Conservation Hindered

The impact of local government rates and State land taxes on the conservation of native vegetation

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Bushcare

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Disclaimer

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Contents

About this project

Incentives for remnant vegetation conservation

This report forms a part of a larger project being undertaken by CSIRO Wildlife and Ecology which is identifying opportunities for the use of incentive-based instruments in the conservation of native remnant vegetation. The project is funded by Environment Australia and the Land and Water Resources Research and Development Corporation.

The report is one of five reports prepared to date which evaluate the role of local government in conserving native vegetation. The other four reports are:

Motivating People: Using management agreements to conserve remnant vegetation. This report addresses the role of financial incentives and legally binding management agreements in promoting the conservation of native vegetation on private land. It develops a conceptual framework for the project by identifying the situations in which different types of financial incentive can most effectively be used to conserve native vegetation.

Beyond Roads, Rates and Rubbish: Opportunities for local government to conserve native vegetation. This report evaluates the key policy and financial opportunities and impediments to local governments playing an active role in native vegetation management. It provides a synthesis of the findings of an extensive review of the role of local government and identifies policy options for all levels of government.

Opportunity Denied: Review of the legislative ability of local government to conserve native vegetation evaluates impediments to local governments using a range of innovative incentive-based instruments. A number of important legislative barriers to local government playing an effective role in native vegetation management are identified.

Talking to the Taxman About Nature Conservation: Proposals for the introduction of tax incentives for the protection of high conservation value native vegetation. This report reviews the impact of Commonwealth taxes on the conservation of native vegetation. It finds that conservation activities can in certain circumstances be highly taxed and puts forward proposals to address these situations.

The aim of the project is to address the issue of conserving native vegetation in a way that is relevant and attractive to all spheres of government: local, State and Commonwealth. It is only with each jurisdiction's active cooperation that the linkages between national policies for the conservation of native vegetation can be integrated with the economic, social and environmental interests of local communities.

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Executive summary

Some people argue that Australians are not philanthropic: that unlike our European and American counterparts we do not have a culture that promotes private investment in goods and services that are of a public nature, including the conservation of native vegetation.

This report evaluates the impact of property-based rates levied by local governments and State-based land taxes on the ability of landholders to conserve native vegetation. It does so with the objective of understanding how private investment in the conservation of native vegetation can be more effectively promoted in Australia. Private investment is required because many of Australia's most vulnerable ecological communities (different types of native vegetation) are only found in small isolated patches on private land. These valuable patches of native vegetation are often found within agricultural regions and on the coastal zone where development pressures are greatest.

New approaches are needed to achieve conservation outcomes in these regions. Financial incentives that share the costs of conservation between the community, represented by governments, and private individuals are required. However, before advocating new incentives it is critical to understand the impact of existing government policies and taxes on the price signals given to landholders seeking to conserve native vegetation.

The report concludes that conservation is being hindered by rate and land tax structures. Rates and land taxes are annual charges on land ownership and are generally based on a fixed proportion of land value. Of particular concern is the finding that the negative impact of these taxes is strongest in many of the regions of Australia where the conservation of a representative range of different types of native vegetation is yet to be achieved.

The report identifies important policy opportunities for all spheres of government: local, State and Commonwealth. These policy options are directed at correcting the price signal provided to landholders to conserve areas of high conservation value. A national program is proposed that has the potential to deliver this outcome through rate and land tax concessions. For smaller sites, a rate and land tax incentives program would be at least 10 times more cost-effective than acquiring these sites. In addition to being more cost-effective, the proposed program is likely to be more acceptable to private landholders, many of whom could be expected to react negatively to acquisition programs.

A national rate and land tax program would not replace the need for other conservation programs. In particular, incentive programs for off-reserve conservation will effectively complement acquisition programs for larger areas of outstanding national significance for national parks.

The report also alludes to a broader issue: how governments can promote philanthropic investment in nature conservation. The issue can be characterised by the challenge of encouraging wealthy philanthropists to invest in land of high conservation value. Tax structures, including property-based rates and land taxes, have a significant role to play in this wider agenda.[1]

The report begins by discussing the importance of conserving native vegetation on private land and defining property rates and land taxes, and then demonstrates that these taxes may affect the incentive to conserve native vegetation in two ways:

- firstly, through the way land is valued for rating and taxation purposes, and
- secondly, through the way rates and land taxes are applied to different classifications of land.

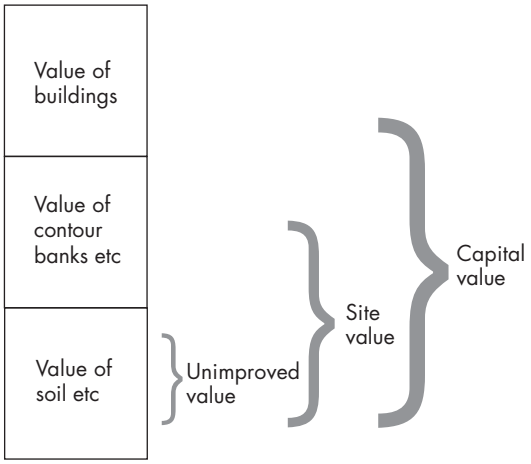
1. Commonwealth taxes also have a strong impact on philanthropic investment. These issues are addressed in detail in a separate report from this project: *Talking to the Taxman about Nature Conservation* (Binning and Young, 1999).

Impacts of different methods of valuation

Land can be valued in a number of different ways. Figure 1 summarises the different types of land valuation: from unimproved value that does not include any capital improvements, to site value which includes land improvements such as clearing of native vegetation and pasture improvements, to the full capital value that includes all buildings and fixed capital.

The impact of different methods of valuation on rates and land taxes is evaluated against benchmarks of tax neutrality, environmental impact, equity and investment and development. From the perspective of tax neutrality, environmental impact and equity, the capital value of land is the preferred method of valuation. However, from the perspective of investment and development, the unimproved value is strongly preferred as new investments do not attract higher rates of tax.

Figure 1: Different methods of valuation



While it is possible to conclude that, from an environmental perspective, the capital value of land is the preferred method of valuing land, it is not possible to draw a general conclusion. The overall size and distribution of the tax burden between taxpayers is a contentious issue in any community. The significance of different methods of valuation will vary between regions depending on the size of the gap between unimproved and capital values and the level of development. For these reasons it is concluded that there is not a strong case for fundamental reform of the valuation system. Local councils will be best placed to determine the basis for valuation and the most equitable distribution of the rating burden across their community *(draft policy option 2)*.

However, it can be concluded that in all cases the site valuation of land should be preferred over the unimproved value of land that excludes the economic value of vegetation clearance *(draft policy option 1)*.

The application of rates and land taxes to different classifications of land

Rates and land tax are applied very differently to different types of land depending on land use and the status of the landholder. A range of exemptions and concessions from rates and land taxes are available to different classes of land. There is considerable scope for targeting rate and land tax incentives for vegetation management by extending these special arrangements to land that is managed for nature conservation. The ability for landholders in each State to voluntarily enter legally binding conservation agreements provides a robust mechanism for targeting conservation incentives.[2]

In general, the rationale for special consideration and concessions in relation to rates and land tax is based on the provision of a public benefit. For example, charitable, religious, sporting and educational organisations are generally exempt from rates and land tax. Arrangements in each State are reviewed and identified in tables in the main body of the report. Opportunities to extend existing arrangements are identified below.

Exemptions: An exemption from rates and land tax could be given to all lands covered by a legally binding conservation agreement *(draft policy option 2)*. New South Wales provides a precedent and model for such an exemption.

2. The term 'conservation agreement' is used in this report to refer to a legally binding agreement between a landholder and a third party, usually government, to manage an area of native vegetation for conservation. Such agreements often take the form of a statutory covenant, but at a local level could also be operationalised by zoning the area in a conservation zone within local land use plans.

Differential rating: All local councils in Australia have the capacity to levy differential rates. Where differential ratings are based on rural land or primary production, these could be extended to land that is zoned and managed for conservation within formal land use plans *(draft policy option 3)*.

Consideration of development potential: The development potential of land is generally considered in valuing land for rating and land tax purposes. All States have procedures to ensure land valuations take account of the impact of planning provisions. However, there is scope to ensure that regulations relating to vegetation clearance are taken into account *(draft policy option 4)* and that the presence of legally binding conservation agreements is recorded on land valuation data files *(draft policy option 5)*. Provision may also be made to have high conservation value lands valued on the basis of their existing use – conservation – rather than potential future uses *(draft policy options 6 and 7)*. Queensland provides a useful model for implementation of these policy options in relation to rural lands.

Impact of income tax: Landholders carrying on a business on their land are able to deduct the cost of rates and land tax from their income tax. There is an opportunity to extend this provision to land covered by a legally binding conservation agreement *(draft policy option 8)*.

The significance of rates and land taxes

To understand the significance of rates and land tax on landholders' decisions, it is important to identify their magnitude.

Rates and land taxes on remnant vegetation vary enormously because they depend on the size of the remnant, value of the land, and the level of the rate. The analysis reveals that it is possible to identify three broad classifications of land in terms of the impact of rates and land tax on land.

Remote rural sites. In most broad-acre rural regions, rates are likely to be modest, with most lying in the range of $2 to $25 per hectare, creating a payment of between $100 to $1250 for a large remnant of 50 hectares. In these regions a rebate on rates and land tax is only likely to offer a relatively modest incentive. The impact of rate rebates in these regions will depend on their symbolic impact to act as a catalyst to reinforce the existing motivations of landholders.

High opportunity cost sites. In some regions land values, and hence rates and land taxes, are likely to be high. For example, in one cited Queensland case, rates and land taxes amounted to $635 per hectare. This is most likely to occur where development pressures are high, for example, where there is urban development potential or high value agricultural commodities, such as sugar cane or vineyard establishment. In these areas a rebate on rates and land tax will not serve to compensate landholders for forgone development opportunities. However, access to a rate rebate will do a great deal to offset the direct annual costs of managing land for conservation.

Urban sites. Urban rates are high relative to the size of the land, lying generally in the range of $500 to $1000 for an average urban block. It is likely that conservation management would need to occur over a relatively large number of adjoining blocks to deliver a good conservation outcome, for example, by maintaining a wildlife corridor. As is the case with other high opportunity cost sites, a rate rebate will not compensate for forgone development opportunities. It will, however, provide relief from annual payments and, if used in conjunction with a binding conservation agreement or rezoning, offer landholders the opportunity to voluntarily protect land from development pressures in the longer term.

Costs of rate and land tax incentives

The costs of providing exemptions from rates and land tax are estimated for assumed average rate and land tax payments. The costs of different categories of council implementing a rate incentive program for 30 properties in the first year, rising to 90 properties in the third year, are set out in Table 1.

These results need to be interpreted with care. The assumptions underpinning the results are discussed in the main report. Because these estimates are based on expected averages, councils will have to

review their own land valuation rolls and rate levels to derive a more accurate estimate.

The results do provide some very useful insights at a national level. It is particularly interesting to note that costs in terms of forgone revenue are estimated to be relatively low when compared with the cost of extension officers to support the program. This emphasises that conservation programs of this kind are voluntary and require strong motivational support. In many regions there is scope to use existing extension services to deliver programs of this kind.

Rate and land tax incentive programs are likely to be most effectively implemented by local councils, with the costs of these programs absorbed over a number of years. However, the financial capacity of many councils to introduce schemes of this kind is strictly limited. It is recommended that longer term cost-sharing arrangements be established, particularly for remote rural councils that are less able to cross-subsidise conservation programs from other ratepayers.

Rate and land tax incentives potentially offer a very cost-effective way of securing conservation outcomes. At 0.2% to 7% of the value of land per annum, they are more cost-effective than acquisition programs, even before savings from ongoing management costs are taken into account. However, programs of this kind do not replace the need to develop and maintain a core area of public conservation reserves. Ongoing acquisition programs will be required for larger sites of outstanding national environmental value. Further, it is likely that, where the incentive provided by rate and land tax incentives is small, additional complementary incentives will be required to encourage landholder participation.

A national program

Interviews with local government officials have revealed that very few local governments will take an active role in providing incentives for the conservation of native vegetation on private land. In the absence of leadership and policy support from Commonwealth and State governments, it is unlikely that such programs will play a significant role. For this reason, it is recommended that the Commonwealth government set aside $5 million over three years to fund a rate and land tax rebate scheme based on the policy options identified in this report *(draft policy option 9)*.

Table 1: Estimated cost of rate rebate scheme to different categories of council

	Year 1 (30)	Year 2 (60)	Year 3 (90)	Total cost to revenue	Cost of extension officer	Total cost
Rural councils	$13 500	$27 000	$40 500	$81 000	$225 000	$316 000
Urban councils	$30 000	$60 000	$90 000	$180 000	$225 000	$405 000
High opportunity cost councils	$90 000	$180 000	$270 000	$540 000	$225 000	$765 000

Summary of draft policy options

The table below summarises, in order of priority, the draft policy options identified in this report against the tier of government which would be required to play a lead role in their implementation. As can be seen, each tier of government has an active role to play. Full wording and rationale for each of the policy options is at the page reference identified.

