



Draft Native Vegetation Regulation 2004 Regulatory Impact Statement

NSW Native Vegetation Reforms

Protecting and investing in healthy
and productive landscapes for the
people of New South Wales



NSW Government

Draft Native Vegetation Regulation 2004 Regulatory Impact Statement

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Information Sources

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Table of Contents

	<u>page</u>
Executive Summary	i
1. Introduction	1
1.1 The objectives of the proposed regulation	1
1.2 Role of Subordinate Legislation Act	1
1.3 Background to the Proposed Regulation	2
2. Existing Situation	2
2.1 Native Vegetation Cover	2
2.2 Clearing of Native Vegetation	3
2.3 Compliance	5
2.4 Native Vegetation Management Fund (NVMF)	6
3. Alternative Options to Achieve Policy Objective	7
3.1 Description of Alternative Options	7
3.1.1 Option 1: ‘The ‘Do Nothing’ Scenario	7
3.1.2 Option 2: Proposed New Government Statutory Rule (Regulation)	8
3.1.3 Option 3: An Alternative Statutory Rule (Regulation)	10
3.2 Expected Distributional Effects of the Regulations	11
3.3 Stakeholders	11
4. Approach and Methodology	12
4.1 Net Economic Benefits	13
5. Analysis of the Impact of Options	18
5.1 Option 1: ‘Do nothing’ - the regulation is not made.	18
5.2 Option 2: Proposed new Government statutory rule (Regulation)	21
5.3 Option 3: An Alternative Statutory Rule (Regulation)	25
5.4 Economic Evaluation	28
5.5 Sensitivity Analysis	29
5.6 Conclusion	30
6. Public Consultation Program	31
7. Data and Information Sources Used	31
Attachments	33

List of Tables

	Page No
Table 1 Summary of Native Vegetation Cover of NSW	3
Table 2 Native Vegetation Clearing Application and Outcomes	4
Table 3 Area Approved for Clearing for All DIPNR Regions	5
Table 4 Native Vegetation Management Fund 1998-2004	6
Table 5 Summary of Choice Modelling Studies concerned with Conserving Native Vegetation	16
Table 6 Transfer and Calibration of National WTP Value Estimates to NSW Regional Prices	17
Table 7 Summary of Key Outcomes by Regulatory Option	18
Table 8 Option 1 – ‘Do nothing’: Agency Costs	20
Table 9 Option 1 – ‘Do nothing’: Agency Costs by Major Cost Category and by Year (S’000)	21
Table 10 Option 1 - ‘Do nothing’: Landholder Costs	21
Table 11 Option 1 – ‘Do nothing’: Landholder Costs by Major Cost Category and by Year	21
Table 12 Option 2 – Proposed New Government Statutory Rule: Agency Costs	23
Table 13 Option 2 – Proposed New Government Statutory Rule: Agency Costs by Major Cost Category and by Year	24
Table 14 Option 2 – Proposed New Government Statutory Rule: Landholder Total Costs	24
Table 15 Option 2 – Proposed New Government Statutory Rule: Landholder Costs by Major Cost Category and by Year	24
Table 16 Option 2 – Proposed New Government Statutory Rule: Economic Benefits	24
Table 17 Option 2 – Proposed New Government Statutory Rule: Economic Benefits by Major Benefit Category and by Year	25
Table 18 Option 3 - Alternative Regulatory Option: Agency Costs	26
Table 19 Option 3 - Alternative Regulatory Option: Agency Costs by Major Cost Category and by Year	27
Table 20 Option 3 - Alternative Regulatory Option: Landholder Costs	27
Table 21 Option 3 - Alternative Regulatory Option: Landholder Costs by Major Cost Category and by Year	27
Table 22 Option 3 - Alternative Regulatory Option: Economic Benefits	27
Table 23 Option 3 - Alternative Regulatory Option: Economic Benefits by Major Cost Category and by Year	28
Table 24 Summary of Economic Evaluation and Net Present Value Comparison	29
Table 25 Impact of Sensitivity Analysis on Net Present Values by Option	30

ABBREVIATIONS

ACF:	Australian Conservation Foundation
API:	Air Photo Interpretation
BRS:	Bureau of Rural Sciences
CM:	choice modelling
CMA:	Catchment Management Authority
DEC:	Department of Environment and Conservation
DIPNR:	Department of Planning, Infrastructure and Natural Resources
DLWC:	Department of Land and Water Conservation
EP&A:	Environmental Planning and Assessment Act 1979
ERIC:	Environmental Research and Information Consortium Pty Ltd
IBRA:	Interim Biogeographic Regionalisation for Australia
LEC:	Land and Environment Court
NLWRA:	National Land and Water Resources Audit
NPV:	net present value
NV Act:	Native Vegetation Act 2003
NVC Act:	Native Vegetation and Conservation Act 1997
NVMF:	Native Vegetation Management Fund
NVMP:	Native Vegetation Mapping Program
NVR:	Native Vegetation Regulation 2004
NVRIG:	Native Vegetation Reform Implementation Group
PNF:	Private Native Forestry
PVP:	Property Vegetation Plan
PC:	Productivity Commission
RAMA:	routine agricultural management activity
RIS:	Regulatory Impact Statement
SCMP:	State Conservation Monitoring Project
SEPP:	State Environmental Planning Policy
TSCA:	Threatened Species Conservation Act 1995
TSR:	Travelling Stock Reserve
WTP:	Willingness to pay

Executive Summary

The proposed Regulation is titled the Native Vegetation Regulation 2004 (NVR 2004) under the Native Vegetation Act 2003 (NV Act). The Minister for Natural Resources is the proponent and the Minister responsible for making the Regulation.

Objectives of the Proposed Regulation

- The objective to be achieved by the proposed Regulation is:

To provide a clearly defined, equitable, consistent and streamlined framework for the management of native vegetation in New South Wales.

Structure of the Regulatory Impact Statement

The NVR 2004 provides the regulatory basis for the streamlined delivery of Property Vegetation Plans (PVPs) and development consents. It also contains an Environmental Outcomes Assessment Methodology (EOAM) which defines the circumstances under which broadscale clearing may improve or maintain environmental outcomes. In addition the regulation defines routine agricultural management activities (RAMAs) which can be conducted without consent and outlines a methodology for determining whether or not native vegetation comprising only groundcover may be cleared.

Approach and Methodology

The methodology adopted for the Regulatory Impact Statement (RIS) is based on the procedure set out in Schedules 1 and 2 of the *NSW Subordinate Legislation Act 1989*, as well as the *Guidelines for Economic Appraisal*, NSW Treasury and the *Regulatory Impact Statement Instruction Manual*, NSW Business Deregulation Unit.

Regulatory Options Identified

The costs and benefits of the following three options were evaluated:

- **Option 1: ‘Do nothing’.** The Regulation is not made. This would create procedural and administrative problems with many sections of the NV Act. It would not achieve the objectives as outlined.
- **Option 2: Proposed new Government statutory rule (Regulation) – Native Vegetation Regulation 2004.** The NV Act which was passed by Parliament in December 2003 provides for certain administrative and procedural activities to be prescribed in a Regulation. The proposed NVR 2004 provides the basis for those activities. Under this regulation most of the operational costs are borne by the Government. The regulation would achieve the objectives as outlined.
- **Option 3: Alternative Regulatory option with devolution of responsibility for and costs of the preparation the PVP to the landholder.** This option, which is similar in its effects to Option 2 except for shift of the cost burden to landholders, along with an expected increase in compliance costs, would achieve the objectives as outlined.

Overall Assessment

The assessment of the options is comparative against the ‘Do nothing’ base case, Option 1.

The proposed general regulation, Option 2, provides the greatest net economic benefits to the community. This option has a Net Present Value of \$48.6 million and a significantly higher net benefit of \$88.6 million over the five-year period at a 7% discount rate compared to Option 1. Option 2 also has a net economic advantage of some \$8.7 million over Option 3. Sensitivity testing of changes in the key assumptions had no effect on the relative ranking of the options.

Option 2 enables the objectives to be achieved by the proposed Regulation and provides effective supporting legislation for the NV Act. Option 3 would also meet the policy objectives but would not deliver the same benefits to farmers and the wider community as Option 2. The government’s policy objectives could not be achieved under Option 1.

Conclusion

The proposed Regulation will provide consistency, administrative certainty and clarity in decision making for the management of native vegetation. It will provide the greatest economic benefits to farmers and the community while minimising private and administrative costs.

The proposed Regulation will deliver the objectives of the NV Act 2003. It provides a framework that ensures an end to broadscale clearing of remnant native vegetation that doesn’t improve or maintain environmental outcomes. It provides landholders with certainty through a PVP system and clearly identifies routine agricultural management activities that do not require any form of consent.

The proposed Regulation will provide the mechanisms for the decision-making process to support the granting of clearing approval, particularly with respect to the ‘improve or maintain environmental outcomes’ test.

Public Consultation Program

The public consultation program for the Regulatory Impact Statement (RIS) will be undertaken in accordance with the *Subordinate Legislation Act 1989*.

Following the public review process of the new Regulation and of the RIS, any amendments to the proposed regulation will be considered and, if necessary changes made.

1. Introduction

This report, the Regulatory Impact Statement (RIS) under the *Native Vegetation Act 2003* (NV Act) sets out the analysis of the impact of the proposed Native Vegetation Regulation 2004 (NVR 2004) and the alternatives to the proposal. Preparation of the RIS involved assessing relevant costs and benefits, including the impacts on resource allocation, compliance costs, administrative costs and other costs and benefits to the community. The purpose of the RIS is to assist in the decision whether to accept, reject or modify the proposed Regulation.

The NVR 2004 provides the regulatory detail that allows for the streamlined delivery of Property Vegetation Plans (PVPs) and development consents. It also contains an Environmental Outcomes Assessment Methodology (EOAM) which defines the circumstances under which broadscale clearing may improve or maintain environmental outcomes. In addition the regulation defines routine agricultural management activities (RAMAs) which can be conducted without consent and outlines a methodology for determining whether or not native vegetation comprising only groundcover may be cleared.

1.1 The objectives of the proposed regulation

The objective to be achieved by the proposed Regulation is:

To provide a clearly defined, equitable, consistent and streamlined framework for the management of native vegetation in New South Wales.

1.2 Role of Subordinate Legislation Act

Under the *NSW Subordinate Legislation Act 1989* there is a requirement to prepare an RIS when a principal regulation is made. An RIS is seen as an effective means of raising public involvement in the regulation making process. It provides members of the community with an opportunity to understand the effects of regulations before they become law.

