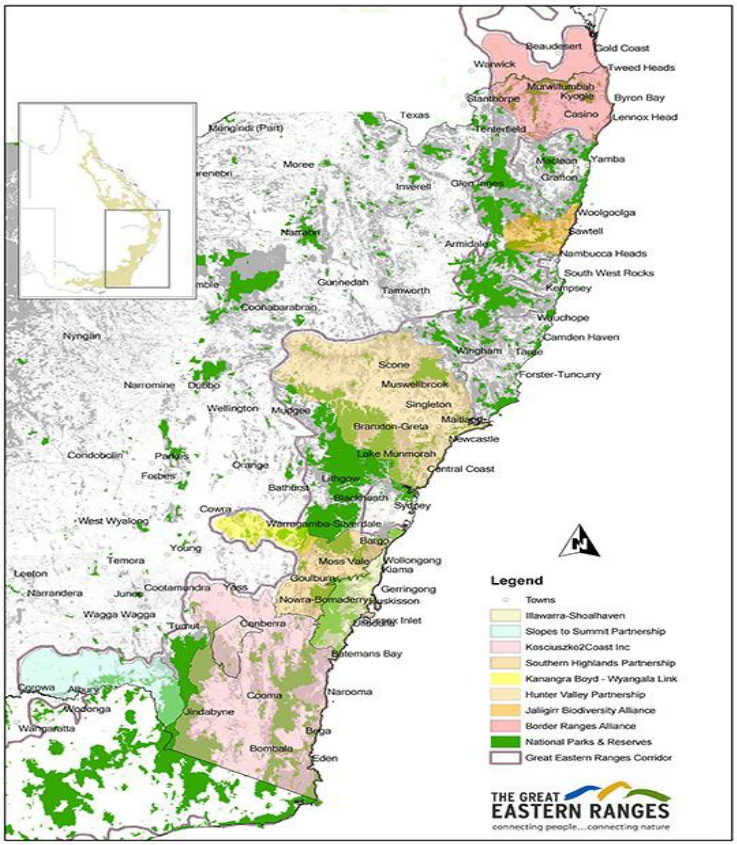
Appendix D: Case study—Great Eastern Ranges initiative

The Great Eastern Ranges initiative is a collaborative, cross-border program that sets out to link and restore fragmented habitats along the Great Dividing Range across public and private land. It is bringing people and organisations together to establish a conservation corridor that will encompass a variety of land uses, including agriculture, industry and human settlement, in addition to national parks and reserves.

The Great Eastern Ranges encompasses the Great Dividing Range and the Great Eastern Escarpment and runs for 3600 kilometres from western Victoria through NSW and the ACT to Far North Queensland. This represents the longest adjoining mountain forest and woodland systems in Australia and is home to nearly two-thirds of our vegetation communities. The area also provides crucial ecosystem services, providing clean water to 93 per cent of the population along the eastern seaboard.

The Great Eastern Ranges program is supported by a diverse range of organisations. There are five primary partners in this initiative, being the Office of Environment and Heritage, the Nature Conservation Trust, Greening Australia, OzGreen and the National Parks Association of NSW. A number of regional partnerships have also been established to focus on priority projects that have been identified through regional analysis and planning. By working with local landholders, industry groups, traditional owners, governments, non-government organisations and community groups to achieve high priority objectives, the Great Eastern Ranges' 10 Regional Partnerships (see Figure D1) have made a critical contribution to the success of the initiative.

Figure D1. The 10 regional partnerships of the Great Eastern Ranges initiative (NSW and ACT section)



The Great Eastern Ranges program works as an overarching branding mechanism for partner organisations and as a source of technical support to private land-conservation providers. It is functioning despite the complicated governance arrangements that flow from the diversity of private land-conservation providers in NSW. Conservation agreements and wildlife refuges have been used in securing areas of high conservation significance within the Great Eastern Ranges area, along with other types of agreements that do not have a statutory basis.

Appendix E: Case study—Victorian Environmental Partnerships Policy

Victoria, through its Environmental Partnerships policy, has placed greater emphasis than any other state on the use of market-based mechanisms. Most jurisdictions have one market-based program currently in place. Victoria runs three separate market-based programs, namely Bushbroker (similar to BioBanking) and two competitive tendering programs, Bushtender and Ecotender.

The competitive tender (or reverse auction) system is where landholders compete (or tender) for available funds in order to better manage native vegetation on their properties. Successful bids are those that offer the best value for money. This approach pays landholders to enter into contracts to undertake management to improve the quality or area or native vegetation on their land. BushTender specifically targets remnant vegetation, whereas EcoTender includes riverine health, salinity, carbon and water quality. Both BushTender and EcoTender are non-legislative programs.

How does it work?

Landholders contact the government to express interest in the scheme. A field officer then assesses the significance and quality of their land. Landholders than identify management activities they will undertake, prepare a management plan, and submit a bid that outlines the payment being sought from the government. Bids are then judged on the current conservation value of a site, the amount of service offered by the landholder, and the cost. Successful bidders enter into an agreement with the government and receive regular payments on the basis of work completed (Department of Natural Resources and Environment 2002).

Participating landholders are required to submit annual progress reports. About 20 per cent of properties are visited by a field officer each year: over the life of the agreement each property can expect at least one site visit. Contracts are usually for 5 years, but some may be up to 10 years. Successful bidders may be offered additional financial incentives to opt for permanent protection of their land.

Tender schemes are typically used in regions where many landholders are managing properties containing important biodiversity values, such as a threatened vegetation community. The theory behind this approach is that the scheme provider can obtain a greater area of protection for biodiversity values at a lower cost than with other voluntary incentive options.