Jurisdiction	Draft policy options
Commonwealth	*Draft policy option 9 (Page 44)* The Commonwealth government set aside $5 million over three years to fund a rate rebate scheme based on the policy options identified in this report. Local councils would be funded on the following basis: • twice the cost of providing a rate rebate would be reimbursed to provide a positive incentive to participate in the scheme and offset some of the costs of administration and extension support • provided criteria relating to the conservation value of the land are met, a minimum rate rebate provided would be $250, irrespective of the size or land value of the remnant • within three years, processes for incorporating the costs of rate rebates into the rating structure of participating councils would be determined, and • State governments would bear the costs of forgone land tax revenue. *Draft policy option 8 (Page 31)* Allow rate and land tax payments to be deducted from the income of landholders who enter into legally binding conservation agreements. *Draft policy option 4 (Page 30)* Establish and fund education programs to ensure that land use restrictions relating to retention of native vegetation are taken into account in land valuation.
State	*Draft policy option 2 (Page 26)* Exempt from rates and land tax all land that is covered by a binding conservation agreement. *Draft policy option 6 and 7 (Page 30)* Extend provisions that allow high conservation value land to be valued on the basis of its current use – conservation – rather than on the basis of its development potential. *Draft policy option 1 (Page 23)* Give local governments discretion in the method used for valuing land, but ensure that site value is used in preference to unimproved value for valuation purposes. *Draft policy option 5 (Page 30)* Ensure that binding conservation agreements are recorded on files and taken into account in land valuation.
Local	*Draft policy option 3 (Page 28)* Councils can use differential rating to ensure that land of high conservation value, which is appropriately zoned, qualifies for the lowest rural rate.

1. Introduction

This report evaluates how property rates administered by local government and State land taxes affect the willingness of landowners to conserve native vegetation. It identifies important policy opportunities for all spheres of government: local, State and Commonwealth. These policy options are directed at correcting the price signal provided to landholders to protect areas of high conservation value native vegetation.

In a broader context the report also seeks to understand how private investment in the conservation of native vegetation can be more effectively promoted in Australia. Private investment is required because many of Australia's most vulnerable ecological communities (different types of native vegetation) are found only in small isolated patches on private land. These valuable patches of native vegetation are often found within agricultural regions and on the coastal zone where development pressures are greatest.

New approaches are needed to achieve conservation outcomes in these regions. Financial incentives that share the costs of conservation between the community, represented by governments, and private individuals are required. However, before advocating new incentives it is critical to understand the impact of existing government policies and taxes on the price signals given to landholders seeking to conserve native vegetation.

The impact that rates and land taxes have on a landholder's decision to manage a remnant of native vegetation for conservation is difficult to determine as these charges have both a psychological and financial impact. Psychologically, rates and land taxes may have a negative impact on landholder motivation and willingness to conserve native vegetation. This is because they may feel that it is inequitable to be required to pay taxes on land that is managed in the public interest and from which they cannot derive an income. Cost-sharing principles support this view by suggesting that landholders should not be required to pay tax on an activity that is essentially a public good (Binning and Young, 1997a). This principle is strongly supported by both private landholders and local government officials when discussing the potential for incentives to promote the conservation of native vegetation.[3] In short, while a rebate on rates or land tax may not provide a strong financial incentive, it may do much to motivate individual landholders to conserve native vegetation.

What is less clear is whether a rate rebate or exemption from land taxes will provide a significant financial incentive for native vegetation conservation. In some regions the reduction in annual rate and land tax payments would be minimal, in the order of $50 to $100 for a 50-hectare remnant in a remote rural region. This compares to a potential reduction in excess of $10 000 for a 50-hectare property on the Queensland coast. Clearly, in the latter case, rates and land tax are a significant financial impediment to conservation, particularly where no income is earned from the site to offset rate payments. On the other hand, the impediment in a rural region would appear to be more symbolic than financial in that a landholder may not in principle be willing to enter into a binding conservation agreement on land they still have to pay taxes on.

From the perspective of nature conservation, the objective would be to ensure that rates and land tax have a neutral or positive impact on the incentive to conserve remnant vegetation. However, existing arrangements fall short of achieving this objective because rates and land taxes vary depending on:

- the method of valuation used
- the use the land is put to, and
- the taxation status of its owner.

For example, a range of exemptions and the use of differential rates mean that land managed for business purposes, including primary production, is

3. Discussions with local government officials, reported in Binning, Young and Cripps (1999), demonstrated strong support for rate rebates provided that any lost revenue could be made up from other sources.

generally rated and taxed at a lower rate than land managed for conservation.

A special case that requires urgent attention is the situation where an individual purchases land to manage it exclusively for nature conservation. A related issue is to understand how higher income-earning individuals can be encouraged to invest in the conservation of high conservation value lands. Landholders of this kind could be argued to be philanthropic, in that they are investing in a public good. Australians are often criticised as not having a culture of philanthropy in relation to nature conservation; this could be due to perverse incentives that tax philanthropic investments in nature conservation.

For example, in a separate report prepared as part of this project, *Talking to the Taxman about Nature Conservation* (Binning and Young, 1999), we find that, because nature conservation is not an income-earning business, it is amongst the most heavily taxed land uses in Australia. As a result it is argued that significant impediments to investment in conservation activities exist within the Commonwealth tax system. In this report similar findings are revealed in relation to the impact of local government rates and State land taxes on philanthropic investment in nature conservation.

It is in the context of the issues outlined above that we analyse whether rating and land tax arrangements are hindering the conservation of native vegetation and how these may be addressed by policy-makers.

The report is structured as follows.

Section 2 defines perverse incentives and identifies a range of benchmarks against which tax and rating arrangements can be measured, and discusses the rationale for property-based rates and land taxes against these benchmarks.

Section 3 discusses the impact that different methods of land valuation have against each tax benchmark and then analyses the impact of current arrangements in each Australian State.

Section 4 discusses the impact that different land uses and classes of ownership have on the incidence of the rate and land tax burden.

Section 5 discusses the magnitude of the impact of rates and land taxes.

Section 6 summarises the key policy opportunities and discusses the costs and cost-effectiveness of providing rate and land tax incentives.

Section 7 concludes the report by highlighting the potential to catalyse philanthropic investment in nature conservation and proposes a national program to support local and State governments in introducing rate and land tax incentives.

2. Key concepts

The task of evaluating whether existing land tax and rating arrangements have a positive or negative impact on the conservation of native vegetation is not straightforward, as these taxes have generally been introduced to meet objectives not associated with biodiversity conservation. Indeed, most rating and land taxation arrangements were established a long time ago when biodiversity conservation was not a policy objective. Often incentives for investment and development were the primary objective.

Generally, the 'secondary' effects of rates and taxes on environmental goods and services are not considered in the development of new tax policies. Secondary impacts are the impacts a new policy will have on other public policy objectives. For example, a tax break that promotes development may have a detrimental secondary impact on conservation to the degree to which development is a direct cause of biodiversity loss. Development is, of course, also an important social objective, for which positive incentives may be considered and justified. Hence a difficulty occurs when these two objectives come into conflict through taxation and rating policy.[4]

In order to evaluate where conflicts of this kind occur, it is firstly necessary to:

- outline why the objective of conservation of native vegetation on private land is important
- define property-based rates and land taxes
- introduce the concept of a perverse incentive, and
- define benchmarks against which the impact of different tax arrangements can be assessed.

Each of these topics is discussed in turn in this section.

2.1 Understanding the objective of conserving native vegetation on private land

Approaches to nature conservation have traditionally been focused on management of large areas of public land in reserves. Pressey (1995) argues that approaches to reservation policy, hence the location of public reserves, have been guided by factors largely unrelated to biodiversity conservation. Firstly, 'perceptions of conservation value' have been influenced by the beauty and wildness of areas and, secondly, reserves tend to have been drawn from steep or infertile crown lands that were unallocated. In other words, reserves have tended to be located where there have not been strongly competing land uses.

This strategy has not served many ecological communities (different types of native vegetation) well in terms of formal public reservation. Many ecosystems are poorly represented within the reserve system: 'Ecosystem types, such as temperate grasslands, coastal heathlands, mangrove communities, and a variety of arid communities have been identified as urgently requiring protection' (Howard and Young, 1995, p. 23). Development pressures have been strongest on fertile lands that have been suitable for agricultural

4. The potential for conflicts of this kind is the reason why many tax officials argue against the use of the taxation system to meet social objectives. They argue that using the tax system to provide incentives for changing social behaviour is likely to create a wide range of secondary and, potentially, perverse outcomes. Hence the tax system should be used to raise revenue in a manner that is neutral on all financial transactions, leaving social objectives to be achieved through the expenditure side of the budget, through grants processes, for example (Treasury, pers. comm., 1992–98). These are compelling arguments. They are consistent with the Tinbergen Principle (Tinbergen, 1950) which suggests that separate policy instruments should be used to address different policy objectives. The rationale underpinning the Tinbergen Principle is the observation that the policy structure is such that when one social objective changes, the policy setting relating to that objective can be fine tuned without having wide-ranging secondary impacts.

   A significant difficulty with this view is that existing taxation and rating policies do have wide-ranging secondary impacts on the price signals that consumers face in the market place. Arrangements to control and manage these impacts are not in place. As demonstrated later in this report, existing land tax and rating arrangements in each State often discourage the conservation of native vegetation.

development, leaving relatively few remnants of conservation value. Further, the remnants that do remain are typically on the land that is 'the most rugged, the least desirable for agriculture or the most inaccessible'. (Strom 1979 cited in Pressey, 1995, p. 49). This has meant that intact ecological communities on fertile agricultural lands or nearby urban centres on the coastal zone are not only poorly represented within the reserve system but are now generally very scarce (see Hamilton and Cocks, 1996).

More recently, nature conservation policies have shifted to focus on the conservation of biodiversity as the primary objective of management. In Australia this has been given effect through the National Strategy for the Conservation of Australia's Biodiversity (Commonwealth of Australia 1996a) and the National Forest Policy Statement (Commonwealth of Australia 1992) which call for the establishment of a national reserve system based on the principles of comprehensiveness, adequacy and representativeness.

Whilst long recognised by ecologists, this shift in emphasis has only recently become the major driver of reserve selection processes. The increasing emphasis on objective regional assessment of conservation values is perhaps best evidenced by the Regional Forest Agreement process where Comprehensive Regional Assessments have been undertaken to assess how comprehensive, adequate and representative the existing reserve system is. The result is that many of the ecological communities of highest priority occur on private land (see, for example, Tasmanian government, 1998).

With this shift in conservation priorities, it is important to consider how conservation of native vegetation on private lands can be most effectively fostered. To the extent that rates and land tax add to the cost of managing private lands for conservation, they are an impediment to achieving an effective conservation outcome.

2.2 Defining land tax and rates

Before discussing how property-based taxes and rates affect nature conservation, it is important to define the taxes and rates that are considered in this report and the broad rationale for their use.

Land tax

Land tax is an annual charge on the unimproved value of land levied by all State governments. It is essentially a tax on wealth or the ownership of an asset. Prior to the introduction of capital gains tax in 1985, land tax could have been considered a mechanism of taxing capital gains derived from the investment in land. However, any returns on capital are now taxed through capital gains, although all land purchased prior to 1985 is exempt.

Since the introduction of capital gains tax, it is difficult to rationalise land tax as being anything other than a tax on wealth. This is perhaps best evidenced by the fact that most land, including principal place of residence and rural land, is exempt from land tax. Land tax is broadly only applied to land that is held as an investment. Exemptions from land tax are discussed in greater detail in Section 4.

Rates

Rates are the primary means through which local councils raise revenue from their local communities. Rates account for approximately 50% of local government revenues and are the only direct way of local governments taxing their communities (National Office of Local Government, 1997).

Rates can be classified into two components: the first component, *service charges*, includes charges that cover the costs directly associated with providing services to the land and its owner; and the second component, *general rates*, includes the rates that provide general revenue to councils to cover the cost of providing/managing community infrastructure and services. For the purposes of this analysis, we ignore the provision of services as

these are considered a charge for a service rather than a tax in themselves.[5]

General rates have much the same impact on the owner as land tax, as they are generally levied as a fixed proportion of land value. As such they are also a tax on wealth to the extent that land values reflect wealth in any given community. However, to the extent that revenues gained from such rates are spent in the local community, they are quite specifically targeted.

2.3 Defining perverse incentives

A perverse incentive for biodiversity conservation is created when a policy unintentionally induces behaviour that results in the loss of biodiversity or creates a threat to biodiversity conservation (McNeely, 1988). Two broad situations in which such perverse incentives may be created can be envisaged:

- a good or service that is detrimental to the conservation of biodiversity is either exempt from tax or subsidised; for example, clearing of native vegetation may be a deductible business expense for taxation purposes, and
- a good or service that is beneficial to the environment is taxed at a higher rate than other goods and services; for example, land set aside for conservation is taxed at a proportionately higher rate than other lands.