The primary purpose of an RIS is to ensure that the economic and social costs and benefits of regulatory proposals are examined so that Ministers proposing the regulations and members of the community can be satisfied that the benefits of the regulation justify potential costs.

Schedule 2 of the *Subordinate Legislation Act 1989* requires that the RIS must include:

- a statement of the objective[s];
- an identification of the alternative options by which those objective[s] can be achieved, wholly or in part;
- an assessment of the incremental cost and benefits of the Regulation, including the costs and benefits relating to resource allocation, administration and compliance;
- an assessment of the costs and benefits of each alternative to the making of the Regulation, including the costs and benefits relating to resource allocation, administration and compliance; with these assessments including the alternative of not proceeding with any action;
- an assessment as to which of the alternatives involves the greatest net benefit to the community; and
- a statement of the consultation program to be undertaken.

Cost benefit analysis has been used where possible in the preparation of this RIS. As not all costs and benefits could be quantified cost effectiveness analysis has been used in some places.

1.3 Background to the Proposed Regulation

The NV Act has been passed by both houses of the NSW parliament. It is a key part of the Natural Resources Reform in NSW and has substantially reformed the laws relating to the management of native vegetation. It sets a framework for improved native vegetation management through ending broadscale clearing that does not improve or maintain environmental outcomes and encouraging the revegetation and rehabilitation of farmland.

The NV Act is based on recommendations of the Native Vegetation Reform Implementation Group (NVRIG)¹ headed by the Rt. Hon. Ian Sinclair and with membership drawn from key stakeholders, including farming and environmental interests. The NV Act is designed to give greater clarity and certainty to farmers and industry regarding native vegetation management. The NV Act is part of a package of legislative reform that includes the *Natural Resources Commission Act 2003* and the *Catchment Management Authorities Act 2003*.

The keystones of the new system include clearer and much improved native vegetation legislation and regulations, a streamlined and effective property vegetation planning format that gives landholders a bigger say in how vegetation on their properties is managed, and the introduction of detailed satellite monitoring of vegetation change across the State.

The proposed Regulation is titled the Native Vegetation Regulation 2004 (NVR 2004) under the Native Vegetation Act 2003 (NV Act). The Minister for Natural Resources is the proponent and the Minister responsible for making the Regulation.

2. Existing Situation

2.1 Native Vegetation Cover

The total land area of NSW is some 80 million hectares of which about 50 percent are owned as freehold land, around 38 percent are leasehold (including lands in the Western Division) and the remainder is Crown Lands (including road and other infrastructure reserves, State Forests and National Parks). Native vegetation covers in the order of 65 percent of the state. When conservation reserves and the Sydney Basin are excluded the area of native vegetation subject to the NV Act is approximately 44.3 million hectares, representing about 55.3 percent of the State.

Table 1 provides a summary.

¹ Native Vegetation Reform Implementation Group, Final Report, October 2003.

Table 1 Summary of Native Vegetation Cover of NSW

Dataset*	Area (ha)**	% Total
Total Area of NSW	80,120,000	100.0
Total Vegetation Cover*** of NSW (Benson 1999)#	51,810,000	64.7
Total Vegetation Cover*** of NSW (NLWRA 2001)^	53,580,000	66.9
Total Vegetation Cover*** of NSW (SCMP 2002)~	51,460,000	64.2
Adjustments:		
Conservation Area Vegetative Cover*** (Benson 1999)	5,300,000	6.6
Sydney Basin Vegetative Cover*** (Benson 1999)#	2,480,000	3.1
Total Adjustments	7,780,000	9.7
Total Area covered by NV Act****	44,300,000	55.3

* Datasets do not delineate between remnant and regrowth.

** Data rounded to nearest 10,000 ha.

*** Coverage estimated using bioregions (IBRA).

**** Based on 65percent average vegetation cover.

Benson calculations using IBRA version 4.

^ NLWRA (National Land and Water Resources Audit). Data presented as major vegetation groups (e.g. Eucalypt Tall Open Forests) - Australian wide coverage - July 2001.

~ SCMP using IBRA 5.1. Using 1 km pixel presence/absence coverage.

Source: DIPNR records.

2.2 Clearing of Native Vegetation

The Impacts of Vegetation Clearing

There is uniform acceptance across government, industry and the community that broadscale land clearing must come to an end unless it maintains or improves environmental outcomes. The clearing of native vegetation is strongly linked to soil degradation, such as erosion and salinity as well as declines in aquatic ecosystem health, water quality, and climate change. (NSW SOE Report 2003). Two thirds of landholders nationally report that their property values will decline by up to 25 percent over the next three to five years as a result of land degradation (Allen Consulting Group 2001).

The Australian Bureau of Statistics estimates land degradation costs nationally \$1.15 billion per annum in lost production, 5 percent of the total value of agricultural production. The Prime Minister's Science Engineering and Innovation Council concluded that the cost of repairing damaged ecosystems nationally is \$2 - \$6 billion annually (May 2002). They recommended that the Commonwealth government urgently work with the States to limit broad scale clearing.

The loss and decline of native vegetation can lead to a substantial reduction in terrestrial habitats and is a major threat to biodiversity. As many areas have already been extensively cleared, even small amounts of additional clearing can have a relatively high impact on biodiversity.

For example, there is now a well documented pattern of accelerating extinctions occurring amongst woodland birds (Robinson & Traill 1996; Garnett & Crowley 2000; Ford et al. 2001). While many regions have already lost significant numbers of native species, regional extinctions will continue long after vegetation clearance ceases as the phenomenon known as the "extinction debt" runs its course (Possingham, 2001). As a consequence, clearing of native vegetation is listed as a "Key Threatening Process" under the *Threatened Species Conservation Act 1995*. As landscapes approach levels of clearing around 70 percent there is a rapid decline in habitat connectivity and a rapid decline in the probability of species persistence (Smith & Sivertsen 2002).

In NSW 180,000 ha of productive land is already salt affected and that area is estimated to increase eight-fold by 2050 (National Land and Water Audit). CSIRO have shown that a minimum of 30-50 percent of perennial vegetation cover is required to ultimately control groundwater rise and salinity

(Hatton et al, 2003). In south-western NSW alone, road damage due to high water tables costs about \$9 million each year. About 34 percent of roads and 21 percent of national highways are affected in this way (National Dryland Salinity Program 1998).

In addition, net emissions from land clearing Australia-wide are about 70 million tonnes of carbon dioxide equivalents per year from about 500,000 hectares of clearing across the country. Current levels of land clearing make up approximately 13 percent of total carbon dioxide emissions (Possingham, Ryan, Baxter & Morton 2002). The New South Wales contribution to these figures is substantial.

Conversely, it has been shown that a balanced cover of native vegetation can directly improve agricultural production. For example Walpole (2001) found that in the Gunnedah area, the value of pasture output is at its highest when the proportion of tree area across a farm is at least 34 percent.

Land Clearing Approvals

Under the NVC Act, the Department of Infrastructure, Planning and Natural Resources (DIPNR) is the consent authority for a wide variety of vegetation management and clearing activities including the management of invasive scrub, removal of exotic species and logging/forestry. All clearing approved by DIPNR under the NVC Act meets the requirements and definitions of the Act. Before clearing can be approved it must first pass social, economic and environmental impact assessment in accordance with Section 79(C) of the EP & A Act. This will not be the case under the new NV Act once the proposed regulation is in place.

A summary of the clearing applications received by DIPNR and their outcome under the NVC Act is shown in Table 2.

Table 2 Native Vegetation Clearing Application and Outcomes

Calendar Year	Outcome of Clearing Applications Received					
	Received	Processed	Approved	Withdrawn (1)	Rejected (2)	Refused (3)
1998	478	434	360	52	9	13
1999	805	760	714	23	23	8
2000	662	594	523	42	6	24
2001	548	578	457	64	6	52
2002	502	530	488	20	2	20
2003	522	547	494	30	2	21
2004 (June)	287	308	287	12	6	3
Total	3804	3751	3323	242	53	140
No./yr	585	577	511	37	8	22

(1) Applicant withdraws application; (2) Application not processed because it does not provide all the information required for assessment; (3) Application is assessed but does not meet the criteria for approval.

Source: DIPNR.

The number of applications received in any given period does not correlate with the number of applications determined in any given period. This is because some applications may take several months to complete the assessment process.

The actual area for which clearing approval was sought and the area approved for clearing since the commencement of the NVC Act is summarised in Table 3. The figures in Table 3 are for clearing applications and approvals. They do not represent the actual area cleared.

Table 3 Area Approved for Clearing for All DIPNR Regions

All DIPNR Regions	1998	1999	2000	2001	2002	2003	2004 To June	ha/yr (Ave)
Applications for clearing	104,810	276,996	100,489	133,876	84,878	86,158	44,951	128024
Area approved (ha)	75,307	174,681	74,459	90,786	57,753	59,365	38470	87,818

Source: DIPNR

The totalling of clearing application figures will provide a misleading answer to the environmental impact of vegetation clearing. The method of recording clearing can exaggerate clearing impacts on the environment because the total area of an application may be identified as being cleared when:

- invasive native shrubs are cleared with both significant environmental and agricultural benefits. Statistics relating to approvals for clearing invasive scrub are only available for the years 2000 onwards. They show that the average area approved for clearing over this period was 1997 hectares a year;
- sustainable forestry operations only remove a small percentage of vegetation over the given area;
- an application has been previously approved, but the clearing never physically took place (lapsed consent). In the financial year 2002/2003 these totalled just 495 hectares but in 2003/2004 the figure was 8,122 hectares;
- isolated paddock trees are removed in already cleared and cultivated areas, but may cover less than 10 percent of the area approved;
- only the shrub layer is cleared and trees and groundcover are retained;
- some areas have been previously cleared;

The figures do not include clearing carried out under exemptions, illegal clearing or clearing excluded under the NVC Act or clearing approved under other Acts;

Exempt Clearing

The exemptions under the NVC Act were designed to allow for the undertaking of normal farming activities. Landholders are not obliged to notify DIPNR that they are using an exemption, and it not possible to estimate the area cleared under exemptions. The range of exempt activities has been extensively revised in the NV Act.

2.3 Compliance

Breaches of the NVC Act require compliance action by DIPNR. Alternative available include warning letters, stop work orders, requirements for remediation and prosecution.

In the period from 2002 to June 2004 some 330 compliance actions were initiated by DIPNR in response to actual breaches of the NVC Act. This represented an average of some 132 a year.