How is it funded?

BushTender and EcoTender are funded by the Victorian Government, but the BushTender program has not received funding since 2011.

The BushTender-type approach does provide an opportunity for investors from different programs to co-invest and potentially increase the outcomes. Each investor may have different objectives for investing through BushTender, but the combined outcomes of their investment (e.g. amount of carbon sequestered, improved quality of native vegetation, threatened species conservation) can be estimated and reported (Department of Sustainability and Environment 2008).

Payments occur subject to satisfactory progress against actions as specified in the Management Agreement. However, the payments are based on 'outputs' (e.g. number of hectares fenced or number of trees planted), not on any measured environmental outcomes.

Some BushTender/EcoTender auctions have had a mixture of Commonwealth and State funding. However, there are no examples to date of co-investment with a non-government or philanthropic organisation.

Analysis

An evaluation of the BushTender trial was conducted in 2002–03. A key finding was that many of the bids were for less money than officials had expected. In fact, the early results indicated that using the tender method improved the cost effectiveness of expenditure seven fold (Stoneham et al. 2002).

In 2006, the Department of Sustainability and Environment conducted a study of landholder responses to BushTender (Department of Sustainability and Environment 2006). It indicated that the BushTender approach appealed to a wide range of private landholders.

Conservation tenders may be an efficient way of allocating public funds for biodiversity outcomes on private land, particularly when compared with traditional grant payments (Stoneham et al. 2002). BushTender utilises a consistent assessment methodology that uses a biodiversity score to evaluate bids.

Well-designed auctions may provide additional incentives to encourage landholders to deliver environmental outcomes where previously these were largely lacking. However, these tools require careful design in order to be effective, particularly as administration and design costs may be high. The Department of Sustainability and Environment (2008) report highlighted the fact that auctions cannot be effective without well-designed underpinning regulation that includes the need to clearly articulate landholder 'duty of care'. They also rely predominantly on government funding, and payments to landholders are limited to 5, or at the most 10, years.

Conservation tenders are a targeted approach and are not a suitable mechanism for universal participation (Whitten et al. 2007). The auction approach could be effective as part of a range of incentive mechanisms available to landholders.

Appendix F: Case study—Victorian Trust for Nature's Statewide Conservation Plan

The Victorian Trust for Nature has recently prepared a strategic approach to its conservation efforts. In 2013, the Trust prepared and adopted a state-wide conservation plan that clearly sets out its conservation priorities throughout Victoria.

To improve its effectiveness as a conservation organisation, Trust for Nature recognised the need for a clearly defined set of conservation priorities and priority areas at a state-wide scale. The Statewide Conservation Plan is designed to complement other major planning approaches that relate to Victoria's natural resources, particularly the Regional Catchment Strategies developed by Victoria's Catchment Management Authorities and the biodiversity planning undertaken by the Department of Environment and Primary Industries (formerly the Department of Sustainability and Environment).

The aims of the Plan are to:

- establish a strategic, state-wide approach to the Trust's conservation activities on private land, focusing on protecting priority ecosystems and species
- develop an integrated approach to biodiversity conservation across the Trust's 10 operational regions
- develop a strategic approach to nature conservation on private land that complements the conservation measures being undertaken or funded by partner agencies on public and private land.

The approach taken to develop the Plan was based on the Department of Environment and Primary Industries' conservation-planning method for the development of Catchment Management Authority Regional Catchment Strategies. The first step was to define the biodiversity assets to be targeted for conservation and the second was to identify priority locations to help conserve those assets.

The three broad classes of biodiversity asset defined for the Plan are:

- terrestrial ecosystems on private land
- aquatic ecosystems on private land (comprising wetlands, waterways and coasts)
- threatened species on private land.

A key outcome of the Plan has been the identification of 12 focal landscapes across Victoria. These landscapes were assessed as capable of making the greatest contribution towards nature conservation on private land. Most of these focal landscapes overlap with priority areas for biodiversity investment identified by Catchment Management Authorities, the Department of Environment and Primary Industries and the Australian Government, providing opportunities to strengthen partnerships at each of these levels.

Appendix G: Case study—joint management agreements

Joint management agreements are little-used provisions in the *Threatened Species Conservation Act 1995*, provided for under Part 7. Only one joint management agreement has been put in place.

Joint management agreements are made between the Office of Environment and Heritage and one or more public authorities for the management, control, regulation or restriction of an action that is jeopardising the survival of a threatened species, population or ecological community.

A joint management agreement for the NSW Shark Meshing (Bather Protection) Program was prepared in 2009 between the then Director General of the Department of Environment, Climate Change and Water and the Director General of the Department of Primary Industries. The objectives were:

- to minimise the impact of the shark-meshing program on marine mammals, marine birds and marine reptiles that are protected or a threatened species, population or ecological community
- to ensure that the shark-meshing program does not jeopardise the survival or conservation status of threatened species, populations or ecological communities, or cause species that are not threatened to become threatened.

The joint management agreement includes performance measures such as monthly catch summary reports and annual performance reports. A review report is required if the trigger point is tripped. The trigger point is tripped when the number of entanglements of non-target species and threatened species over two consecutive meshing seasons exceeds twice the annual average catch (i.e. net entanglement) in the preceding 10 years for those species. This has occurred once.

A mechanism like this that allows agencies to work together to manage threatened entities, especially where responsibilities are included in multiple pieces of legislation. It remains useful and adds minimal red tape.

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