Economics literature suggests that perverse incentives should be removed prior to any positive incentives for vegetation management being provided to landholders, the rationale being that it is more efficient to address the underlying causes of a problem than to use new policies to offset the perverse effects (OECD, 1995).

An example of a potentially perverse incentive is that the same area of remnant vegetation may be rated and taxed at very different levels depending on whether or not an income-earning business is being undertaken on that parcel of land.

2.4 Benchmarks for assessing the impact of land tax and rating incentives

Any taxation arrangement can only be evaluated against a series of benchmarks. A benchmark is a standard or objective against which the arrangement or proposal can be assessed. Without a benchmark, it is impossible to evaluate whether a positive, neutral or negative incentive to change behaviour is created. The most obvious benchmark to be considered in the context of this report is the likely impact of a given tax arrangement on the management of native vegetation for nature conservation. However, there are other benchmarks which need to be considered, especially those that relate to economic and social policy objectives.

5. The design of service charges is itself a highly controversial issue. This is because the provision of services such as water and garbage collection are characterised by high fixed costs and low marginal costs per landholder. This presents a dilemma as to how consumers should be charged for access and how they should be charged for consumption of the service. An economically efficient outcome is derived through a two-part tariff with a fixed charge for access and user charge to cover the marginal cost of providing infrastructure or services.

   The use of these pricing structures for public utilities that supply environmental goods such as water has been strongly advocated by environmental interests on the grounds that water use will be diminished where the user pays for every litre used rather than a fixed access charge.

   Others such as Savage and Hart (1993) have defended arrangements where the provision of services is linked to the value of land by arguing that local charges should address equity as well as efficiency considerations. As such, they argue that general taxation and access charges should be progressive, that is, related to individuals' capacity to pay.

The following four benchmarks are put forward as a basis for evaluating the economic, social and environmental implications of tax policy.[6]

Tax neutrality

The tax system should treat all financial transactions in a *consistent* way; be administratively *simple*; and have *equitable* impacts on all taxpayers.

Neutrality ensures that relative market values of all goods and services are not changed by the measure. Ideally, all transactions should be taxed at the same rate. Importantly, this argument explicitly rejects the view that market failures should be corrected through the tax system. The use of Pigouvian (selective) taxes, which correct market failures, is explicitly rejected.

Environmental impact

The tax system should have a positive impact on environmental values in the sense that the full social, environmental and economic costs of goods and services are reflected in their prices.

This benchmark requires taxes to be levied on goods and services differentially depending on their environmental impact. In conflict with tax neutrality, it seeks to address market failure. Goods and services that provide positive non-market environmental benefits, such as protection of an endangered species, should be taxed at a low level. Actions that have negative environmental impacts of no market consequence to the taxpayer, such as water pollution, should be more heavily taxed.[7] Alternatively, charges or tradeable permits should be introduced to achieve the same end.

Equity

The taxation system should progressively redistribute income to poorer people. That is, taxes should be levied at a proportionately higher rate on higher incomes and on larger quantities of capital.

At the same time, however, there is a need to take into account the capacity of individuals to pay. Impacts on the asset rich but income poor can require special consideration. The aged and farmers are typically used as examples of asset rich people whose lifestyles might be adversely affected by progressive capital taxation arrangements.

Investment and development

The taxation system should provide a positive incentive for investment and development, as they are important generators of financial wealth in society. In turn, this increases prospects for other public objectives like employment.

Negative gearing and accelerated depreciation are examples of tax policies specifically targeted at promoting investment.

These benchmarks can be used to evaluate the impact of land tax and property rates on different policy objectives. This is the topic of the next section.

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6. These benchmarks are based on criteria for the assessment of economic instruments developed originally by the Organisation for Economic Cooperation and Development. These criteria are reviewed in Young et al. (1996) in the context of biodiversity conservation. Criteria relating to administrative feasibility are addressed separately in relation to each proposed tax incentive.

7. At the extreme this benchmark reflects a Pigouvian view where taxes are used to ensure the full costs of all goods and services are incorporated into their prices. Pushed to the extreme, no further interventions are required, as all market failures have been corrected through the pricing system. This is of course a somewhat naive view. It assumes that social objectives can be perfectly quantified and further, as society's aspirations change, these changes can be reflected in changes to the taxation system instantaneously. Nevertheless, there is a powerful argument that, as all taxes are distorting to some degree, taxes should be targeted at environmental "bads" as then at least the taxation system is working to improve environmental outcomes.

3. Evaluating the impact of different methods of valuation

Table 3.1 summarises the impact that land taxes and property rates are likely to have on each of the policy benchmarks introduced in Section 2.

The table, however, does not provide a complete analysis of the impact of these taxes. This is because the method for valuing land may also have a significant impact on the distribution of the tax burden. Up to this point we have focused on discussing the implications of taxes on land as though they are equitably applied across all land. In the following discussion, the impacts of differing methods of levying these taxes are evaluated.

3.1 Defining methods of land valuation

Each State has an Act that establishes the basis upon which land is valued for land tax and rating purposes. The terminology used in each jurisdiction varies considerably. For consistency, the following terms and broad definitions are used to distinguish between the four main ways of valuing land:[8]

Unimproved value: the capital amount which the land might be expected to realise if offered for sale assuming that no built improvements or improvements to the landscape had been made.

Site value: the capital amount which the land might be expected to realise if offered for sale, or might be expected to realise assuming that any improvements, *other than site improvements*, had not been made. An example of a site improvement is the construction of contour banks (see below).

Capital value: the money which the land, including all improvements on that land, would raise if offered for sale.

Table 3.1: The impact of land taxes and property rates on each of the policy benchmarks

Benchmark	Implications
Tax neutrality	The taxation of land at a different rate from other assets shifts investment either away from or towards land. However, to the extent that land is in fixed supply and, therefore, inelastic, it could be expected that a tax on land would be passed on in full, with the seller decreasing the value of the asset by approximately the size of the tax. Hence a transfer of wealth with a net welfare loss to the landholder takes place with little or no impact on allocative efficiency.
Environmental impact	Land taxation has an uncertain impact on the environment as the impact will depend on the extent to which good and bad land management practices are taxed or to which taxation payment leads to good or bad management.
Equity	Land taxation has a positive impact on wealth redistribution as land ownership is closely correlated with wealth. There are, however, questions over whether it is more equitable to tax income derived from an asset or the asset itself.
Investment and development	Land taxation has an uncertain impact on investment and development of land and, in particular, is a function of the way land is valued. Taxation of the market value of land including 'improvements' on it discourages investment. In all cases, however, land taxation encourages people to ensure that the land they hold generates income.

8. Considerable confusion can be created when comparing terminology in each State as the same term may have different meaning between jurisdictions. The definitions presented in this section have been developed for the purpose of distinguishing between different classes of valuation for the purposes of analysis. For precise definitions as they apply in each State, the reader should refer to the relevant Act.

Annual rental value: the gross annual rental that the land might reasonably be expected to realise if let on a tenancy from year to year upon the condition that the landlord were liable for all rates, taxes and other charges thereon, and the insurance and outgoings necessary to maintain the value of the land and buildings.

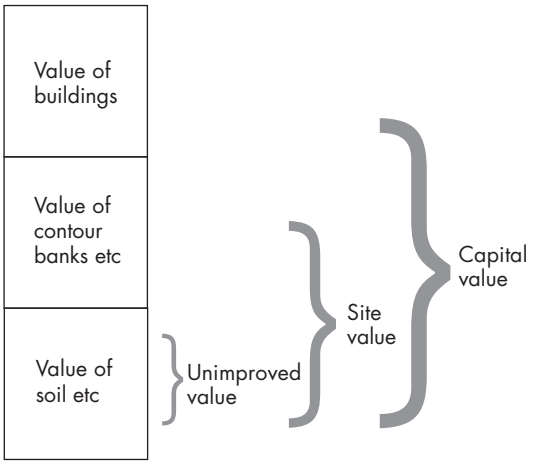
It is also important to understand the definition of improvements for the purpose of land valuation:

Improvements: in this context mean the value of all works done on the land that benefit the economic value of the land. Improvements generally cover buildings, fixtures, fences, bridges, roads, tanks and other fixed equipment and all site improvements. They do not, however, include plant or equipment that are not materially fixed to the land.

Site improvements are a subset of improvements and include any works that are undertaken on the land itself. Site improvements generally include earthworks, drainage, the removal of rocks or soil, and the clearing of timber, scrub and other vegetation.

The first three definitions of land value relate to the asset value of the land, with improvements being added progressively until the full capital value of the land is reached. The fourth definition, annual rental value, reflects the income stream that an asset is expected to be able to generate. It is a very different basis for land valuation. Conceptually, however, it should be closely correlated to the capital value of the land as the expected return would be a function of all improvements rather than a subset of these. Figure 3.1 summarises the differences between these concepts. These definitions are important as the method of the valuation used for rating and taxation purposes will affect the relative payments made by each landholder and, hence, the price signal given to the conservation of native vegetation.

Figure 3.1: Different concepts of land value



3.2 The impact of different methods of land valuation

Table 3.2 summarises the impact that different methods of valuation have on each of the policy benchmarks. It shows that, with the exception of the investment and development benchmark, capital improved or annual valuations would be preferred from a conservation perspective. This relationship is captured in the equations presented in Box 1 which show that, for a given level of revenue to council, unimproved land will be taxed at a higher rate if the basis for valuation is unimproved value rather than site or capital value.

Table 3.3 summarises the method of valuation used in each State for rating and land tax. It shows that many States use unimproved or site value as the basis for calculating rates, the method of valuation that has the most adverse impact on the 'environmental impact' benchmark. On the other hand, as shown in Table 3.3, using the unimproved value is beneficial in terms of promoting development as the assets generated through development are not subject to higher rates.

Table 3.3 summarises the method of valuation used in each State for rating and land tax. It shows that many States use unimproved or site value as the basis for calculating rates, the method of valuation that has the most adverse impact on the 'environmental impact' benchmark. On the other hand, as shown in Table 3.3, using the unimproved value is beneficial in terms of promoting development as the assets generated through development are not subject to higher rates.

Table 3.2: Impact of methods of valuation on various land tax and rating benchmarks

Benchmark	Comments
Tax neutrality	When considering the impacts of valuation in isolation, capital or annual valuations are superior to other forms of valuation as all capital (land, site improvements and other improvements) is taxed at the same rate. However, neutrality will depend on the tax treatment of other assets. All assets are subject to capital gains tax but few are subject to other taxes, meaning that investment in land and land development are negatively affected.
Environmental impact	Capital or annual valuations are superior because when these are the basis of valuation an unimproved block of land is taxed at a lower rate for a given total level of tax revenue. An unimproved block of land with native vegetation will be taxed at a lower rate if the capital or annual value is used. Hence there is less incentive for development and, therefore, potentially less impact on the environment. This is also the case when the site value is used, but to a lesser extent.
Equity	To the extent that the capital or annual value of land is a better surrogate of wealth, then these are superior. There may be an argument that annual value should be the preferred basis of valuation, as this reflects the asset's income-earning capacity, rather than asset value.
Investment and development	Unimproved value is superior, as a landholder is not penalised for developing their land. When the basis of valuation is capital value, a landholder faces paying a higher rate of tax if they undertake development. Hence there is a perverse incentive against development.

Table 3.3: The method of valuation used in each State for rating and land tax purposes[a,b,c,d]

State	Local government rates	Land tax
NSW	Site value [a]	Site value [a]
Vic	Councils choose between annual rental, site and capital values	Site value
Tas	Councils choose between unimproved, capital or annual rental values	Site value [b]
SA	Councils choose between annual rental, site and capital values [c]	Site value
WA	Rural: unimproved value [d] Non-rural: annual rental value	Unimproved value [d]
Qld	Unimproved value	Unimproved value

a. S58 if the Valuation of Land Act provides a 15-year allowance, that is, a deduction from the site value, for any site improvements, including clearing of native vegetation, that are made by the current landholder. If the land is sold the allowances no longer apply.

b. The Tasmanian definition of *land value* falls between the unimproved and site value as defined in this report. The value of roads, dams, planted trees, introduced pastures and other like improvements is excluded. However, any value derived for the grading or levelling of land, removal or destruction of vegetation, the alteration of soil fertility and elimination of erosion or flooding is not excluded.

c. S170 of the South Australian Local Government Act requires councils to use capital value. However, the council may declare rates on the basis of the annual rental value or site value if: the council declared rates in respect of that land on that basis for the previous financial year; or the council declared rates in respect of that land on the basis of capital value for the previous three financial years.

South Australian land valuation also specifically addresses the issue of revegetation by noting that the capital and annual values should exclude any value created through the planting or preservation of trees for shelter or ornament.

d. Unimproved value is equal to the site value if in a townsite, or the unimproved value if outside a townsite.