Almost 68 percent of those breaches required only a warning letter to achieve the desired result. Stop work orders were issued in 5 percent of cases. Remediation agreements and notices were used to resolve 21 percent of the breaches of the Act. Prosecutions were initiated in respect of less than 4 percent of breaches and some breaches were settled out of court. Following court proceedings remediation orders were issued for the remaining 2 percent of breaches.

It is likely that a proportion of illegal clearing activity arises from the misinterpretation of the exemptions under the NVC Act. Their replacement by Routine Agricultural Management Activities (RAMAs) and clearer definitions under the NV Act should overcome such problems. It is anticipated

that the number of compliance actions which proceed to court with and without settlement will approximate two a year, with the number of small offences (i.e. those settled out of court) totalling five. In the 'Do nothing' scenario the compliance activity is expected to double.

2.4 Native Vegetation Management Fund (NVMF)

Table 4 Native Vegetation Management Fund 1998-2004

Summary of Agreements Made*				
Year	Agreements made Number	Area Covered Hectares	Funds Disbursed \$	Funds Disbursed \$2004 values
1998		212	41,312	49,438
1999	284	33,055	3,685,565	4,363,613
2000	298	39,153	4,344,216	4,984,489
2001	126	7,967	1,910,022	2,067,049
2002	88	3,208	936,576	985,583
2003	52	1,447	598,626	613,454
Jan-Jun 2004	56	3,643	530,203	530,203
Total	904	88,685	12,046,520	13,593,829
Averages**	169	16,966	Ave/ha \$135	Ave/ha \$153

* Includes Property Agreements, Management Contracts and Voluntary Conservation Agreements

** Excluding 1998 and January-June 2004

Key: Source DIPNR

Under the NVC Act financial incentives were made available to landholders for the management of native vegetation. These incentives were provided through the Native Vegetation Management Fund to landholders who entered into property agreements, management contracts and /or NPWS voluntary conservation agreements.

In the period from June 1998 until June 2004 a total of 904 agreements and contracts were made covering more than 88,000 hectares. Based on the data for the years 1999 to 2003 some 16,966 hectares were conserved on an annual basis. (Note: The small area in 1998 and the incomplete current year figures were excluded from this calculation).

The allocation of more than \$12 million from the NVMF represents an average of \$153 per hectare when expressed in \$2004 figures.

Details of the agreements and payments are shown in Table 4.

In addition to the \$12.0 million funds expended:

- \$1.0 million has been transferred to the revolving fund for the NSW Conservation Trust;
- \$1.8 million has been allocated to agreements to protect native vegetation in the Eden RFA area;
- up to \$0.5 million has been allocated to Rural Lands Protection Boards for protection of native vegetation on travelling stock reserves (TSRs); and
- currently there is about \$3.5 million in the Fund which will be split up among the CMAs for the protection of native vegetation when the NV Act is proclaimed.

3. Alternative Options to Achieve Policy Objective

Three alternative options were identified for achieving the policy objective of the proposed Regulation. They were:

- **Option 1: ‘Do nothing’. The Regulation is not made.**
- **Option 2: The Proposed new Government statutory rule (Regulation) – Native Vegetation Regulation 2004 with operational costs borne by the Government is made.**
- **Option 3: An Alternative statutory rule (Regulation) which devolves to the landholder the responsibility for, and costs of, preparing a Property Vegetation Plan is made.**

3.1 Description of Alternative Options

A description of each of the three options selected for detailed benefit cost analysis follows.

3.1.1 Option 1: ‘The ‘Do Nothing’ Scenario

Summary of option 1 effects:

Under this scenario the regulations referred to in the NV Act would not be made. This would create procedural and administrative problems with many sections of the Act.

A basic objective of the NV Act is to prevent broadscale clearing unless it improves or maintains environmental outcomes. However, the Act itself does not define the term “improve or maintain environmental outcomes.” Rather it specifies (clauses 15 and 32) that regulations may define the circumstances in which broadscale clearing is to be regarded as improving or maintaining environmental outcomes for development consent or for the purposes of a property vegetation plan (PVP).

In the absence of a regulation virtually all proposals for clearing remnant vegetation would have to be assessed as development applications (DAs) requiring consent as provided for in S14(3) of the NV Act. The proposal may also need to meet the requirements of S79C of the Environmental Planning and Assessment Act 1979 (EP&A Act). A refusal of development consent may leave open an appeal to the Land and Environment Court (L&EC).

The option of a PVP would not be viable in the absence of a regulation since the proponent would not have available the principles of assessment to be applied to such plans, detail of their form and content, or the circumstances under which clearing would be deemed to improve or maintain environmental outcomes. Similarly there would be no facility available to the proponent to incorporate offsets into their proposal.

In addition the proponent would be responsible for meeting all the costs associated with the preparation of the plan with no certainty that it would meet the test of improving or maintaining environmental outcomes.

Relying on the Act alone would deny landholders the expectations and benefits of a more standardised and transparent method of applying for approval to clear native vegetation that has been built up in the minds of stakeholders prior to and following the passing of the NV Act by both houses of the Parliament.

As a result of these circumstances it is anticipated that there would be many fewer applications for clearing than has been the case in the past. The reduction could be of the order of 75%. The staffing level to meet this demand is expected to be the equivalent of 18 full time staff (EFTs).

This option does not meet the policy objective of the proposed Regulation but is the base case scenario against which other options must be evaluated.

3.1.2 Option 2: Proposed New Government Statutory Rule (Regulation)

The *NV Act* provides that certain administrative and procedural activities must take place and that these are to be prescribed in regulations.

The proposed new Government statutory rule (Regulation) represented by the NVR 2004 contains eight parts and 1 Schedule. The effects of its provisions are set out under the headings in the regulation as follows.

- **Part 1: Preliminary - commencement and definitions.**

Provides a definitive commencement date from which the native vegetation reform package arrangements operate and some relevant definitions.

- **Part 2: Development consent for clearing**

Under the new arrangements proposals that involve the clearing of native vegetation may be made by way of a development application or incorporated into a PVP.

This part outlines the matters to be considered in relation to development applications for which consent is required under the NV Act.

- **Part 3: Property vegetation plans**

PVPs are the foundation of the new system. This part provides details on the form and content of PVPs. It also refers to PVPs that propose to change the regrowth date from that specified in the Act, outlines considerations to apply to the termination of PVPs and specifies the requirements for keeping a register of PVPs.

- **Part 4: Routine agricultural management activities**

Routine agricultural management activities (RAMAs) are defined and replace the exemptions for clearing of native vegetation under the previous legislation

Section 22 of the NV Act allows clearing of native vegetation for RAMAs so long as the clearing does not exceed the minimum extent necessary for carrying out the activity.

The NV Act itself provides a summary of some activities that may be considered to be RAMAs. This is supplemented by Part 4 of the regulation which not only extends the list but includes a definition of small holdings and a comprehensive listing of infrastructure buffer distances that are to apply to RAMAs.

Part 4 of the regulation provides landholders with certainty about their rights and obligations. The regulation provides for different standards to apply to some RAMAs in the Western Division.

- **Part 5: *Broadscale clearing***

Under the NV Act no proposal for broadscale clearing can be approved unless it can be shown that the clearing will improve or maintain environmental outcomes.

Part 5 of the NV Reg provides that any proposal for broadscale clearing will be assessed according to the Environmental Outcomes Assessment Methodology (EOAM). The EOAM developed in association with the regulation provides detailed assessment procedures that determine the circumstances in which broadscale clearing can be regarded as improving or maintaining environmental outcomes. It addresses the key environmental values of water quality, land degradation, salinity and biodiversity.

Clearing associated with a PVP proposal can include offsets that may enable the clearing proposal to be deemed to improve or maintain environmental outcomes.

- **Part 6: *Special provision for vulnerable land***

Part 6 outlines provisions that are to apply to:

- State protected lands.
- Identification of protected regrowth on steep or erodible land or protected riparian land
- limitation of RAMAs on protected riparian land; and
- Clearing of lignum on special category land.

- **Part 7: *Saving and transitional provisions***

Schedule 3 of the Subordinate Legislation Act identifies matters of a savings or transitional nature as not requiring regulatory impact assessment.

- **Part 8: *General***

This part contains details of the methodology to be used to calculate the percentage of groundcover that comprises indigenous species for the purposes of section 20 of the Act under which the clearing of certain groundcover is permitted.

It also contains provisions relating to penalty notice offences, the issue of false or misleading information and the extension of the Act to the Wollongong LGA.

The Regulation contains one Schedule that specifies the various penalties for offences by section under the Act and by clause under the Regulation for offences by individuals and corporations.

Summary of Option 2 effects.

Once the Act is proclaimed it is anticipated that virtually all proposals for clearing of native vegetation will be made in the context of PVPs which provide the foundation for the new system of native vegetation management. It will of course still be possible for landholders to make a development application involving broadscale clearing.

Under the new arrangements all PVPs and development applications involving broadscale clearing will be assessed according to the Environmental Outcomes Assessment Methodology (EOAM) to determine whether the broadscale clearing improves or maintains environmental outcomes for water quality, land degradation, salinity and biodiversity (referred to as the ‘improve or maintain test’).

The EOAM provides a transparent, objective and repeatable process for the assessment using a computer based decision support tool referred to as the 'PVP Developer'.

On-site assessments will be carried out by CMA officers using the PVP Developer. This will ensure that all proposals for broadscale clearing are assessed using a scientifically credible method. A total of 28 EFTs have been allocated for this role.

An application for development consent for development involving broadscale clearing, or for approval of a PVP can only be granted if there has been an assessment and determination in accordance with the EOAM and that this assessment and determination has shown that the proposed clearing will improve or maintain environmental outcomes. Applications that do not meet the assessment criteria will not be approved.

While the NV Act does not give any direction concerning the allocation of costs associated with the procedural activities defined in the regulation it is proposed that under option 2 all PVP preparation and assessment services will be provided free of charge by either DIPNR or a CMA. In effect this means that the broader community would bear these costs.

The regulatory framework will also provide landholders with certainty about their rights and obligations when undertaking routine agricultural management activities.

Landholders will also have certainty about the methodology they need to follow, and the records they need to keep, when considering the clearing of native vegetation that comprises only groundcover.

This option achieves the objectives set down for the regulation.

3.1.3 Option 3: An Alternative Statutory Rule (Regulation)

Summary of Option 3 effects.