Box 1: Implications of methods of valuation on the incidence of rates between unimproved and improved land

The equations set out below show that, for a given level of total rate income Y, the distribution of the rate burden will vary depending on the basis of the valuation used. Three scenarios are considered where land is valued on the basis of unimproved, site and capital value respectively. The extent of variation depends on:

- the proportion of blocks in each category – unimproved, with site improvements or with capital improvements (that is, the distribution of sites between n_1, n_2 and n_3), and
- the differences in valuation between each category (that is, the differences between V_1, V_2 and V_3).

$$Y = P_1n_1 + P_2n_2 + P_3n_3$$

$$a_{unimproved} = \frac{Y}{V_1(n_1 + n_2 + n_3)}$$

$$a_{site} = \frac{Y}{V_1n_1 + V_2(n_2 + n_3)}$$

$$a_{capital} = \frac{Y}{V_1n_1 + V_2n_2 + V_3n_3}$$

Scenario $a_{unimproved}$: $V_1 = V_2 = V_3$

Scenario a_{site}: $V_1 < V_2 = V_3$

Scenario $a_{capital}$: $V_1 < V_2 < V_3$

Where:

Y = Total rate income

V_i = Valuation of an average block of land in category i

P_i = aV = Rate payment

a = % of valuation paid in rates each year

n = Number of properties in each class of value

i = 1: Unimproved property

i = 2: Property with site improvements

i = 3: Property with capital improvements

The key result is that $a_{unimproved} > a_{site} > a_{capital}$ showing that if all land is valued on the basis of its unimproved value, the proportion of the value of land paid in rates will be higher than if land is valued on the basis of site value and capital value respectively. Thus the owner of an unimproved block of land will pay a larger proportion of the total rate bill Y if the unimproved value of land is used as the basis for valuation.

The extent to which the basis of valuation is a significant issue depends on the proportion of land that is improved and the magnitude of the difference between the capital improved value and the unimproved value of the land.

3.3 Discussion and policy opportunities

The significance that the method of valuation has on the incentive to conserve native vegetation depends on the extent of land and other improvements within a local government area. If a high proportion of land within a region has been developed and these developments add significantly to the value of the site, then the method of valuation will have a significant impact. This can be expected to be the case in or near urban centres. On the other hand, if land and other improvements are only a small proportion of the total land value within a region, then the differences caused by different methods of valuation will be diminished. This may be expected to occur in agricultural regions remote from the urban population centres.

The distinction between unimproved and site value is particularly interesting from the perspective of maintaining native vegetation. This is because site value includes any increase in land value from site improvements which include earthworks, the clearance of native vegetation and the establishment of improved pasture. It could be argued that those States that base land values on the unimproved value of land are providing a relatively strong

incentive to undertake land improvements and hence clearance of native vegetation.

One could take the view that land improvements should be encouraged as long as they comply with legislative requirements aimed at protecting conservation values, for example, clearing controls and threatened species legislation. Another view suggests that any price signal which promotes the destruction of native vegetation should be regarded as creating a perverse incentive and should be removed. This situation operates in different ways through each jurisdiction's Valuation Act, for example:

- The Tasmanian definition of unimproved value excludes roads, dams, planted trees, introduced pastures and other like improvements but includes *inter alia* earthworks and the clearance of vegetation.
- The South Australian definition requires that the value of land excludes the value created through the planting or preservation of trees for shelter or ornament.
- The NSW legislation includes all site improvements but provides a deduction for those made by the existing landholder in the past 15 years.

It can be seen that the treatment of native vegetation is specifically addressed in many of the Valuation Acts. Given the trend towards dealing explicitly with vegetation clearance in Valuation Acts, it would appear to be reasonable to recommend that the site value of land should always be preferred over the unimproved value.

The choice between site value and capital value, however, is more problematic. This is because incentives for land development must be considered against other policy benchmarks, including environmental impact and equity.

It is interesting to note that a number of States and Territories give councils the discretion of choosing which basis of valuation should be used. Such a system implies that there is no ideal basis for valuing land and the choice of system reflects a view about the relative importance of various social objectives. Additional flexibility is provided in most jurisdictions by giving councils the ability to differentiate rates between categories of land use (as discussed below). Councils, elected by their community, may be in the best position to take account of local circumstances and thereby determine how the rate burden is most equitably distributed amongst ratepayers.

Draft policy option 1

From the perspective of nature conservation, capital value is the preferred method of valuing land.

- The site value of land should be the preferred basis of valuation over unimproved value for rating and land tax purposes to ensure that cleared land is not rated on the same basis as uncleared land maintained for conservation.
- Because the choice of method of valuation between site and capital value means balancing a range of social objectives, this should be left to individual jurisdictions and/or councils because they are best placed to determine how the rating burden can be most equitably distributed amongst ratepayers.

4. The application of rates and land tax

In addition to the basis for valuation, rates and land tax are applied at quite different rates depending on the status of the owner and primary use of the land. The classifications of land use and ownership that may affect the rating and land tax arrangements are introduced in Box 2.

Box 2: Classification of land use and ownership

An area of remnant native vegetation could be found in any of the following classifications which may affect its liability for rates and land tax:

- land owned and managed for primary production
- land which is the principal place of residence of the owner
- land that is vacant
- land that is subject to a legally binding conservation agreement
- land owned by a recognised charitable, religious, sporting, educational or non-profit organisation
- land that is zoned for uses that are of higher value than its current use, and
- land that is subject to vegetation clearing controls.

The impact of land tax and property rates on these different categories of land may differ for four reasons, where:

1. they are legislatively exempt from land tax or local rates
2. rates are applied differentially to different land uses
3. for certain land uses the future development potential is not taken into account in making valuations, and
4. landowners are liable to pay income tax on rate and land tax payments.

Each of these issues and the implications of each of these issues for managing native vegetation are discussed in this section. Options for how existing arrangements could be amended to promote native vegetation conservation are then identified.

4.1 Legislative exemptions

Current state of play

A wide range of exemptions from land tax and property-based rates are set out in the Local Government Act and other relevant Acts in each State (Cripps, Binning and Young, 1999). Table 4.1 sets out the main exemptions that may be relevant to native vegetation conservation in each State.

- that charitable, sporting and not-for-profit organisations are exempt from both rates and land tax across all jurisdictions;
- that NSW and South Australia are the only States to make specific exemption for land covered by a legally binding conservation agreement;
- vacant land is only exempt in NSW and Tasmania, and that is only if it is classified as rural land, and
- land used for primary production is exempt from land tax in all jurisdictions.

Table 4.1: Land that is exempt for rates and land tax[9, 10, 11, 12]

	Rates						Land Tax					
	NSW	Vic	Tas	SA	WA	Qld	NSW	Vic	Tas	SA	WA	Qld
Crown Land	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Primary production	✗	✗	✗	✗	✗	✗	✓	✓	✓	✓	✓	✓
Principal place of residence	✗	✗	✗	✗	✗	✗	✓	✗	✓	✓	✓	✓
Vacant land	✗	✗	✗	✗	✗	✗	✓10	✓12	✗	✗	✗	✗
Subject to conservation covenant	✓	✗	✗	✓	✗	✗	✓11	✗	✓	✗	✗	✗
Charitable organisation[9]	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Recreational/ sporting – non-profit	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Discussion and policy opportunities

Exemptions from rates appear to have been provided in situations where it can clearly be demonstrated that the land is predominantly used for the provision of a public good. The provision of nature conservation on private land has not traditionally been considered a public good. However, where private landholders manage land exclusively for nature conservation, a strong case can be made that this is a service which is of a public nature in the public interest.[13] This case will be strengthened where the land in question can be defined as having high conservation values.

A difficulty arises in determining when land will be managed to maintain conservation values on an ongoing basis. A two-part test could be envisaged:

- land that is subject to a legally binding management agreement that is registered on title, preferably via a statutory covenant, and
- land that contains native vegetation that is of regional conservation significance.

The first part of the test provides a clearly defined trigger for eligibility as only specific organisations are able to enter legally binding conservation agreements.[14] These organisations have considerable expertise in conservation management and are well placed to make a judgement about the conservation value of proposed sites. The second part of the test provides specific guidance on the definition of high conservation value. If a tight public interest criterion were to be imposed, the second criteria could be used. However, sites of

9. Charitable organisation typically includes religious, educational, sporting and non-profit organisations.
10. Vacant land would not be subject to land tax if the land is within a 'rural' or 'non-urban' zone or is land the Chief Commissioner is satisfied is rural land.
11. The Act provides for land to be exempt that in the view of the Director General of National Parks and Wildlife is primarily used for the maintenance of endangered species native to Australia.
12. Rural land is exempt from land tax. Hence vacant land within a rural land category will be exempt. Vacant land in any other category will not be exempt.
13. Binning and Young (1997a) argue that agreements for the conservation of sites of high conservation value constitute a public conservation service which justifies ongoing financial assistance from government because of the public service provided.
14. The ability of different organisations to enter conservation agreements is reviewed in Binning and Young (1999).

regional or local significance may be excluded through the use of these criteria.

NSW has recently introduced an exemption for land covered by a conservation agreement. It is a well-designed exemption that could act as a model, as it addresses both the case where land is exclusively managed for conservation and where a conservation agreement only covers a portion of a block of land (see below). The test used is only the first part of the two-part test outlined above. NSW Parks and Wildlife Service applies criteria which require sites to be of significant conservation value, although there is discretion in how this term is interpreted. Leaving the conservation agency or organisation entering the agreement to determine what is of conservation value has worked to date, as relatively small areas of land are having legally binding conservation agreements placed over them. On balance, only applying the first part of the test would appear reasonable. If, over time, questions arise over the public value of land that is being covered by a conservation agreement, the second part of the test could be applied.

The exemption in the Local Government Act (NSW) reads:

> [Land Exempt from rates includes:]
>
> S555 (1)(b1) subject to subsection (3), land that is the subject of a conservation agreement (within the meaning of the National Parks and Wildlife Act 1974),
>
> S555 (3) If land to which subsection (1) (b1) applies comprises part of a single parcel of land for rating purposes, that part is exempt from all rates. However, rates may be made and levied on the other part of that parcel proportionately.

In relation to land tax, the exemptions are more wide-ranging, generally covering the principal place of residence and land used for primary production. The rationale would appear to be that only land that is held as an income-earning investment, or for the purposes of carrying out a business other than primary production, should be subject to the tax. Under this rationale a case could also be made to exempt land covered by a binding conservation agreement, as this land is unlikely to earn income.

A more difficult situation arises in considering land that is of high conservation value and is managed sympathetically, but does not meet the first part of the eligibility test outlined above, that is, where it is not covered by a binding conservation agreement. Although criteria could potentially be developed to address these areas, it would be difficult to justify a rate incentive in the absence of a legal mechanism to secure the conservation of the land. Further, the potential to be exempt from rates could act as an incentive to enter a conservation agreement, thereby achieving greater security for ongoing conservation management.

This issue is discussed in greater detail in Section 4.3, which discusses options for creating incentives that ensure land is not forced to be developed through high taxes because of the land's development potential.

Draft policy option 2

All States introduce an exemption from rates and land tax for lands covered by a legally binding conservation agreement that is binding on title. In the case of land tax, the owner should demonstrate that they are not earning income from conducting a business on the land.

4.2 Applying rates differentially

The issue and current state of play

A second way in which land may be rated or taxed at a different rate is by councils applying different rating structures to different categories of land. Table 4.2 summarises the extent to which rates can be applied differentially in each State.[15]

15. The capacity to apply differential rates is the primary means through which rate rebates may be provided by councils. The capacity to use differential rates for native vegetation conservation is discussed in detail in Cripps et al. (1999).

Differential rates are used extensively to meet a wide range of different objectives. Generally, councils attempt to tie rates to the level of services provided to different categories of land within their area. For this reason rural lands tend to be levied at a lower rate than residential or industrial categories (Patricia Mann, NSW Department of Local Government, pers. comm., 1998).

It is difficult to judge the extent to which differential rating affects vegetation clearance. Both positive and negative impacts can be conceived. For example, owners of vacant bush blocks may benefit from discounted rates provided to rural lands. On the other hand, to the extent that lower rural rates imply higher urban rates, such a scheme may also disadvantage bush blocks in an urban zone. Further, lower rates in rural areas may penalise owners of bush blocks if they are not classified as rural land. This situation may arise where a landholder has to demonstrate that they are carrying out a business of primary production to qualify for the zone. This is often the case where tight guidelines are provided for defining rural land near an urban centre, that is, urban farm land.[16] In these situations a strong case can be made to include land that is of conservation value within the lower rating category.

Discussion and policy opportunities

Differential rating is already widely used to distribute the overall rate burden amongst different landowners. Different States, and local councils within States, use many different approaches. This is consistent with the principles of local governance, which imply that councils should have flexibility to determine how to distribute the rate burden amongst ratepayers. They are after all directly accountable to their community through the electoral process.