Option 3 would be very similar in its content to Option 2 but would require landholders to accept both the responsibility for and the costs associated with the development of property vegetation plans as a result of significantly reduced DIPNR/CMA input

It is based on the premise that the reason a person or entity would wish to clear remnant native vegetation is for economic or other "personal advantage" and that the 'user' who gains the benefit 'pays' rather than the community.

Accordingly, unlike Option 2 all resource-related information and on-site assessment would be provided by the proponent not by CMAs (or through DIPNR). It is anticipated that under this option landholders would use the services of private providers to develop PVPs prior to their submission to the CMA.

DIPNR or the CMA would remain the assessor of clearing proposals and plans and decide on the basis of established guidelines and processes whether or not to approve a proposal to clear native vegetation. The staff numbers involved in the assessment of DAs and PVPs under this option is estimated to be 24 EFTs .

A potential downside to this option is that it not only transfers substantial costs to the private sector but also leads to duplication of process, such as data collection and the purchase of maps. The option also has a different expected compliance and litigation cost profile.

This option achieves the objectives of the proposed Regulation and is similar to Option 2 but shifts the cost burden to landholders, and increases compliance costs.

3.2 Expected Distributional Effects of the Regulations

The NVR 2004 contains provisions which provide a number of mechanisms for ensuring that activities on, and proposed for, land supporting native vegetation are assessed in accordance with the principles of the NV Act. In particular, it delivers flexibility to landholders in the management of native vegetation, incentives to manage native vegetation sustainably and brings to an end uncontrolled broadscale clearing in New South Wales. Without the proposed Regulation the opportunity to offset clearing which on balance has a net environmental benefit would be lost.

Option 3 has an adverse distributional effect in that it transfers substantial costs to landholders who have to pay for professional advice, data collection, maps, etc.

The contribution of the NSW Government to PVP preparation under Option 2 offsets these costs and provides substantial assistance to proponents to meet their obligations. There is a greater level of DIPNR financial and other resource input and consequent integrity of the process compared with Option 3.

Means and Processes of Enforcing the Regulation

The Regulation will be administered through:

- the Minister, DIPNR and CMAs;
- authorised officers and / or entities appointed by the Minister, DIPNR; and
- enforcement provisions supported by proceedings before a Local Court or the Land and Environment Court, providing that proceedings are commenced within, but not later than, two years after the date on which the offence is alleged to have been committed; or two years after the date on which evidence of the alleged offence first came to the attention of an authorised officer.

3.3 Stakeholders

The identified parties in the public and private sectors affected by the Regulation are as follows:

- Minister for Natural Resources;
- Department of Infrastructure Planning and Natural Resources;
- Department of Environment and Conservation;
- NSW Farmers' Association;
- Local Courts;
- Land and Environment Court;
- Catchment Management Authorities; and
- Landholders throughout NSW.

4. Approach and Methodology

In order to effectively evaluate the impacts of the NVR 2004 or any alternative regulation, expected costs and benefits (both direct and indirect; tangible and intangible) need to be identified, quantified and where possible assessed using market values.

In undertaking the evaluation of the impacts of the proposed Regulation the impacts have been itemised and wherever possible valued. The identification of the impacts and their valuation has been done in consultation with officers from within DIPNR. The source data has been cross-checked and is deemed to be acceptable.

The methodology adopted for the RIS is based on the procedure set out in Schedules 1 and 2 of the *Subordinate Legislation Act 1989*, as well as the *Guidelines for Economic Appraisal*, NSW Treasury and the *Regulatory Impact Statement Instruction Manual*, NSW Business Deregulation Unit.

A cost benefit analysis of the selected options that have been identified as meeting the objectives has been carried out over a five-year planning period. This time period is consistent with the time frame before the NVR 2004 is repealed or remade under the *Subordinate Legislation Act 1989*.

It is the consequences or impacts of the proposed NVR 2004 or any alternative regulatory option which underpin the RIS. These impacts can be in the form of direct or indirect costs or benefits. Where quantification of the impacts in money terms is not possible, the impacts are identified as being 'intangible'. Impacts of this type require qualitative judgements to be made. Tangible impacts are those that can be quantified. The aim of the RIS is to quantitatively and qualitatively estimate the advantages and disadvantages to the parties affected by the NVR 2004 or either alternative option. Only impacts which result from the change brought about by the each regulatory option are identified.

As it is the impact of the NVR 2004 on landholders and the wider community which is the focus of this analysis, the **incremental** costs and benefits generated by proceeding with the NVR 2004 or any alternative regulatory option are evaluated through comparison with the 'Do nothing' option (the NV Act alone) and other alternatives for achieving the same objectives as the NVR 2004.

The costs and benefits of the 'Do nothing' scenario (Option 1) and each alternative option are first estimated to determine the total costs and benefits for each. These costs and benefits are discounted to their present values over the time frame or project planning period for the RIS. The incremental present value of the costs and benefits compared to the 'Do nothing' option is then calculated for each option. The net present value (NPV) is the sum of the discounted option benefits less the discounted option costs compared to 'Do nothing' scenario. From an economic perspective, the preferred regulatory option should have a higher NPV than the 'Do nothing' option.

Consistent with *Treasury Guidelines*, a 7 percent interest rate was used for the purpose of discounting the future cost and benefit streams to present day values. This discount rate was assumed to represent the opportunity cost of capital and is a real rate which already takes inflation into account. This assumption has been sensitivity tested with a lower bound figure of 4 percent (i.e., the social discount rate) and an upper bound figure of 10 percent (i.e., the private discount rate). Sensitivity testing of the results to changes in other major parameters was also conducted.

The following additional assumptions apply to this cost benefit analysis.

- the analysis is based on data provided by DIPNR officers;
- agreed payments to landholders for undertaking approved native vegetation conservation works from the Native Vegetation Management Fund are a proxy for the net costs to the landholder of undertaking the works, since a rational landholder would not undertake the conservation works unless the benefits to the landholder. That is, agreed offset plus private benefits at least equal the cost to the landholder (i.e., opportunity costs plus direct costs);

- costs and benefits are expressed over a five-year time frame, the commencement date and end year being the same for each alternative option;
- the year 2004/05 is the base year or Year 1 for the purpose of the RIS; and
- all costs and benefits are expressed in 2004 constant \$ values.

4.1 Net Economic Benefits

There are four components to the assessment of the net economic benefit of conserving native vegetation (Lockwood and Walpole 1999).

- transaction costs associated with establishing and implementing the proposed Regulation;
- net on-farm costs;
- community benefits (including value of the species conserved); and
- catchment benefits (eg, through avoided damage to infrastructure and amenities from dryland salinity and soil erosion which impact on downstream rural and urban populations).

Estimation of landholder on-farm costs and benefits is beyond the scope of this RIS and so emphasis is placed on (i) the transaction/compliance costs and (ii) community or public benefit associated with conservation, aesthetic and biodiversity values as measured by willingness to pay (WTP). Past expenditure on agreed incentives (funded from The Native Vegetation Management Fund) included in approved property agreements under the NVC Act can be considered a proxy for the on-farm net present value of benefits and costs under PVPs. PVPs would not be undertaken if there is no net benefit to the landholder. Similarly public expenditure to mitigate catchment impacts would not be undertaken unless there was a perceived net benefit to the community.

Economic impacts of conserving native vegetation include the broader social and environmental impacts on the community, on individual landholders and government. As there is a lack of detailed regional and site-specific data on the economic costs and benefits, the identification and transfer of attribute values needs to be done with care.

The background paper prepared for the Native Vegetation Advisory Council in 2000, the *Economic Values of the Native Vegetation of New South Wales* summarises the key economic concepts (Gillespie 2000), as do the series of publications funded by the Land and Water Resources Research and Development Corporation (LWRRDC) from the Johnstone Centre, Charles Sturt University, Albury (Lockwood, Walpole, Miles et al.) in the late 1990s².

The total economic value of native vegetation includes both use (i.e., people using native vegetation either directly or indirectly and deriving value from its use) and non-use values (i.e., the enjoyment of the native vegetation even without direct or indirect contact, eg, option values, quasi-option values, vicarious use values, bequest values and existence values).

² Lockwood, M., & Carberry, D. (1998) *Stated Preference Surveys of Remnant Native Vegetation*, Johnstone Centre Report No. 104; Walpole, S., Lockwood, M. & Miles, C.A. (1998) *Influence of Remnant Native Vegetation on Property Sale Price*, Johnstone Centre Report No. 106; Miles, C., Lockwood, M., Walpole, S., & Buckley, E. (1998) *Assessment of the On-farm Economic Values of Remnant Native Vegetation*, Johnstone Centre Report No. 107; Walpole, S., & Lockwood, M. (1999) *Catchment Benefits of Remnant Native Vegetation Conservation*, Johnstone Centre Report No. 129; Walpole, S., & Lockwood, M. (1999) *A revised incentive policy for remnant vegetation conservation*, Johnstone Centre Report No. 131; Lockwood, M., Walpole S., & Miles C. (2000) *Economics of remnant native vegetation conservation on private property*, Research Report 2/00, National Research and Development Program on Rehabilitation, Management and Conservation of Remnant Vegetation.

The potential benefits of native vegetation and biodiversity are summarized in the *Productivity Commission Inquiry Report 2004* drawing from the National Framework for the Management and Monitoring of Australia's Native Vegetation (2001) and Gillespie (2000). The potential benefits include:

For native vegetation:

- Fodder; food; seeds; wildflowers and plants; medicines; timber, including for fencing and firewood; shade; shelter; honey production; pollination and pest control services;
- Tourism, recreation and visual amenity;
- Habitat for native fauna;
- Soil and water protection (eg, prevention of salinity, soil erosion or acidification);
- Biodiversity;
- Carbon sinks and/or storage;
- Climate; and
- 'Existence' and 'option' values;

For biodiversity:

- Health of ecosystems — their ability to maintain and regulate atmospheric quality, climate, fresh water, marine productivity, soil formation, cycling of nutrients and waste disposal;
- Resilience of ecosystems — their ability to respond to and recover from external shocks such as drought, flood and climate change; and
- Cultural values.