However, it is of concern that land that is managed for conservation often falls between the definition of rural land, urban rural land and/or primary production, and therefore may be rated at a higher rate than is desirable. To correct this situation the following policy option may be considered.

Table 4.2: Capacity to differentially rate, by State[17]

State	Comments
NSW	Rates can be determined in relation to four categories: farm land, residential, mining and business. These categories can be further divided into sub-classifications by the council. A sub-category for conservation could be created to provide discounted rates, although to date this mechanism has not been used.
Vic	Councils can impose a differential rate if it will contribute to the equitable and efficient carrying out of its functions. Councils may also provide a rebate or concession in relation to any rate or charge to conserve places of environmental interest.
Tas	Rates can be varied on the basis of the use or predominant use of the land, locality of the land, non-use of the land, planning zone or any other factor approved by the Minister. Any change must be approved by an absolute majority of council. Hence rates may be applied differentially and this is often done between urban and rural lands.
SA	Both general and separate rates may be applied differentially according to use or locality of the land, or on some other basis determined by the council, subject to limitations.
WA	Differential general rates may be imposed on the basis of the purpose for which the land is zoned, the predominant purpose for which the land is held or used, as determined by the council, whether the land is vacant or not, and any other characteristic or combination of characteristics prescribed.
Qld	Differential rates can be applied on the basis of categories determined by the council.

16. For example, both the Victorian and Western Australian Valuation Acts contain strict definitions for land to be considered farm land in urban areas, including a requirement that a business of primary production be undertaken which is a primary source of the landholder's income.

17. For a more comprehensive analysis see Cripps, Binning and Young (1999) for a review of the ability of councils to use differential rating policies to provide incentives for nature conservation.

Draft policy option 3

Where differential rating categories are based on rural land or primary production, these definitions could be extended to include land that is managed for the conservation of native vegetation. To qualify, land would have to be shifted to an appropriate land use planning zone requiring development consent prior to any development detrimental to maintaining the land's conservation value.

4.3 Consideration of land's development potential

Issues and current state of play

The way in which the development potential of land is taken into account in determining land values can also have a significant impact on the liability to pay rates.

Land is generally valued on the basis of its 'best and highest valued' use, taking into account any existing planning instruments that apply to the land. That is, all potential land uses that are not forbidden by a planning instrument are taken into account in valuing the land. Thus a vacant block of land is valued on the basis of its development potential rather than on its existing use.

There are two situations that need to be considered in terms of their impact on the incentive to conserve native vegetation:

- the impact of planning provisions on the value of land, and
- the situation where high conservation value land has a high development potential and hence is valued at a high rate.

The impact of planning provisions

If vegetation clearance is restricted through legislation or local planning provisions, this should be taken into account in valuing land. Thus land uses that involve clearing which is unlikely to be approved should not be taken into account in making valuations. Thus the situation can be envisaged where new planning provisions relating to vegetation management may reduce the value of land for rating purposes.

This concept could potentially be taken one step further if land were voluntarily placed in a conservation zone in the local land use plan or a binding conservation agreement entered into. In both of these cases the restriction of either the planning provision or the conservation agreement should be taken into account in making the valuation.

Table 4.3 indicates the current situation in each State and confirms that valuations should take account of changes in planning provisions and other Acts. The table also indicates when specific provision is made for valuations to take account of the existence of a legally binding conservation agreement on the property.

Table 4.3: Provisions that may exclude land's development potential from valuation

State	Valuation to take account of changes in planning provisions and other Acts	Valuation to take account of conservation agreement	Valuation to be based on existing use rather than potential use
NSW	✓	✓	✗
Vic	✓	✓	✗
Tas	✓	✗	✓ Urban farm land
SA	✓	✓	✓ Primary production ✓ Principal place of residence
WA	✓	✗	✗
Qld	✓	✓	✓ Single-dwelling house ✓ Primary production

In summary, it would appear that any restrictions relating to the protection and management of native vegetation are addressed under current legislation. What is less clear is whether land valuers are aware of and take account of land use restrictions of this kind in making valuations. These issues are discussed below.

Incentives to develop high conservation value land

In the case of land managed for conservation, the 'existing land use' may be well below the value of other potential land uses, that is, the 'best and highest valued land use'. For example, vacant land near a growing urban centre may be rezoned as being suitable for future urban development, thereby creating a jump in its value and hence the rates payable. Further, if differential rates are applied the rates could be further increased as the land moves from one rating category to another. In this way the land's development potential could create a large disincentive to conserve areas of native vegetation, as land could be triggered into both higher rates and land tax.

The situation can be envisaged where the development of land is 'forced' by the fact of its development potential. Land values are most likely to increase in urban growth corridors where many of Australia's vulnerable lowland coastal ecological communities are located (Hamilton and Cocks, 1996; Mary Maher and Associates and Ecograph, 1997). We are aware of one such situation in Queensland where eight landholders are being subject to extremely high levels of rates and land tax on lowland ecosystems despite being committed to managing it for conservation.

A potential solution to this problem would be to rate land that is of high conservation value on the basis of its 'existing use' rather than its potentially 'best and highest valued' use. While this approach has not been adopted in relation to nature conservation, such an approach has been used to protect farm land near major urban centres. Several jurisdictions have acted to ensure that such land be valued on the basis of its existing use rather than future potential uses (see Table 4.3).

For example, the Queensland approach to valuation could be used as a model as set out below, with conservation added in brackets:

> In making a valuation of the unimproved value of land exclusively used for the purposes of a single dwelling house [conservation of native vegetation] or for the purposes of farming, any enhancement in that value for that the land has been subdivided by survey or has a potential use for industrial, subdivisional or any other purposes shall be disregarded irrespective of whether or not, in case of the potential use as aforesaid, that potential use is lawful when the valuation is made (*S17 (1) Queensland Valuation of Land Act 1944*).

Where such land is developed, these special provisions would obviously no longer apply. The Act also addresses this issue.

Discussion and policy options

Impact of planning provisions

All States have a mechanism in place that would trigger review of the valuation of land when potential uses may have been reduced through changes in planning provisions. Some States also make provision for revisiting valuations at the time a binding conservation agreement is entered into. However, it is unclear to what extent changes in planning provisions relating to vegetation conservation or the existence of a binding conservation agreement have been taken into account by valuers. This is because valuers may not be aware of all the planning provisions that relate to a particular block of land or the existence of a conservation agreement and *the impact that either of these would have on market values.*

Draft policy options 4 and 5

4. Procedures be put in place to ensure that land valuations take account of the impact of planning provisions, at both State and local level, for the protection of native vegetation.

5. The presence of legally binding conservation agreements be recorded in land valuation data files and processes put in place to ensure that the impact of any conservation agreement is taken into account in valuing the land.

Valuing on the basis of existing use

From the perspective of the environmental impact benchmark introduced earlier in this report, a case could be made that all land should be rated on the basis of its existing use rather than its future development potential.

However, it would appear that exemptions have only been provided where there is a demonstrated case that it is socially desirable that land not be developed, or development should be deferred so that the existing landholder can maintain a given lifestyle. As discussed above, the principle of valuing on the basis of existing use is well established in the context of protected rural land on the urban fringe from being forced to develop. The motivation would appear to be to provide incentives for the maintenance of open space and lifestyle.

Given these criteria, a case could be made for offering the same basis for valuation to lands of identified conservation value. A difficulty arises in how to determine when land should qualify for such special consideration. A process for determining the conservation value of land would need to be put in place. In regions where native vegetation is mapped this could be done by targeting strategic sites that would be eligible. For example, Brisbane City Council has mapped and applied a Vegetation Protection Order on all native vegetation of significant conservation value within their local government area. These areas could potentially have lower rates applied to them. Alternatively, in the absence of mapped information, a process could be established where landowners are given the opportunity to apply for their land to be revalued on the basis of its conservation value.

Draft policy options 6 and 7

Extend provisions that allow high conservation value land to be valued on the basis of its current use – conservation – rather than on the basis of its development potential.
To operationalise this option:

6. Councils could identify lands to be valued on the basis of their management for conservation; or

7. Rate notices could, through regulation, contain a notice informing ratepayers that they may apply to have their land revalued if it is managed for conserving native vegetation.

4.4 Liability to pay income tax on rates and land tax payments

The final way in which different classes of land use and ownership may affect incidence of rates and land tax is in terms of a landholder's liability to pay income tax.

If an income-earning business is being carried out on land then the payments of rates and land tax can be deducted as a business expense from the owner's taxable income.[18] Importantly, a primary producer would qualify to deduct rate and land tax payments under these provisions. Likewise, if the organisation that owns the land is a public, charitable or non-profit organisation that is exempt from income tax, they also will not be liable to pay income tax on income earned to pay any land rates or charges.[19]

18. S72 of the *Income Tax Assessment Act 1936* provides that rates and land tax paid on income-producing premises or land are deductible.

Table 4.4: Total income required to pay $100 of rates and/or land tax

Marginal tax rate including Medicare levy of 1.5% [a]	Rate payment	Taxable income required to be earned to pay rates and charges
Exempt	$100	$100
21.5	$100	$127
35.5	$100	$155
44.5	$100	$180
48.5	$100	$194

a. A Medicare levy of 1.5% has been added to each of the marginal rates although the thresholds and rates of levy are different from those for income.

However, landholders who do not use their land for income-generating purposes will not be able to deduct the cost of rates and land tax from their income. This is significant because these landholders are, in effect, paying tax on their tax as they must pay income tax prior to paying rates or land tax. The degree to which paying income tax will affect the net payment made by landholders will depend on their marginal income rate as outlined in Table 4.4.

From Table 4.4 it can be seen that the financial impact of rates and land tax for non-income-earning land is nearly doubled at the top marginal tax rate. A landholder who purchases a block of land for conservation purposes and is ineligible to deduct these expenses will be liable to pay income tax on their rate payments. Hence individuals on the highest marginal tax will have to earn nearly twice the rate payment, that is, one dollar in rates will require they earn $1.94.

Draft policy option 8

Disincentives to invest in land to be managed for conservation could be significantly reduced by introducing provisions that allow the owner of land covered by a legally binding conservation agreement to deduct rates and land tax charges from their income.

This is, of course, only one of a range of deductions that are available to landowners who derive income from their land. Other deductions available to businesses and primary producers include the ability to:

- deduct ongoing costs of management including wages and consumables as a business expense (s8-1)
- deduct interest payments associated with the land as a business expense (s8-1)
- claim a diesel fuel rebate
- claim sales tax exemption for goods associated with the management of the land (Schedule 1 *Sales Tax (Exemptions and Classifications) Act 1992*)
- depreciate plant and articles associated with management of the land (s42-15)
- depreciate fences, dams and other structural improvements on farmland (s42-18)
- claim a three-year deduction for water storage and farm reticulation systems and an outright (100%) deduction for expenditure on capital works designed to prevent or combat land degradation on rural land or, from 1 July, claim a rebate or a tax credit for this expenditure at the rate of 34 cents in the dollar (s387-130 and s387-55).

A strong case could be made that these deductions also be made available to landholders who manage land for conservation purposes. These issues are addressed in detail in a companion report: *Talking to the Taxman About Nature Conservation* (Binning and Young, 1999).

19. S23 of the *Income Tax Assessment Act 1936* lists those organisations that are exempt from income tax. Most of the organisations qualifying for an exemption would also qualify for an exemption from rates and land tax.

5. The magnitude of rates and land taxes

Up until this point the magnitude of rates and land taxes has not been discussed. It is important to consider the potential size of rate and land tax payments in order to be able to make a judgement on the potential impact of these taxes on a landholder's decision whether to manage areas of remnant vegetation for nature conservation. The significance of the potential impact is critical to determining what policy actions may be appropriate.

The following factors affect the size of rates and land taxes:

- *Rate as a percentage of land value:* rates are generally levied at a rate of between 0.2% and 10% of the value of land.
- *Land tax as a percentage of land value:* land tax is levied at the rate of between 0.1% and 5% of the value of the land.
- *Land value:* land values are in the range of $50 to $10 000 per hectare in rural regions and from a nominal value to several million dollars in urban areas.
- *Size of the remnant:* remnant native vegetation can range in size from a significant block of urban bushland less than 1 hectare to larger areas of native bushland of several thousand hectares.
- *Income tax:* if rates and land tax are not deductible, the cost increase associated with these charges is between 127% and 194%.

Each of these factors cannot be considered independently as the actual size of the rate payment is influenced by the multiplication of the rate, land value and the size of the remnant. For example, rates are levied at 11% in Rand NSW but most unimproved land values are less than $1500, meaning that most ratepayers are on the minimum payment of $160. In contrast, rates are levied at a rate of 0.4% in Hornsby but average land values are in the order of $123 000, meaning that average rates, including a $129 base amount, are approximately $633 (Patricia Mann, NSW Department of Local Government, pers. comm., 1998). Furthermore, the wide variation in land values and hence rates and land tax payments means that generalisations about their impact cannot be easily made.