The Productivity Commission report goes on to say that the descriptor 'potential' is used advisedly because:

- not all native vegetation in all locations will deliver all of these benefits to the same degree;
- in some cases, the link between native vegetation and the potential benefit is reasonably straightforward (eg, the provision of shade, fodder), though not always easily measurable (eg, visual amenity);
- in other cases, such as the link between native vegetation and biodiversity and climate, the nature of the connection is complex and not fully understood (eg, what levels and/or types of native vegetation and biodiversity are required to deliver healthy genetic, species and ecosystem diversity?);
- it is also feasible that some of the listed benefits could be provided from sources other than native vegetation, possibly more efficiently and effectively (eg, shelter and shade, timber and firewood, carbon sequestration, and prevention of soil erosion, could be provided by non-native vegetation); and
- prevention of soil erosion and degradation may also be facilitated via application of low-impact farming techniques such as minimum-till cultivation.

As the economic values placed by the community on native vegetation are non-traded in the market place and cannot be valued using market-based or surrogate techniques, the most appropriate methodology is stated preference techniques such as contingent valuation and choice modelling.

In this RIS, benefit transfer from choice modelling (CM) studies has been used as these types of studies are regarded as being more amenable to benefit transfer due to valuing of specific attributes

whose unit values (or attribute implicit prices) can be varied rather than being limited to a particular combination of attributes at fixed levels as in contingency valuation modelling studies³.

The key CM study is one commissioned by the National Land and Water Resources Audit (*Towards the development of a transferable set of value estimates for environmental attributes*, van Bueren M., and Bennett J., *The Australian Journal of Agricultural and Resource Economics* (2004), 48:1, pp. 1-32.). Relevant CM studies are summarised in Table 5.

³ Gillespie Economics (2003) *Regulatory Impact Statement - Hunter Catchment Management Trust Regulation 2003*: p. 34 and van Bueren M. and Bennett J. (2004) *Towards the development of a transferable set of value estimates for environmental attributes*, *The Australian Journal of Agricultural and Resource Economics*, 48:1, pp. 26-27).

Table 5 Summary of Choice Modelling Studies concerned with Conserving Native Vegetation

Study	Policy site	Year	Attribute Value	\$ 2004 value
Lockwood & Carberry	Southern Riverina of NSW	1998 ⁴	WTP/household (\$)*	\$/household
			<ul style="list-style-type: none"> ▪ \$3.76 (one-off payment) per 10,000 ha native vegetation conserved ▪ \$1.69 (one-off payment) for every native plant and animal species conserved in the region 	<p>\$4.51</p> <p>\$2.02</p>
CM study funded by LWRRDC which examined community WTP for native vegetation conservation as opposed to market values such as on-farm productivity and property prices.				
Gillespie Economics	Hunter Valley of NSW	2003 ⁵	WTP/household (\$)*	\$/household
			<ul style="list-style-type: none"> ▪ \$0.27 pa per 10,000 ha native vegetation conserved** ▪ \$0.12 pa for every extra native plant and animal species conserved in the region** 	<p>\$0.32 pa</p> <p>\$0.14 pa</p>
Willingness to pay based on Lockwood and Carberry's CM study with attribute values converted to an annual payment.				
Van Bueren & Bennett	National	2000 ⁶	WTP/household (\$)*	\$/household
			<ul style="list-style-type: none"> ▪ \$0.74 (one-off payment***) per 10,000 ha land restored or protected from degradation (\$0.07 pa) ▪ \$7.20 (one-off payment***) for every additional species protected (\$0.68 pa) ▪ \$0.85 (one-off payment***) per 10km waterway restored for fishing or swimming (\$0.07 pa) ▪ -\$0.95 (one-off payment***) per 10 persons leaving country communities (-\$0.09 pa) 	<p>\$0.85</p> <p>(\$0.08 pa)</p> <p>\$8.27</p> <p>(\$0.78 pa)</p> <p>(\$0.08 pa)</p> <p>(\$-0.10 pa)</p>
A Choice Modelling (CM) study funded by the National Land and Water Resources Audit which examined community Willingness To Pay (WTP) for species protection, improvements in landscape aesthetics for countryside restored and waterway restoration over the next 20 years. It was concluded (i) the implicit prices for attributes in the national context are significantly lower than those estimated when respondents were asked to value the same attributes in a local or regional context and (ii) implicit attribute prices are constant for changes in the attributes over the range of levels used in the choice sets. Study also tested the validity of transferring estimates (eg, consistency of values, transferability of estimates, importance of framing) derived in a national context to different regional contexts.				
Provides benefit transfer guidelines for the scaling factors (<i>shown in brackets</i>) for calibrating the national estimates for transfer to a regional context are: species (x 2); aesthetics (x 20-25); water (x 20-25); and social (x 6-26). The scaling adjustment is required to reflect the higher values attached to attributes in a regional frame – where there are no other parallel improvements (substitutes) being carried out in other regions ⁷ .				

* Assumed that area is conserved essentially for the longer term and so one-off WTP estimate used.

** Based on a saving of 10,000 ha per year over 14 years, a total of 140,000 ha.

*** Payment each year for 20 years expressed in present value terms at a discount rate of 7percent.

⁴ Lockwood, M. and Carberry, D. (1998) *Stated Preference Surveys of Remnant Native Vegetation*, Johnstone Centre Report no. 104, Charles Sturt University, Albury, p.24.

⁵ Gillespie Economics (2003)

⁶ van Bueren, M. and Bennett, J., (2000)

⁷ van Bueren, M. and Bennett, J., (2000)

It is assumed that the area of native vegetation conserved as a result of the operation of the NVR 2004 and the conservation outcomes achieved each year are a one-off impact. On this basis the one-off national WTP values from Table 5 have been used as a base source of value estimates. These WTP value estimates need to be adjusted to fit the policy frame. van Bueren and Bennett point out that populations from different states have similar values in the national context, but in the regional context the values are markedly different, particularly for case studies within a narrow local context within regions; with a scaling factor of 2-26 being used depending on the attribute. The proposed regulation refers to the State context, with a much larger frame of reference than a specific region. A scaling factor of x3 has been used.

The transfer and calibration of the van Bueren and Bennett national WTP value estimates to assess the impacts of remnant native vegetation conservation in a New South Wales context, along with the Lockwood and Carberry regional WTP estimates are summarised in Table 6. This table indicates the following based on 2004 \$ values:

- WTP for remnant native vegetation conservation (excluding any additional species protection) ranges from a lower bound of \$2.55 to an upper bound of \$4.51 (giving a mid-point of \$3.53) per household per 10,000 ha based on the studies quoted; and
- WTP for species protection ranges from \$2.02 to \$16.54 (giving a mid-point of \$9.28) per household per additional species protected.

Table 6 Transfer and Calibration of National WTP Value Estimates to NSW Regional Prices

Attribute	Units	Scaling factor adopted	WTP national values for calibration to regional values (\$ 2004)	Regional WTP values (\$ 2004) [Impact per hhold pa]
van Bueren & Bennett (<i>see</i> Table 5)				
▪ Landscape aesthetics [<i>farmland repaired and bush protected</i>]	\$ per 10,000 ha land restored or protected from degradation	x 3	\$0.85	\$2.55 per 10,000 ha
▪ Species protection [<i>number of species protected from extinction</i>]	\$ per species protected	x 2	\$8.27	\$16.54 per species
Lockwood & Walpole (<i>see</i> Table 5)				
▪ Native vegetation conserved	\$ per 10,000ha native vegetation conserved	-	-	\$4.51 per 10,000 ha
▪ Native plant and animal species conserved in the region	\$ per species conserved	-	-	\$2.02 per species

There is no specific data available on changes in the levels of the average number of native plants and animals protected or conserved. On the assumption that there is no change in the number of species with native vegetation conservation, no account is taken of this impact in the economic evaluation.

A conservative estimate of the value of the potential net economic benefit of native vegetation conservation from the perspective of the wider community in New South Wales is the aggregation of the native vegetation data based on the number of households in New South Wales⁸. It was assumed

⁸ Number of households in New South Wales as at 30 June 2001 was 2,454,676. ABS Catalogue No. 3101.0 (4 June 2004) *Australian Demographic Statistics*, Table 18: Estimated Residential Households as at 30 June 2001. If 25,000 ha were conserved each year, the aggregate one-off value of the WTP is \$15.6 million (i.e. \$626 per ha).

that it is the broader population that derives the use and non-use value from native vegetation that is protected or conserved.

The average annual area of native vegetation subject to some type of management agreements under the NVMF of 17,000 hectares (*see* Table 4) is a reasonable proxy for the lower bound estimate of the number of hectares of native vegetation likely to be conserved under the alternative regulatory scenarios, namely Option 2 and Option 3. The new system could double this figure to around 34,000 hectares, which is assumed to be the upper bound estimate of the area native vegetation likely to be conserved. The mid-range figure of 25,000 ha has been used in the evaluation, with this assumption being sensitivity tested with the lower and upper bound estimates.

Given the few relevant CM studies which have been identified for benefit transfer of community willingness to pay, the lower bound figure of \$2.55 per 10,000 ha per household for native vegetation conservation has been used in the analysis.

The key outcomes which have been identified are summarised in Table 7. These outcomes can be expected over the next five years with the three regulatory options.

Table 7 Summary of Key Outcomes by Regulatory Option

Parameter	Units	Option 1	Option 2	Option 3	Source
Households in NSW	no.	2,454,676	2,454,676	2,454,676	ABS
CMA Staffing for DAs/PVPs**	EFT	18	28	24	DIPNR
Community WTP	\$/10,000 ha/hhold	2.55	2.55	2.55	Table 6
Area native vegetation conserved	ha/yr	-	25,000	25,000	DIPNR
Landholder private benefit	\$/ha	153	153	153	Table 4
Clearing:					
- Applications received	no./yr	150	585	440	DIPNR
- Invasive scrub cleared	ha/yr	1,997	-	-	DIPNR
Compliance action:					DIPNR
- Small offence (settled out of court)	no./yr	10*	5	5	
- Moderate offence (goes to court / settlement)	no./yr	2*	1	1	
- Larger offence (goes to court, etc)	no./yr	2*	1	1	
- Other compliance actions	no./yr	240	120	120	

* Assumed to be twice that of Options 2 and 3. ** These figures are derived from the discussion and assumptions contained within the descriptions of each of the regulatory options.

5. Analysis of the Impact of Options

The administrative and compliance costs associated with the NVR 2004 can be grouped into public sector costs, landholder and the broader community costs (private sector costs). In addition there are potential savings or avoided costs as a result of moving from the 'Do nothing' scenario (Option 1) to the 'Do something' scenarios (Options 2 and 3).

The detailed working papers for each regulatory option are included in Appendix A.

5.1 Option 1: 'Do nothing' - the regulation is not made.

This would create procedural and administrative problems with many sections of the Act. The absence of a regulation may result in activities taking place which cause negative environmental outcomes with respect to the remnant native vegetation, resulting in both tangible and intangible costs to the community.

The Option costs for the most part become benefits (avoided costs) of ‘doing something’ under the proposed Regulation or other regulatory or non-regulatory alternatives. This Option does not meet the policy objective of the proposed Regulation but is the base case scenario against which all options must be evaluated.

The impacts associated with the implementation of Option 1 – ‘Do nothing’ are incurred by DIPNR or other agencies, landholders or the broader community.

For DIPNR and other agencies, the cost impacts have been grouped under the following headings and are summarised in Table 8. The agency costs by major cost category and by year are summarised in Table 9.

- Mapping and PVP Developer;
- Staff training and operating costs;
- Monitoring and Compliance; and
- Enforcement.

For landholder there would be cost impacts associated with the preparation of a case for any development applications that may be made and or the preparation costs for a PVP should landholders proceed in that direction. There could also be some costs arising from compliance activity.

In theory, without the NVR 2004 the main area of clearing would be in respect of regrowth, clearing for routine agricultural management activities (RAMAs) and clearing for invasive scrub. The removal of SEPP 46 exemptions such as 2 hectare and minimal tree clearing (7 trees per hectare) may increase the risk of RAMAs being misused or misinterpreted resulting in excess and inappropriate clearing.

The value of foregone community benefits (Table 10) is a conservative estimate of the potential net economic benefit of native vegetation conservation to the wider community in New South Wales. These impacts are summarised in Table 10, while the landholder costs by major cost category and by year are summarised in Table 11.

Table 8 Option 1 – ‘Do nothing’: Agency Costs

Item	Units	No. units	Unit cost (\$)	Total cost** (\$'000)	Comment
Mapping and PVP Developer:					
- SPOT 5 satellite imagery	LS	-	5000000	5000.0	sunk cost
- Existing aerial mapping	LS	-	12000000	12000.0	sunk cost
- PVP Developer					
.. <Yr 1 (DEC: \$950K & DIPNR: \$59.8K)				1008.9	< Yr 1
.. Yr 1 on (DIPNR)*				2914.7	Yrs 1-5
- Enhancements to PVP Developer					
- Hardware - Yr 1:					
.. Laptop	3 per CMA	36	4515	162.5	12 CMAs
.. Printer	3 per CMA	36	714	25.7	12 CMAs
.. Digital camera	3 per CMA	36	636	22.9	12 CMAs
- Hardware - Yr 2:					
.. Laptop					
.. Printer					
.. Digital camera					
Staffing	1.5 EFT/CMA	18	75000	8505.0	12 CMAs
Ongoing replacement/upgrading	20% initial capital cost			168.9	
Subtotal Mapping and PVP Developer				13593.4	
Staff training (guidelines, protocols, etc)					
.. Yr 1	EFT per 6 months	3	75000	141.8	+26% on-cost
.. Yr 2 on	EFT per 3 months	3	75000	283.5	+26% on-cost
Subtotal Staff Training				425.3	
Monitoring and Compliance:					
- Ortho-rectification of aerial photos: Yr 1-5	EFT	2	75000	945.0	+26% on-cost
- Compliance activity: Yrs 1-5	EFT	4	75000	1890.0	+26% on-cost
- Public register ongoing management	EFT	-	-	-	
- PANRIIe & Hot Spots Monitoring Program					DIPNR
.. Yr 1	LS	-	567000	567.0	
.. Yr 2 on	LS	-	1626000	1626.0	
.. Yr 3 on	LS	-	1732000	1732.0	
.. Yr 4 on	LS	-	1470000	1470.0	
.. Yr 5 on	LS	-	1370000	1370.0	
- Head Office support	EFT	3	75000	1417.5	+26% on-cost
Subtotal Monitoring and Compliance				11017.5	
Enforcement:					
- Small offence (settled out of court)	no. cases	10	5000	250.0	DIPNR
- Moderate offence (goes to court / settlement)	no. cases	2			DIPNR
.. Legal (barristers, expert witnesses, etc e/s)	days/case	5	7500/day	375.0	
.. Local Court costs	days/case	2	2900/day	58.0	
- Larger offence (goes to court, etc)	no. cases	2			DIPNR
.. Legal (barristers, expert witnesses, etc e/s)	days/case	10	7500/day	750.0	
.. LEC costs	days/case	2	6000/day	120.0	
Subtotal Enforcement				1553.0	
Total Costs				26589.2	

* Includes communication and training costs for CMA and DIPNR officers.

** Over five years.

DEC: Department of Environment & Conservation

LEC: Land and Environment Court

Source: Appendix A Table A.1.

Table 9 Option 1 – ‘Do nothing’: Agency Costs by Major Cost Category and by Year (\$'000)

Item	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Total Costs
Mapping and PVP Developer	1008.9	4826.9	1939.4	1939.4	1939.4	1939.4	13593.4
Staff training costs	0	141.8	70.9	70.9	70.9	70.9	425.3
Monitoring and Compliance	0	1417.5	2476.5	2582.5	2320.5	2220.5	11017.5
Enforcement	0	310.6	310.6	310.6	310.6	310.6	1553
Total	1008.9	6696.7	4797.4	4903.4	4641.4	4541.4	26589.2

Source: Appendix A Table A.1.

Table 10 Option 1 - ‘Do nothing’: Landholder Costs

Item	Units	No. units	Unit cost (\$)	Total cost* (\$'000)	Comment
Mapping:					
- Maps	\$/map/applic.	2	150	225.0	
- Preparation of DA	days/applic	3	200	450.0	
- Professional adviser for DA	days/applic	6	1000	5400.0	+20% incidentals
- Develop / ‘ground truth’ PVP	days/applic	-	200	-	
- Professional adviser for PVP	days/applic	-	1000	-	+20% incidentals
Subtotal Mapping				6075.0	
Monitoring and Compliance:					
- Responding to warning letters, remedial action, etc	compliance actions	240	100	120.0	4 hours / action @ \$25/hr
- Professional adviser	days/case	0.5	1000	1440.0	+20% incidentals
- Small offence settled out-of-court	LS	10	40000	2520.0	
- Moderate offence(goes to court / settlement)	LS	2	175000	2205.0	
- Larger offence (goes to court, etc)	LS	2	245000	3087.0	
Subtotal Compliance				9372.0	
Community Benefit Foregone:					
- Invasive native scrub cleared	\$/10,000ha / hhold	1997	2.55	6249.4	\$0.51 / ha / hhold
Subtotal Community Benefit Foregone				6249.4	
Total				21696.4	

* Over five years.

Source: Appendix A Table A.1.

Table 11 Option 1 – ‘Do nothing’: Landholder Costs by Major Cost Category and by Year

Item	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Total Costs
Mapping costs	0	1215.0	1215.0	1215.0	1215.0	1215.0	6075.0
Compliance	0	1874.4	1874.4	1874.4	1874.4	1874.4	9372.0
Community benefit foregone	0	1249.9	1249.9	1249.9	1249.9	1249.9	6249.4
Total	0	4339.3	4339.3	4339.3	4339.3	4339.3	21696.4

Source: Appendix A Table A.1.

5.2 Option 2: Proposed new Government statutory rule (Regulation)

The proposed Regulation contains a number of mechanisms to achieve the stated policy objectives. As with Option 1, the impacts are either attributed to the DIPNR/CMAs or other agencies, landholders or the broader community. This option provides offsets for approved clearing under PVPs and DIPNR/CMAs would have a key role in the use of the PVP Developer process and its “PVP Mapper” component in the clearing approval process and the biodiversity assessment of offset sites. Until SPOT 5 satellite imagery is available (Year 2) it will be necessary to use alternatives such as aerial photographs.

There will be substantial costs associated with the use of the PVP process, including DIPNR staff training and their time and landholder time when the PVP officer is on site.

Compared to Option 1, there will be fewer landholder costs in relation to preparation of a case in support of a DA or a PVP, and compliance activities like responses to warning letters, stop work orders, and remedial action. Compliance needs were assumed to be half the level in Option 1 with the increased clarity and certainty in the process for evaluating assessments

The benefits of the NVR 2004 or any alternative regulation are:

- avoided costs under the regulation compared to the ‘Do nothing’ scenario (Option 1);
- the private benefits received by landholders for the conservation of approved native vegetation areas in the PVP process; and
- the community value represented by the WTP for the conservation of native vegetation.

For DIPNR/CMAs and other agencies, potential impacts have been grouped under the following headings and are summarised in Table 12. The agency costs by major cost category and by year are summarised in Table 13.

- Mapping and PVP Developer;
- Staff training and operational costs;
- Monitoring and Compliance; and
- Enforcement.

For the landholder there will be cost impacts as a result of the need to ‘ground truth’ the PVP process and through compliance activity. These impacts are summarised in Table 14 and Table 15.

The private benefits to landholders are derived from the financial offsets for native vegetation areas set aside for conservation. The community also places a value on these areas of the native vegetation which would not otherwise be conserved. These economic benefits are summarised in Table 16 and Table 17.