In the remainder of this section the significance of rates in different regions is reviewed by evaluating the impact of rates in rural areas and in urban areas before drawing some general conclusions.

5.1 Magnitude of rural rates

Rates in rural regions vary enormously, mostly because the value of land varies considerably. Based on the figures outlined above, rates could vary between $0.10 and $1000 per hectare. However, it can be expected that the majority of rural rates would lie in a fairly tightly clustered group towards the lower end of the spectrum. For example, the following are examples of rates in three different shires:

- Dumbleyung Shire (WA Wheatbelt): $2.26 per hectare/ $113 for 50 hectares
- Yass Shire (NSW): $10.00 per hectare/ $500 for 50 hectares
- Urana Shire (NSW): $1.50 to $4.00 per hectare/ $75 to $200 for 50 hectares.

Most rural land is not subject to land tax as it qualifies for an exemption under primary producer status.

However, there are extreme cases where land is valued highly because of its development potential. For example, we are aware of a situation in Miriam Vale Shire in northern Queensland where there are two blocks of land of similar market value:

- one, approximately 40 hectares, is used for primary production and valued on the basis of its current use as a commercial farm at $28 500, and

- the other, approximately 20 hectares, is not used for primary production and is valued on the basis of its development potential (pers.comm., 1998).

Rates in the shire are 1.62% and the rate of land tax in Queensland is $1895 plus 1.2% of the excess value over $200 000. Differential rates are payable depending upon whether or not the area is being used for primary production and whether it is a primary place of residence. Final cost also depends on whether or not it is payable in before or after-tax dollars. After-tax dollars are those that people use for their own purposes – their disposable income. In this scenario, based on the Miriam Vale Shire rates the following levels of rate would apply.

This case is interesting from two perspectives. Firstly, it demonstrates that rates and land tax may be a highly significant impediment to managing land for nature conservation in some rural regions. In the situation outlined above, the owner is likely to be driven to develop the land in order to either gain access to exemptions and/or an ability to earn income from the land in order to pay rates and land tax. Secondly, the contrast between the two blocks is so large, with the comparison of $462 and $12 709 in rate and land tax payments. In this case the differences in rating burden are created by (in order of significance):

- the discount in valuation caused by the land used for primary production being valued only on its value as farm land
- the liability to pay income tax on income earned to pay rates and land tax, and
- the liability to pay land tax.

It is clear that this is an extreme case concerning vacant land with high development potential. However, it is also clear that in the absence of incentives from rates and land tax, blocks such as these will face strong pressures to be developed. Blocks like this tend to be co-located near existing urban centres and their removal from the conservation estate has significant collective impact.

5.2 Magnitude of urban rates

In urban areas or areas subject to development pressures the significance of rates and land tax increases. Firstly, there are many more landholders over which the rate burden can be shared. Secondly, each block of land is much smaller, meaning that several blocks of land may be required to conserve a small remnant or to secure the conservation of a bushland corridor. Residential rates for a number of metropolitan councils in NSW are outlined below (NSW Department of Local Government, 1998):

- Ku-ring-gai Council – $700
- Liverpool City Council – $530
- Lake Macquarie City Council – $478.

Table 5.2 summarises the rates payable on a property in Lake Macquarie.

Table 5.1: Example of costs of rates and land tax on a 40-hectare block on the Queensland coast

	Land value	Rates	Land tax	Total rates and tax payable	Taxable income required to be earned to pay rates and taxes
Primary producer	$28 500	$462	$0	$462	$462
If non-primary producer	$250 000	$4 050	$2 495	$6 545	$12 709
If principal place of residence	$250 000	$4 050	$0	$4 050	$7 857

Table 5.2: Rates and land tax on a typical urban property in Lake Macquarie

	Land value	Rates	Land tax	Total rates and tax payable	Taxable income required to be earned to pay rates and taxes
No land tax	$65 000	$597	$0	$597	$1 170
Subject to land tax	$65 000	$597	$1 302	$1 899	$3 722

Despite the relatively modest value of the land, the cost of rates may be quite high. In this case the most significant factors are whether the land is subject to land tax and the compounding effect of income taxation.

5.3 Magnitude of land tax

Land tax varies depending on the value of land, with the marginal rate of tax increasing as the value of non-exempt land owned by an individual increases. Land tax is generally payable on the total value of all eligible land owned by a taxpayer. Most land is exempt from land tax (see Section 4.1). Table 5.3 summarises the rate of land tax in each State. It can be clearly seen that land tax is most relevant for highly valued properties (CCH Tax Editors, 1998).

5.4 Summary of the impact of rate rebates

It is clear that the impact of rates and land tax on a landholder's financial position will vary considerably depending on where in Australia they are located. Hence the expected impact of changes in policy surrounding rates and land tax will vary considerably.

It is possible to consider three broad classifications of landholdings.

1. *Remote rural sites.* In most broad-acre rural regions, rates are likely to be modest, with most lying in the range of $2 to $25 per hectare, creating a payment of between $100 and $1250 for a large remnant of 50 hectares. In these regions a rebate on rates and land tax is only likely to offer a relatively modest incentive. The impact of rate rebates in these regions will depend on their symbolic impact to act as a catalyst to reinforce the existing motivations of landholders.

2. *High opportunity sites.* In some regions land values and hence rates and land taxes are likely to be high. For example, in the Queensland case cited above they are $635 per hectare. This will occur where the development pressures are high, for example, where there is urban development potential or high value agricultural commodities such as sugar cane or wine grapes can be produced. In these areas a rebate on rates and land tax will not serve to compensate landholders for forgone development opportunities. However, access to a rate rebate will do a great deal to offset the direct annual costs of managing land for conservation.

3. *Urban sites.* Urban rates are high relative to the size of the land, lying in the range of $500 to $1000 for an average urban block. It is likely that conservation management would need to occur over a relatively large number of adjoining blocks to deliver a good conservation outcome, for example, by maintaining a wildlife corridor. As is the case with other high opportunity cost sites, a rate rebate will not compensate for forgone development opportunities. It will, however, provide relief from annual payments and, if used in conjunction with a binding conservation agreement or rezoning, offer landholders the opportunity to protect land from development pressures in the longer term.

Table 5.3: Rates of land tax by State

State	Land tax payable above land value	Rate
NSW	$160 000	100 + 1.85% of excess over $160 000
Vic	$85 000	0.1% rising to 5.0% for property valued in excess of $2 700 000
Tas	$1 000	0.75% rising to 2.5% for property valued in excess of $500 000
SA	$50 000	0.35% rising to 3.7% for property valued in excess of $1 000 000
WA	$10 000	0.15% rising to 2% for property valued in excess of $1 100 00
Qld	$0	0.2% rising to 1.8% for property valued in excess of $1 500 000

In summary, the impact of rates and land tax are likely to be most significant in urban areas and those regions facing high opportunity costs from competing land use opportunities. It might be concluded that because rates and land tax only represent a small proportion of total land value, incentives of this kind will do little to alter the development decisions of landholders within these regions. Indeed, this conclusion holds true under an assumption of profit maximisation.

However, such an incentive is likely to provide encouragement to landholders with a strong conservation ethic who own or purchase land for lifestyle reasons. Such land purchasers could be described as philanthropic, in the sense that they manage land for conservation despite the option of more profitable development. In these cases relief from rates and land tax may be a significant incentive as the annual ongoing cost of owning land may be significantly reduced.

As has been discussed, many of Australia's most vulnerable and fragmented ecosystems are located on the coastal zone and face strong development pressures (Hamilton and Cocks, 1996). Further, many of the gaps in the public reserve system are located in regions where there are either high development pressures or highly fertile soils (Pressey, 1995). These communities occur almost exclusively on private land. For example, the conservation of rainforest remnants in south-east Queensland requires active cooperation of private landholders (World Wildlife Fund, pers. comm., 1998). In the absence of government fully compensating landholders or acquiring key sites, a strong case can be made to provide incentives such as rate rebates that encourage philanthropic investment.

In other regions, rate rebates will only have a very modest impact on the financial position of landholders. In these rural regions it is unlikely that a rebate on rates will, in itself, lead to a significant increase in conservation management. Rebates will have a stronger chance of success if used in conjunction with a broader suite of incentive-based measures. However, the symbolic impact of rate and land tax incentives will also need to be considered. To address the case where rates payable on a significant remnant are negligible, it is recommended that a rebate of $250 be provided. This would ensure that a small incentive is always present. The logic is somewhat similar to that of having minimum rates for land that is of a low value.

The research undertaken for this report has enabled the general categories of landholdings outlined above to be developed. An important next step is to identify those regions in which rate and land taxes are most likely to play a significant role in the management decisions of landholders.[20] This would enable the policy options identified in this report to be more effectively targeted.

20. The Queensland Department of Natural Resources is currently undertaking a project to address this issue for Queensland (Bill Hall, Queensland Department of Natural Resources, pers. comm., 1998).

6. Discussion and costings

6.1 Summary of draft policy options

In this report the impact of annual land rates and land tax on the incentive to conserve native vegetation has been evaluated and a number of policy options put forward to address the issues, anomalies and exemptions which have been identified.

In the first section of the report, the basis for valuation was discussed and only limited opportunities for policy reform identified. We have not identified any specific policy options that require fundamental reform to the valuation system. This is because the comparison of different valuation methods against the benchmarks of tax neutrality, environmental impact, equity, and investment and development failed to identify a single preferred method of valuation. This is because valuation methods work in opposite directions for different objectives, with the unimproved value providing positive incentives for development and the capital improved value superior from the perspective of vegetation conservation. For this reason it is recommended that individual jurisdictions and local councils determine the most equitable way to share the rate/tax burden (draft policy option 1) within their local region.

The more significant policy options focus on providing a series of exemptions or special arrangements for land that is of high conservation value. The proposals have been developed in a manner that is consistent with the principles that have guided concessions for other public services, for example, exemptions provided to education, religious and charitable organisations. Finally, it has been shown that the availability of concessions will have the strongest impact in urban areas and in rural areas where the opportunity costs for conservation are highest.

In this section the policy opportunities identified in the report are summarised and the costs of implementing a rate rebate program evaluated. The capacity to implement each of the policy options varies between the various levels of local government. Table 6.1 summarises the key options against the level of government responsible for administering them.

In terms of the magnitude of the incentive created, the most significant reforms that could be made are providing exemption from rates and land tax (option 3); extending provisions for land to be valued on the basis of its current use (options 7 and 8); and providing deductions for rates and land tax payments for income tax purposes (option 9).

Table 6.1: Summary of draft policy options

Jurisdiction	Draft policy options
Commonwealth	Allow rate and land tax payments to be deducted from the income of landholders who enter into legally binding conservation agreements *(option 8)*. Establish and fund education programs to ensure that land use restrictions relating to retention of native vegetation are taken into account in land valuation *(option 4)*.
State	Exempt from rates and land tax all land that is covered by a legally binding conservation agreement *(option 2)*. Extend provisions that allow high conservation value land to be valued on the basis of its current use – conservation – rather than on the basis of its development potential *(options 6 and 7)*. Ensure site value is used in preference to unimproved value for valuation purposes *(option 1)*. Ensure that legally binding conservation agreements are recorded on files and taken into account in land valuation *(option 5)*.
Local councils	Use differential rating to ensure land of high conservation value, which is appropriately zoned, qualifies for the lowest rural rate *(option 3)*.

These reforms are the responsibility of all levels of government, with each level able to make a significant contribution in its own right. While a coordinated approach is to be strongly preferred, inactivity on the part of one level of government should not be used as an excuse for delay by the other. In the absence of Commonwealth and State government activity, councils in all jurisdictions should be able to use differential rates to get much the same effect. The legal capacity of local councils to provide rate rebates is addressed in detail in a separate report, *Opportunity Denied* (Cripps, Binning and Young, 1999), that evaluates the legal capacity of local governments to use a wide range of financial incentives.

6.2 Costs of rates and land tax incentives

If incentives for land tax and rate rebates are to be provided, it is important to understand what the potential costs and benefits of such rebates might be and who should bear the costs of these incentives. In this subsection we evaluate:

- what the expected uptake by landholders of rate and land tax incentives would be
- who should bear the costs of any rate rebate program, and
- how cost-effective rate and land tax incentives are likely to be in meeting conservation objectives.

Likely uptake and costs of a program

The potential costs of a rate and land tax concession program will depend on both the average cost of providing a rate and land tax concession and the uptake of the concession by landholders. As will be discussed below, the cost of any individual rate incentive is likely to be low and the costs of any program modest in the initial years as uptake of voluntary conservation programs tends to be relatively slow.

Uptake rates

It is very difficult to estimate the uptake of voluntary conservation programs as they are relatively untested in Australia.

One way of approaching this issue is to ask what the ultimate objective of a rate rebate program should be? If a program promoting off-reserve conservation was highly successful over a 20-year time frame, it may aim to have 5% of rateable property within a council area managed for maintaining native vegetation. The figure of 5% is derived from off-reserve conservation contributing approximately half of the land required to meet the objectives of a comprehensive, adequate and representative network of conservation areas (Australian and New Zealand Environment and Conservation Council, 1997).