Table 12 Option 2 – Proposed New Government Statutory Rule: Agency Costs

Item	Units	No. units	Unit cost (\$)	Total cost** (\$'000)	Comment
Mapping and PVP Developer:					
- SPOT 5 satellite imagery	LS	-	5000000	5000.0	sunk cost
- Existing aerial mapping	LS	-	12000000	12000.0	sunk cost
- PVP Developer					
.. <Yr 1 (DEC: \$950K & DIPNR: \$59.8K)				1008.9	< Yr 1
.. Yr 1 on (DIPNR)*				2914.7	Yr 1
- Enhancements to PVP Developer	5% initial devel. cost pa			784.7	Yr 2 on
- Hardware - Yr 1:					
.. Laptop	3 per CMA	36	4515	162.5	12 CMAs
.. Printer	3 per CMA	36	714	25.7	12 CMAs
.. Digital camera	3 per CMA	36	636	22.9	12 CMAs
- Hardware - Yr 2:					
.. Laptop	3 per CMA	36	4515	162.5	12 CMAs
.. Printer	3 per CMA	36	714	25.7	12 CMAs
.. Digital camera	3 per CMA	36	636	22.9	12 CMAs
Staffing	2.3 EFT/CMA	28	75000	13041.0	12 CMAs
Ongoing replacement/upgrading	20% initial capital cost			295.6	Yr 2 on
Subtotal Mapping and PVP Developer				18467.2	
Staff training (guidelines, protocols, etc)					
.. Yr 1	EFT per 6 months	6	75000	283.5	+26% on-cost
.. Yr 2 on	EFT per 3 months	6	75000	567.0	+26% on-cost
Subtotal Staff Training				850.5	
Monitoring and Compliance:					
- Ortho-rectification of aerial photos: Yrs 1-5	EFT	2	75000	945.0	+26% on-cost
- Compliance activity: Yrs 1-5	EFT	4	75000	1890.0	+26% on-cost
- Public register ongoing management	EFT	0.1	75000	47.3	+26% on-cost
- PANRIIe & Hot Spots Monitoring Program					DIPNR
.. Yr 1	LS	-	567000	567.0	
.. Yr 2 on	LS	-	1626000	1626.0	
.. Yr 3 on	LS	-	1732000	1732.0	
.. Yr 4 on	LS	-	1470000	1470.0	
.. Yr 5 on	LS	-	1370000	1370.0	
- Head Office support	EFT	3	75000	1417.5	+26% on-cost
Subtotal Monitoring and Compliance				11064.8	
Enforcement:					
- Small offence (settled out of court)	no. cases	120	5000	125.0	DIPNR
- Moderate offence (goes to court / settlement)	no. cases	0.5			DIPNR
.. Legal (barristers, expert witnesses, etc e/s)	days/case	5	7500/day	187.5	
.. Local Court costs	days/case	1	2900/day	29.0	
- Larger offence (goes to court, etc)	no. cases	1			DIPNR
.. Legal (barristers, expert witnesses, etc e/s)	days/case	10	7500/day	375.0	
.. LEC costs	days/case	2	6000/day	60.0	
Subtotal Enforcement				776.5	
Total Costs				31159.0	

* Includes communication and training costs for CMA and DIPNR officers.

** Over five years.

DEC: Department of Environment & Conservation

LEC: Land and Environment Court

Source: Appendix A Table A.2.

Table 13 Option 2 – Proposed New Government Statutory Rule: Agency Costs by Major Cost Category and by Year

Item	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Total Costs
Mapping and PVP Developer	1008.9	5734.1	3057.7	2888.8	2888.8	2888.8	18467.2
Staff training costs	0	283.5	141.8	141.8	141.8	141.8	850.5
Monitoring and Compliance	0	1426.9	2485.9	2591.9	2329.9	2229.9	11064.8
Enforcement	0	155.3	155.3	155.3	155.3	155.3	776.5
Total	1008.9	7599.8	5840.7	5777.8	5515.8	5415.8	31159.0

Source: Appendix A Table A.2.

Table 14 Option 2 – Proposed New Government Statutory Rule: Landholder Total Costs

Item	Units	No. units	Unit cost (\$)	Total cost* (\$'000)	Comment
Mapping:					
- Maps	\$/map/applic.	-	150	-	
- Develop / 'ground truth' PVP	days/applic.	-	200	1755.7	
- Professional adviser for PVP	days/applic.	-	1000	-	+20% incidentals
Subtotal Mapping				1755.7	
Monitoring and Compliance:					
- Responding to warning letters, remedial action, etc	compliance actions	120	100	60.0	4 hours / action @ \$25/hr
- Professional adviser	days/case	0.5	1000	720.0	+20% incidentals
- Small offence settled out-of-court	LS	5	40000	1260.0	
- Moderate offence(goes to court / settlement)	LS	1	175000	1102.5	
- Larger offence (goes to court, etc)	LS	1	245000	1543.5	
Subtotal Compliance				4686.0	
Community Benefit Foregone:					
- Invasive native scrub cleared	\$/hhold / 10,000ha	-	-	-	
Subtotal Community Benefit Foregone				-	
Total				6441.7	

* Over five years.

Source: Appendix A Table A.2.

Table 15 Option 2 – Proposed New Government Statutory Rule: Landholder Costs by Major Cost Category and by Year

Item	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Total Costs
Mapping costs	0	351.1	351.1	351.1	351.1	351.1	1755.7
Monitoring and Compliance	0	937.2	937.2	937.2	937.2	937.2	4686.0
Community benefit foregone	0	0	0	0	0	0	0
Total	0	1288.3	1288.3	1288.3	1288.3	1288.3	6441.7

Source: Appendix A Table A.2.

Table 16 Option 2 – Proposed New Government Statutory Rule: Economic Benefits

Item	Units	No. units	Unit cost (\$)	Total benefit* (\$'000)	Comment
Economic Benefit:					
- Landholder: Private benefit	\$/ha	25,000ha	153	19160.3	ex NVMF
- Community: WTP	\$/10,000ha / hhold	25,000ha	2.55	78242.8	
Total Economic Benefit				97403.1	

* Over five years.

Source: Appendix A Table A.2.

Table 17 Option 2 – Proposed New Government Statutory Rule: Economic Benefits by Major Benefit Category and by Year

Item	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Total benefit
Landholder: Private benefit	0	3832.1	3832.1	3832.1	3832.1	3832.1	19160.3
Community: WTP	0	15648.6	15648.6	15648.6	15648.6	15648.6	78242.8
Total	0	19480.6	19480.6	19480.6	19480.6	19480.6	97403.1

Source: Appendix A Table A.2.

5.3 Option 3: An Alternative Statutory Rule (Regulation)

This option differs from Option 2 in that DIPNR has a significantly reduced role in the PVP process. The responsibility for preparing the PVP rests with the landholder with the result that there is a reduction in DIPNR/CMA hardware and staffing costs. These savings to DIPNR are partially offset by costs to proponents in the form of professional services from private providers in the preparation of PVPs and the cost of resources to meet the requirements of the property mapping process.

For DIPNR and other agencies, the cost impacts are summarised in Table 18 and the costs by major cost category and by year are summarised in Table 19.

The landholder cost impacts are summarised in Table 20 and table 21. The private benefits to landholders are summarised in Table 22 and 23.

Table 18 Option 3 - Alternative Regulatory Option: Agency Costs

Item	Units	No. units	Unit cost (\$)	Total cost** (\$'000)	Comment
Mapping and PVP Developer:					
- SPOT 5 satellite imagery	LS	-	5000000	5000.0	sunk cost
- Existing aerial mapping	LS	-	12000000	12000.0	sunk cost
- PVP Developer					
.. <Yr 1 (DEC: \$950K & DIPNR: \$59.8K)				1008.9	< Yr 1
.. Yr 1 on (DIPNR)*				2914.7	Yr 1
- Enhancements to PVP Developer	5% initial devel. cost pa			784.7	Yr 2 on
- Hardware - Yr 1:					
.. Laptop	1 per CMA	12	4515	54.2	12 CMAs
.. Printer	nil per CMA	-	714	-	12 CMAs
.. Digital camera	nil per CMA	-	636	-	12 CMAs
- Hardware - Yr 2:					
.. Laptop	nil per CMA	-	4515	-	12 CMAs
.. Printer	nil per CMA	-	714	-	12 CMAs
.. Digital camera	nil per CMA	-	636	-	12 CMAs
Staffing	2.0	24	75000	9000.0	12 CMAs
Ongoing replacement/upgrading	EFT/CMA 20% initial capital cost			43.3	Yr 2 on
Subtotal Mapping and PVP Developer				13805.9	
Staff training (guidelines, protocols, etc)					
.. Yr 1	EFT per 6 months	1	75000	47.3	+26% on-cost
.. Yr 2 on	EFT per 3 months	1	75000	94.5	+26% on-cost
Subtotal Staff Training				141.8	
Monitoring and Compliance:					
- Ortho-rectification of aerial photos: Yr 1	EFT	2	75000	945.0	+26% on-cost
- Compliance activity: Yr 1	EFT	4	75000	1890.0	+26% on-cost
- Public register ongoing management	EFT	0.1	75000	47.3	+26% on-cost
- PANRIIe & Hot Spots Monitoring Program					DIPNR
.. Yr 1	LS	-	567000	567.0	
.. Yr 2 on	LS	-	1626000	1626.0	
.. Yr 3 on	LS	-	1732000	1732.0	
.. Yr 4 on	LS	-	1470000	1470.0	
.. Yr 5 on	LS	-	1370000	1370.0	
- Head Office support	EFT	3	75000	1417.5	+26% on-cost
Subtotal Monitoring and Compliance				11064.8	
Enforcement:					
- Small offence (settled out of court)	no. cases	120	5000	125.0	DIPNR
- Moderate offence (goes to court / settlement)	no. cases	0.5			DIPNR
.. Legal (barristers, expert witnesses, etc e/s)	days/case	5	7500/day	187.5	
.. Local Court costs	days/case	1	2900/day	29.0	
- Larger offence (goes to court, etc)	no. cases	1			DIPNR
.. Legal (barristers, expert witnesses, etc e/s)	days/case	10	7500/day	375.0	
.. LEC costs	days/case	2	6000/day	60.0	
Subtotal Enforcement				776.5	
Total Costs				25788.9	

* Includes communication and training costs for CMA and DIPNR officers. ** Over five years.

DEC: Department of Environment & Conservation

LEC: Land and Environment Court

Source: Appendix A Table A.3.

Table 19 Option 3 - Alternative Regulatory Option: Agency Costs by Major Cost Category and by Year

Item	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Total Costs
Mapping and PVP Developer	1008.9	4768.9	2007.0	2007.0	2007.0	2007.0	13805.9
Staff training costs	0	47.2	23.6	23.6	23.6	23.6	141.8
Monitoring and Compliance	0	1426.9	2485.9	2591.9	2329.9	2229.9	11064.8
Enforcement	0	155.3	155.3	155.3	155.3	155.3	776.5
Total	1008.9	6398.4	4671.9	4777.9	4515.9	4415.9	25788.9

Source: Appendix A Table A.3.

Table 20 Option 3 - Alternative Regulatory Option: Landholder Costs

Item	Units	No. units	Unit cost (\$)	Total cost* (\$'000)	Comment
Mapping:					
- Maps	\$/map/applic.	2	150	660.0	
- Develop / 'ground truth' PVP	days/applic.	3	200	1320.0	
- Professional adviser for PVP	days/applic.	6	1000	15840.0	+20% incidentals
Subtotal Mapping				17820.0	
Monitoring and Compliance:					
- Responding to warning letters, remedial action, etc	compliance actions	120	100	60.0	4 hours / action @ \$25/hr
- Professional adviser	days/case	0.5	1000	720.0	+20% incidentals
- Small offence settled out-of-court	LS	5	40000	1260.0	
- Moderate offence(goes to court with settlement)	LS	1	175000	1102.5	
- Larger offence (goes to court, etc)	LS	1	245000	1543.5	
Subtotal Compliance				4686.0	
Community Benefit Foregone:					
- Invasive native scrub cleared	\$/hhold / 10,000ha	-	-	-	
Subtotal Community Benefit Foregone				-	
Total				22506.0	

* Over five years.

Source: Appendix A Table A.3.

Table 21 Option 3 - Alternative Regulatory Option: Landholder Costs by Major Cost Category and by Year

Item	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Total Costs
Mapping costs	0	3564.0	3564.0	3564.0	3564.0	3564.0	17820.0
Compliance	0	937.2	937.2	937.2	937.2	937.2	4686.0
Community benefit foregone	0	0	0	0	0	0	0
Total	0	4501.2	4501.2	4501.2	4501.2	4501.2	22506.0

Source: Appendix A Table A.3.

Table 22 Option 3 - Alternative Regulatory Option: Economic Benefits

Item	Units	No. units	Unit cost (\$)	Total benefit* (\$'000)	Comment
Economic Benefit:					
- Landholder: Private benefit	\$/ha	25,000ha	153	19160.3	ex NVMF
- Community: WTP	\$/10,000ha / hhold	25,000ha	2.55	78242.8	
Total Economic Benefit				97403.1	

* Over five years.

Source: Appendix A Table A.3.

Table 23 Option 3 - Alternative Regulatory Option: Economic Benefits by Major Cost Category and by Year

Item	Year 0	Year 1	Year 2	Year 3	Year 4	Year 5	Total benefits
Landholder: Private benefits	0	3832.1	3832.1	3832.1	3832.1	3832.1	19160.3
Community: WTP	0	15648.6	15648.6	15648.6	15648.6	15648.6	78242.8
Total	0	19480.6	19480.6	19480.6	19480.6	19480.6	97403.1

Source: Appendix A Table A.3.

5.4 Economic Evaluation

The net present values (NPVs) of Options 1, 2 and 3 have been calculated over the five-year evaluation period 2004/05 to 2008/09 at a 7 percent discount rate. The results for each option and then for Option 2 and Option 3 as incremental to Option 1, the ‘Do nothing’ scenario, are summarised in Table 24. Sensitivity testing has also been carried out of the key assumptions used in the evaluation. The detailed analysis is included in Appendix A.

The conclusions that can be drawn from the analysis presented in Table 24 are:

- Option 2 (the proposed Regulatory Option) provides the greatest net economic benefits to the community.
- Option 2 has a NPV of \$48.6 million and a significantly higher net benefit of \$88.6 million over the five-year period at a 7 percent discount rate compared to Option 1. Option 2 also has a net economic advantage of some \$8.7 million over Option 3 (the alternative Regulatory Option) at the same discount rate.
- The results of the economic evaluation do not include the full economic value of the conservation of native vegetation.
- The NPV relies heavily on the estimated costs of compliance to agencies and landholders, the value of offsets to landholders as a proxy for the landholders private benefits from native vegetation conservation and the value the broader community places on native vegetation conservation.

Table 24 Summary of Economic Evaluation and Net Present Value Comparison

Item	Option 1 [‘Do nothing’]	Option 2 [Proposed Regulatory Option]	Option 3 [Alternative Regulatory Option]	Incremental of Option 1 Option 2	Option 1 Option 3
Agency Costs (\$’M):					
Mapping and PVP Developer	13.6	18.5	13.8	4.9	0.2
Staff training	0.4	0.9	0.1	0.4	-0.3
Monitoring and Compliance	11.0	11.1	11.1	0.0	0.0
Enforcement	1.6	0.8	0.8	-0.8	-0.8
Subtotal Agency Costs	26.6	31.2	25.8	4.6	-0.8
Landholder Costs (\$’M):					
Mapping	6.1	1.8	17.8	-4.3	11.7
Compliance	9.4	4.7	4.7	-4.7	-4.7
Community benefit foregone	6.2	-	-	-6.2	-6.2
Subtotal Landholder Costs	21.7	6.4	22.5	-15.3	0.8
Total Costs (\$’M)	48.3	37.6	48.3	-10.7	0.0
Benefits (\$’M):					
Landholder: Private benefits	-	19.2	19.2	19.2	19.2
Community value: WTP	-	78.2	78.2	78.2	78.2
Total Benefits (\$’M)	-	97.4	97.4	97.4	97.4
Net Benefits (\$’M)	-48.3	59.8	49.1	108.1	97.4
Net Present Value (\$’M):					
@4%	-43.3	53.0	43.5	96.2	86.7
@7%	-40.0	48.6	39.9	88.6	79.9
@10%	-37.2	44.7	36.7	81.9	73.9
RANKING	3	1	2	1	2

Any apparent differences in totals are due to rounding.

Source: Appendix A, Tables A.1 to A.4.

5.5 Sensitivity Analysis

Sensitivity analysis of the impact of changes in the key assumptions was carried out as part of the economic evaluation of the regulatory options to assess robustness of the evaluation outcome and the ranking of the options, namely:

- discount rates were varied to 4 and 10 percent respectively;
- agency and landholder compliance costs were increased by 20 percent;
- landholder private benefits were assumed to be nil;
- community willingness to pay for the conservation of native vegetation was assumed to be nil, the area conserved was varied to a lower bound area of 17,000 hectares and an upper bound area of 34,000 hectares; and
- costs were increased by 20 percent, benefits were reduced by 20 percent and both effects combined.

The sensitivity testing of changes in the key assumptions had no effect on the relative ranking of the two regulatory options based on their NPVs. In particular, the magnitude of the WTP value estimated is not critical to the outcome of the RIS. The regulatory strategy embodied in Option 2 remained the preferred strategy from an economic perspective. Changes in NPVs with sensitivity testing of the key assumptions by option are summarised in table 25.

Table 25 Impact of Sensitivity Analysis on Net Present Values by Option

Item	Option 1 [‘Do nothing’]	Option 2 [Proposed Regulatory Option]	Option 3 [Alternative Regulatory Option]	Incremental cf Option 1	
				Option 2	Option 3
Base Case (\$'M):	-40.0	48.6	39.9	88.6	79.9
RANKING	3	1	2	1	2
<u>Sensitivity Analysis (\$'M):</u>					
Alternate discount rates					
- Discount rate @ 4%	-43.3	118.9	109.4	96.2	86.7
RANKING	3	1	2	1	2
- Discount rate @ 10%	-37.2	44.7	36.7	81.9	73.9
RANKING	3	1	2	1	2
Compliance costs					
- Increased by 20percent	-41.6	47.7	39.1	89.3	80.7
RANKING	3	1	2	1	2
Landholder private benefits					
- Nil	-40.0	32.9	24.1	72.9	64.2
RANKING	3	1	2	1	2
Community WTP					
- Nil	-40.0	-15.6	-24.3	24.5	15.7
RANKING	3	1	2	1	2
- Area conserved: lower bound 17,000ha	-40.0	23.1	14.3	63.1	54.3
RANKING	3	1	2	1	2
- Area conserved: upper bound 34,000ha	-40.0	109.3	100.6	149.3	140.6
RANKING	3	1	2	1	2
Changes in costs & benefits					
- Cost up: 20%	-48.0	4.23	31.9	90.4	79.9
RANKING	3	1	2	1	2
- Benefits down: 20%	-40.0	32.6	23.9	72.6	63.9
RANKING	3	1	2	1	2
Costs up:20%/Benefits dn:20%	-48.0	26.4	15.9	74.4	63.9
RANKING	3	1	2	1	2

Any apparent differences are due to rounding.
Source: Appendix A, Tables A.1 to A.3.

5.6 Conclusion

Option 2, the proposed Regulatory option provides the greatest net economic benefits to the community based on the assumptions used in the economic evaluation. The mechanisms embodied in the regulation enable the objectives to be achieved. The NVR 2004 provides a sound, consistent and equitable methodology for ensuring that proposals for clearing native vegetation are assessed on a uniform basis across the State in accordance with the provisions of the *NV Act*.

The proposed regulatory option embodied in Option 2 is regarded as a robust response to the clauses in the NV Act which require a regulation to be made. Sensitivity testing indicates that the magnitude of the WTP value estimated for the value that the community places on the conservation or protection of native vegetation is not critical to the outcome of the RIS; even if the WTP estimate is excluded.

Option 2 (i.e., the proposed NVR 2004) has a NPV of \$48.6 million and a significantly higher net benefit of \$88.6 million over the five-year period at a 7 percent discount rate when compared to

Option 1 (the 'Do nothing' or no regulation scenario). Option 2 also has a net economic advantage of some \$8.7 million over Option 3 (the alternative regulatory option).

The proposed NVR 2004 provides the greatest public economic benefit and represents a robust outcome. The objective of the NVR 2004 is '*reasonable and appropriate*' and '*in accord with the objective[s], principles, spirit and intent of the enabling Act [The Native Vegetation Act 2003]*' and '*there are no inconsistencies with the objectives of other Acts, statutory rules and stated government policies* (Subordinate Legislation Act 1989, Schedule 1). The 'Do nothing' scenario does not meet the objective of the proposed Regulation, in particular as it does not allow any clearing of native vegetation through the use of offsets.

The proposed Regulation will provide consistency, administrative certainty and clarity in decision-making by CMAs and DIPNR staff when clearing approval is provided and when actions that are permitted under the NV Act without approval require interpretation. The proposed Regulation will provide the mechanisms for the decision-making process to support the granting of clearing approval, particularly with respect to the 'improve and maintain environmental outcomes' test.

6. Public Consultation Program

The public consultation program for the RIS will include:

- publication of notice of availability for inspection in:
 - The NSW Government Gazette;
 - The Sydney Morning Herald;
 - The Land;
- exhibiting the draft Regulation and the RIS on the Department's website and at Regional Offices throughout NSW;
- providing copies of the draft Regulation and the RIS to the following stakeholder groups for comment:
 - Catchment Management Authorities (12);
 - NSW Farmers Association;
 - Environmental Groups; and
 - all Local Government Councils.

7. Data and Information Sources Used

Data Sources

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Information Sources

In the preparation of the Regulatory Impact Statement information was sourced from numerous officers of DIPNR. Sloane Cook & King Pty Ltd, Economic, Agricultural and Natural Resource Consultants assisted with the preparation of the economic evaluation of the impacts of the regulatory options.

Attachments

Appendix A to the RIS comprises five worksheets.