By extrapolation, a program at this scale would eventually create a loss in rate revenue to local councils of about 5% of total local government rate revenue, about $276 million per annum nationally (National Office of Local Government, 1997), and an unknown cost in terms of forgone land tax. While this figure sounds high, a rise of 5.26% in average rates across the community would cover the cost.

However, in the context of the next five years, the scenario outlined above is fanciful. Initially rate and land tax incentives are likely to promote only a modest increase in off-reserve conservation. This is because the majority of the policy options put forward in this report require that landholders enter into a legally binding conservation agreement.[21] Existing programs promoting conservation agreements tend to indicate that these programs are slow to get established, with uptake increasing over time. Some examples of uptake include the following.

- The Victorian Trust for Nature has 249 conservation agreements/covenants covering over 10 000 hectares of high conservation value habitat. The trust has operated for over 20 years; 31 new agreements were entered into the last

21. The use of conservation agreements is reviewed in a separate report, *Motivating People* (Binning and Young, 1997a).

year. The trust offers no financial incentives to enter conservation agreements (Trust for Nature, 1997).

- The Queensland Parks and Wildlife Service has negotiated 30 Nature Refuge agreements over a number of years. Experience in Queensland has demonstrated that it may be difficult to secure agreements in areas where land values and hence rates and land taxes are high (Queensland Department of Environment, pers. comm.).

- The NSW Voluntary Conservation Agreement program secured approximately 50 agreements in its first two years of operation.

- Brisbane City Council and Cooloola Shire Councils both negotiated about 30 agreements in the first year of a rate rebate scheme. Both noted that it was a full-time job to negotiate 30 agreements over the course of a year (Brisbane City Council/Cooloola Shire Council, pers. comm., 1998).

Other councils such as Bendigo Shire have experienced difficulty in generating interest in a rate rebate scheme.

These figures show that uptake rates of conservation agreements are quite slow, although incentives offered to date have been modest. Anecdotal evidence shows that the following factors have the most significant impact on uptake rates.

- *Staffing levels* – Because the negotiation of conservation agreements is fairly resource-intensive, the capacity to negotiate agreements is limited by staffing levels. For example, the Victorian Trust for Nature employs six part-time regional officers who are responsible for negotiating agreements with landholders. If their time was increased, they believe that the volume of agreements would also increase.

- *The degree of targeting* – That is, the extent to which only sites of high conservation value are accepted by the organisation (see below).

- *The financial and other incentives* made available to landholders who enter into an agreement – entering into a legally binding conservation agreement is a significant commitment. With the exception of South Australia, strong incentives are not offered to people who enter into conservation agreements. Without empirical research it is difficult to make a judgement on the impact that formal tax incentives will have. In South Australia, incentives that were equivalent to the market value of land were paid for landholders to enter into conservation agreements at a cost of approximately $70 million.

If additional program support and tax incentives for entering into conservation agreements are introduced, there will undoubtedly be a significant increase in the number of agreements negotiated. Developments in a number of jurisdictions suggest that the number of agreements negotiated in the next 5 to 10 years is likely to increase significantly.

- As an outcome of the Regional Forest Agreement in Tasmania, processes for entering into binding conservation agreements with landholders are currently being developed, with an incentives budget of $30 million.

- The recent enactment of the *Native Vegetation Conservation Act 1997* in New South Wales allows for the negotiation of property agreements as a key mechanism for delivering sustainable native vegetation management, with a budget of $15 million.

- The Department of Conservation and Land Management and the National Trust in Western Australia are currently developing programs for entering into legally binding conservation agreements.

- A number of local councils, such as Brisbane City Council, Cooloola Shire Council and Melton Shire Council, have developed conservation agreement programs that involve rate incentives.

A generous assumption would be that each new scheme introduced would successfully negotiate 30 agreements in each of their first three years of operation. Hence the limiting factor in the uptake of

the program would be the need to initiate and support programs to negotiate a formal conservation agreement and provide ongoing support in future years of the program.

The uptake of other options identified in this report, such as basing valuation on existing use rather than on land's development potential, are harder to estimate. As discussed above, these could have a significant impact on the valuation of land. However, the availability of this option would depend on the council identifying the land as conservation land (option 7) or the landholder applying to have their land revalued (option 8). Criteria relating to the regional or local conservation value of the land would also have to be defined and met. It is assumed that the uptake of these options would also be at a similar rate to entering into conservation agreements. Further, a conservative assumption is used that the costs to rates and land tax of a revaluation would be similar to that of a complete exemption from rates.

Cost of agreements

Based on the discussion of the magnitude of rates and land taxes in Section 5, it is clear that providing an exemption from rates and land tax is likely to vary depending on the region and type of land. The categories of landholding – urban, rural and high opportunity cost – are used to provide the basis for the costings presented below.

Because of the variability in the cost of rates and land tax, perhaps the most useful approach would be to identify the likely costs to councils in each of the three categories of landholding identified in providing rate and land tax incentives. The costings are covered by the following assumptions:

- Thirty agreements are negotiated by each council program each year, rising to a total of 90 agreements after three years.
- The average cost of a rural rebate is $15 per hectare or $450 per agreement, based on the average size of a remnant of 30 hectares (based on Victorian Trust for Nature's experience).[22]
- The average cost of an urban agreement is $1000, covering one hectare. [23]
- The average cost of agreements in high opportunity cost regions is $3000, based on 50% costing $5000, including land tax, and 50% costing $1000.
- The program is supported by one full-time qualified extension officer at a cost, including on-costs of $75 000 per annum.

Under these scenarios the costs set out in Table 6.2 would be expected. The costs in the first three columns represent the annual cost to rates. As more agreements are negotiated, the annual cost to revenue will also rise.

Table 6.2: Estimated cost of rate rebate scheme to different categories of council

	Year 1 (30)	Year 2 (60)	Year 3 (90)	Total cost to revenue	Cost of extension officer	Total 3-year cost
Rural councils	$13 500	$27 000	$40 500	$81 000	$225 000	$316 000
Urban councils	$30 000	$60 000	$90 000	$180 000	$225 000	$405 000
High opportunity cost councils	$90 000	$180 000	$270 000	$540 000	$225 000	$765 000

22. See Binning and Young (1999).

23. Brisbane City Council management agreement scheme is generous, offering $1000 to $1500 on an annual basis.

The most interesting thing to note from these calculations is that the most significant component of the cost of these programs is the cost of an extension officer who is responsible for supporting the program and negotiating conservation agreements with landholders. It is important to note that there are already a significant number of community conservation officers located within local government. Further, a rate rebate program could be integrated with existing State and/or regionally based extension programs such as 'Land for Wildlife' and 'Bushcare Support', potentially reducing the need to employ additional staff. However, to be effective, resources would have to be specifically devoted to negotiating conservation agreements and providing ongoing support to these agreements.

An important caveat relating to the costings is that they can only be expected to act as a rough guide to councils. As has been noted, the size of the rate concession will depend on the average size of remnants, land value, and the rate as a percentage of land value. Hence the costings represent a guide of the likely average rather than a definitive costing for any particular local government area. To derive a more accurate estimate, local councils would need to review the area of native vegetation likely to be eligible for a rate rebate and the average value of those lands from the land valuation rolls.

It is also interesting to speculate what the cost of a land tax and rate concession program would be at a national scale. The following table indicates the costs of a national program based on different numbers of participating councils and assuming the distribution of participating councils between the categories is as follows: rural (40%), urban (40%) and high opportunity cost (20%).

It should be noted that the scenario presented in Table 6.3 is extremely generous and makes allowance for a higher proportion of agreements coming from highly valued land than lower valued land. The number of hectares conserved is constrained by the assumption that 40% of the agreements are in urban areas with an average size of one hectare. Also, while it is assumed that a proportion of land would be subject to land tax, it is likely that most agreements would occur on land that would not be subject to land tax. However, the estimates form a useful basis for considering the highest potential cost of providing rate and land tax rebates in the next three years.

The estimated costs do not address the ongoing costs associated with providing rate rebates and land tax exemptions beyond three years. Continuing payments and extension support would be required to secure conservation outcomes in the longer term (see Binning and Young, 1997a). The issue of meeting ongoing costs is addressed in the next subsections.

Such a national program would be a major undertaking of governments at all levels and would increase the extent of formally recognised off-reserve conservation in Australia by at least two to four times. The number of legally binding conservation agreements, including South Australia with in excess of 1000, is currently less than 1500 nationally (Binning and Young, 1999).

Table 6.3: Estimated costs of a national rate and land tax incentives program

Number of councils	Cost to revenue (excluding extension)	Costs (including extension√)	Total number of agreements	Hectares conserved
10	$2 124 000	$4 374 000	900	16 380
20	$4 248 000	$8 748 000	1 800	32 760
30	$6 372 000	$13 122 000	2 700	49 140
40	$8 496 000	$17 496 000	3 600	65 520
50	$10 620 000	$21 870 000	4 500	81 900

Cost sharing – who should pay?

An important question is who should bear the costs of providing rate and land tax incentives. Two broad strategies for recovering the costs of rate incentives can be envisaged:

- the relative rate at which other properties are rated is increased marginally so as to offset the small number of properties benefiting from rebates/exemptions on rate and land tax, or
- the council, State, or Commonwealth government forgoes revenue to directly fund a rebate scheme.

In an earlier report, *Motivating People,* Binning and Young (1997, page x) recommended that:

> Commonwealth and State governments could encourage local governments to provide rate rebates for land covered by a legally binding conservation agreement that provides for vegetation conservation.
>
> - A five year program to supplement costs to local government could be established. 100% supplementation could be provided in the first 2 years, decreasing by 33% each year thereafter; and
> - Following this transition, rate rebates could be built into the rating base of local governments by reviewing the basis for land valuation and rating.

The rationale behind this recommendation is that to be consistent with the principles of the Commonwealth's Natural Heritage Trust, the Commonwealth should use funding as a catalyst to promote innovative natural resource management programs but not have any ongoing liability after the (five-year) life of the program. The idea was that local councils could use differential rating to provide incentives at no net cost to revenue by raising rates across the whole community by a small margin approximately equal to the percentage of rateable land covered by a conservation agreement within a given local government area.

All other things being equal, this would appear to be a fair arrangement. Cost-sharing arrangements on the basis of the beneficiary pays principle are increasingly being accepted as the basis for providing incentives to landholders for sustainable land management. Under this principle each stakeholder contributes to the extent they benefit from a particular action. In the context of vegetation conservation, beneficiaries could be categorised into the following groups:

- *individual landholders:* who may benefit in terms of increased on-farm productivity, maintenance of land value and so on
- *catchment:* in terms of broader catchment objectives such as management of water recharge, sedimentation and nutrification of water courses and landscape amenity, and
- *broader community:* in terms of societal or public objectives including the protection of biological diversity.

In the case of local government funding there is a *prima facie* case that councils fund those benefits that are consumed at the catchment scale. Given a range of incentives for sustainable natural resource management, it could be argued that local government should fund rate rebates as their contribution to a broader suite of incentives offered across all levels of government.

This arrangement is appropriate if local governments have the capacity to raise adequate revenue to meet the costs of introducing rate incentives. However, there is considerable evidence that many local governments are tightly constrained in their ability to raise funds for new activities. Binning, Young and Cripps (1999), Osborn (1998) and the National Office of Local Government (1997) all point to the fact that there is a vertical imbalance between the revenue-raising capacity of local and State and Commonwealth governments, with local government least able to fund new or discretionary activities. In this environment it is unlikely that councils will take up concession and incentive programs in the absence of a secure additional source of funding.

In urban environments, where many residents can offset the costs of a few conservation incentives, the case for local government funding would appear

quite strong. However, in remote rural communities, which are more dependent on grant funding, the ability of councils to cross-subsidise conservation activities is more constrained. In these cases there may be a case for ongoing Commonwealth funding, either in the form of a tied grant or through appropriate increases in untied Financial Assistance Grants.

Cost-effectiveness of rate and land tax incentives

It is also difficult to judge the cost-effectiveness of a scheme of this kind. If it is assumed that rates lie in the range of 0.2% to 3% of the unimproved value of land and land taxes in the order of 2% to 4% at their highest rate, a combined cost in terms of forgone revenue would be in the range of 0.2% to 7% of the unimproved value of the land. This range is very large and, once again, the majority of remnants could be expected to be found in the lower part of the range.

The only secure alternative to cooperative management through a binding conservation agreement is to acquire the land. This would involve enormous upfront costs, particularly in urban areas. An equivalent acquisition program would have an upfront cost in excess of 10 times the cost of voluntary conservation through rate and land tax incentives. At the same time revenues from rates and land tax would still be reduced by the same amount, as publicly owned lands are not generally subject to rates and land tax. Further, ongoing management costs would also have to be borne by governments. In these cases, councils would also require a mechanism to offset revenue losses.

However, the choice between acquiring a key site and entering into a conservation agreement is not a simple one to be guided by cost-effectiveness alone (Bowers, 1997). Conservation agreements are much more cost-effective and may be more effective if good management arrangements are put in place. However, conservation of these areas is not costless and requires substantial voluntary contributions from the landholder and an ongoing commitment from government to support management activities and to ensure compliance with the conditions of the conservation agreement (Binning and Young, 1997a).

Rate and land tax incentives for voluntary conservation would not replace the need for other conservation programs. In particular, incentive programs for off-reserve conservation will effectively complement acquisition programs for larger areas of outstanding national significance for national parks, where the most secure arrangements for ongoing management are required.

The benefits of a voluntary incentive-based approach is that, if carefully targeted, it can provide the basis for conserving many ecosystems that are predominantly found on private land, where the public reserve network is unlikely to ever be comprehensive, adequate and representative. As such, they represent a cost -effective means of promoting conservation in these areas.

7. Conclusion

7.1 The significance of rate rebates and land tax incentives

At the beginning of this report it was noted that rates and taxes on land have both a financial and symbolic impact on a landholder's willingness to conserve native vegetation. The preceding sections demonstrate that for most landholders a rate and land tax rebate will be modest and certainly less than $1000 per annum.

However, the symbolic impact of a rate and land tax rebate should not be underestimated. A landholder willing to voluntarily manage land for conservation, at a considerable opportunity cost, may be put off by governments who are unwilling to share the costs of doing so. A concession on rates and land tax may not be large in terms of the value of land, but it may represent a large proportion of the annual cost of managing land for conservation. Annual costs will be a major consideration for landholders motivated to philanthropically invest in nature conservation. This principle probably underlies why rate rebates are so consistently raised by stakeholders as a critical issue in promoting nature conservation.

Another issue worthy of consideration is whether the incentive provided by a rate rebate is high enough. The economically rational answer is no, because this falls well short of opportunity costs. Elsewhere it is argued that larger payments may be justified for sites of unique conservation value (Binning and Young, 1997a). However, a payment of at least $250, as recommended, will provide at least small financial recognition to the landholder.

A minimum payment of $250 has been recommended to avoid the situation of entering into a complex agreement for a very small incentive. We believe that this is the lowest rate rebate that will have a significant impact. Raising the minimum annual rebate to $500 or $1000 would probably increase the uptake of conservation agreements significantly. Another approach would be to use rate rebates as one of a broader suite of incentives available to landholders from all levels of government. Indeed, there is evidence that rate rebates are unlikely to be effective if used in isolation from other supporting policies (Young et al, 1996; Binning and Young, 1997a).

The analysis of the magnitude of rates has also revealed that a small number of landholders are likely to be paying extremely high rates to hold vacant land for conservation. The figure of $12 709 in the case cited on the Queensland coast is surprising. It is often argued that Australians are not charitable and that a market for philanthropic investment in conservation cannot be created as it has been in the United States. It is argued that Australia is too small, with too few wealthy individuals.

This study has revealed that there is a significant tax impediment to creating a market for conservation properties. Indeed, the incentives run the wrong way. Wealthy urban investors are much more likely to buy a lifestyle property that can be cleared for primary production and hence provide significant taxation benefits than to invest in a conservation property. The growth in 'Pitt Street Farming' in recent years indicates that a significant market for conservation land may exist near urban centres in the coastal zone where many of our most vulnerable ecological communities are located.

7.2 Proposal for a national program

In the absence of leadership and policy support from Commonwealth and State governments, it is unlikely that a wide range of local councils will implement rate and land tax incentives. Local governments have consistently indicated that they are unwilling to undertake new tasks associated with native vegetation in the absence of policy and financial support.

In our earlier work we identify that:

> Local governments are strongly of the view that increased levels of funding are required if they are to play an effective role in vegetation management. Key concerns raised include:

- councils do not have the staff to undertake the tasks associated with vegetation management
- State governments are increasingly devolving responsibilities to both local government and new regional agencies without resources to support or to maintain them
- a range of support services previously supplied by State governments are now only provided on a cost recovery basis, and
- councils are reluctant to introduce new programs that are going to lead to ongoing liabilities, such as managing areas of land acquired by local government for biodiversity conservation or maintaining an incentive scheme once Commonwealth/State funding ceases.

(Binning, Young and Cripps, 1999)

There is a strong case for Commonwealth and State government leadership. The case is strong, as in the absence of reforms in this area there will continue to be significant financial impediments to philanthropic investment, particularly in high value ecological communities near urban centres and on the coastal zone.

In summary, the following program will facilitate philanthropy rather than preventing it.

Draft policy option 9

The Commonwealth government set aside $5 million over three years to fund a rate and land tax rebate scheme based on the policy options identified in this report. Local councils would be funded on the following basis:

- twice the cost of providing a rate rebate would be reimbursed to provide a positive incentive to participate in the scheme and offset some of the costs of administration and extension support
- provided criteria relating to the conservation value of the land are met, a minimum rate rebate provided would be $250, irrespective of the size or land value of the remnant
- within three years, councils, in cooperation with State and Commonwealth government, would develop processes for incorporating the costs of rate rebates in the rating or (in the case of remote rural councils) general grant structure of participating councils, and
- State governments would bear the costs of forgone land tax revenue.

8. Bibliography

Australian Local Government Association (ALGA) (1996), *Rate Rebate Incentives of Sustainable Land Use,* Discussion paper, ALGA, Canberra.

Australian and New Zealand Environment and Conservation Council (1997), *Interim Scientific Guidelines for the National Reserve System,* Environment Australia, Canberra.

Bates, G (1995), *Environmental Law in Australia*, 4th edn, Butterworths Australia.

Binning, C E (1997), 'Beyond reserves: Options for achieving nature conservation objectives in rural landscapes', in Klomp, N and Lunt, I, (eds) *Frontiers in Ecology: Building the Links,* Elsevier Science, Oxford.

Binning, C E and Young, M D (1997a), *Motivating People: Using management agreements to conserve remnant vegetation*, Paper 1/97, National R&D Program on Rehabilitation, Management and Conservation of Remnant Vegetation, Environment Australia, Canberra.

Binning, C E and Young, M D (1997b), 'Biodiversity: Incentives and local government', Paper to Pathways to Sustainability International Conference, Newcastle.

Binning, C E and Young, M D (1999), *Talking to the Taxman about Nature Conservation: Proposals for the introduction of tax incentives for the protection of high conservation value native vegetation*, National R&D Program on Rehabilitation, Management and Conservation of Remnant Vegetation, Environment Australia, Canberra.

Binning, C E, Young, M D and Cripps E (1999), *Beyond Roads, Rates and Rubbish: Opportunities for local government to conserve native vegetation*, National R&D Program on Rehabilitation, Management and Conservation of Remnant Vegetation, Environment Australia, Canberra.

Bowers, J (1997), *Policy Instruments for the Conservation of Remnant Vegetation: A British perspective,* CSIRO Wildlife and Ecology Working Document, Canberra.

Brisbane City Council (1997), *Voluntary Conservation Agreement Policy,* Unpublished paper.

Campbell, A (1996), *Regionalism, Regionalisation and Natural Resource Management,* Centre for Resource and Environmental Studies Working Paper, Canberra.

CCH Tax Editors (1998), *Australian Master Tax Guide*, CCH Australia Limited, Sydney.

Commonwealth of Australia (1992), *National Forest Policy Statement,* 2nd edn, Australian Government Publishing Service, Canberra.

Commonwealth of Australia (1996a), *The National Strategy for the Conservation of Australia's Biological Diversity,* Commonwealth Department of the Environment, Sport and Territories, Canberra.

Commonwealth of Australia (1996b), *State of the Environment Australia 1996,* Commonwealth Department of the Environment, Sport and Territories, Canberra.

Commonwealth of Australia (1997), *Natural Heritage Trust: Guide to community group applications 1997–98,* Environment Australia, Canberra.

Cripps, E, Binning, C E and Young, M D (1999), *Opportunity Denied: Review of the legislative ability of local government to conserve native vegetation*, National R&D Program on Rehabilitation, Management and Conservation of Remnant Vegetation, Environment Australia, Canberra.

Hamilton, N and Cocks, D (1996), 'Coastal growth and the Environment', in Newton, P W and Bell, M, *Population Shift: Mobility and change in Australia,* Australian Government Publishing Service, Canberra.

Heycox, J, Meadows, P and Vernon, B, (1977), *Measuring Environmental Expenditures and Revenues in Local Government: Report on a pilot project with 21 local governments in Australia,* Environment and Energy Statistics section, Australian Bureau of Statistics, The Australian Centre for Regional and Local Government Studies, University of Canberra, ACT.

Howard, B and Young, M D (1995), 'Can Australia afford a representative reserve network by 2000?' *Search,* Vol. 27, No. 1: 22–26.

Industry Commission (1997), *A Full Renewing Lease: Inquiry into ecologically sustainable land management – Draft Report*, Industry Commission, Melbourne.

Land and Water Resources Research and Development Corporation (1996), *Sustainable Management of Natural Resources: Who benefits and who should pay,* (LWRRDC) Canberra.

Mary Maher and Associates and Ecograph (1997), *Gold Coast City: Nature conservation strategy*, Gold Coast City Council, Gold Coast.

McNeely, J A (1988), *Economics and Biological Diversity: Developing and using economic incentives to conserve biological resources,* ICUN, Gland Switzerland

National Office of Local Government (1996), *Local Government National Report*, Australian Government Publishing Service, Canberra.

National Office of Local Government (1997), *1996–97 Report on the Operation of the* Local Government (Financial Assistance) Act 1995, Commonwealth of Australia, Canberra.

Nobel, A (1997), *Local Government and Landcare Series – Mechanisms for local government to finance Landcare*, Western Australian Municipal Association, Perth.

NSW Department of Local Government (1998), *Comparative Information of New South Wales Local Government Councils*, Department of Local Government, Sydney.

OECD (1995), *Biological Diversity: Economic incentive measures for conservation and sustainable use,* Group on Economic and Environment Policy Integration, Expert Group on Economic Aspects of Biodiversity, Paris.

Osborn, D (1997), *A Rationale and Approach for Applying Environmental Accounting Frameworks in Local Government,* The Australian Centre for Regional and Local Government Studies, University of Canberra, ACT.

Osborn, D (1998), *Building Bridges with Green Beans,* Draft report, Australian Centre for Regional and Local Government Studies, University of Canberra, ACT.

Osborn, D, Burritt, R and Vernon, B (1988), *Applying an Environmental Accounting Frameworks During a Period of Local Government Reform in Australia,* The Australian Centre for Regional and Local Government Studies, University of Canberra, ACT, Australian National University, Australian Bureau of Statistics.

Pressey, A (1995), 'Conservation Reserves in NSW: Crown jewels or leftovers', *Search,* Vol. 26, No. 2., March.

Savage, S and Hart, A (1993), 'Environmental Economics: Balancing equity and efficiency', Paper to 1993 Environmental Economics Conference, Commonwealth Department of the Environment, Sport and Territories, Canberra.

Sproats, K and Kelly, A (1998), *The Role of the Local Government in Natural Resource Management,* Discussion paper, prepared for Local Government and Shires Associations of NSW.

Tasmanian Government (1998), *Strategic Plan for the Private Land Component of the CAR Reserve System,* Department of Primary Industries, Water and Environment.

Thorman, R (1996), *Landcare/local government link*, Unpublished paper, Australian Local Government Association, Canberra.

Tinbergen, I (1950), *On the Theory of Economic Policy*, Elsevier, North Holland.

Trust for Nature (1997), *Trust for Nature: Annual report,* Trust for Nature, Melbourne.

Young, M D, Gunningham, N, Elix, J, Lambert, J, Howard, B, Grabosky, P and McCrone, E (1996), *Reimbursing the Future: An evaluation of motivational, voluntary, price-based, property-right, and regulatory incentives for the conservation of biodiversity*, Department of the Environment, Sport and Territories Biodiversity Unit, Biodiversity Series Paper No. 9.

Relevant State government legislation

New South Wales

Land Tax Act 1956

Local Government Act 1993

National Parks and Wildlife Act 1974

Native Vegetation Conservation Act 1997

Valuation of Land Act 1916

Victoria

Land Act 1958

Land Tax Act 1973

Local Government Act 1989

Planning and Environment Act 1987

Valuation of Land Act 1960

Tasmania

Land and Income Taxation Act 1910

Land Tax Act 1997

Local Government Act 1993

South Australia

Land Tax Act 1936

Land Tax Act 1936–1981

Land Tax Act Amendment Act 1977

Local Government Act 1934

Valuation of Land Act 1971

Western Australia

Land Tax Assessment Act 1976

Local Government Act 1995

Valuation of Land Act 1978

Queensland

Land Tax Act 1915

Local Government Act 1993

Valuation of Land Act 1944