

**POTENTIAL EFFECTS OF SELECTED TAXATION PROVISIONS
ON THE ENVIRONMENT**

Robert Douglas
Consultancy Report

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Preface

Taxation arrangements can influence economic activity and environmental management in many ways.

In recent years, the impact of taxation arrangements on the environment, and the potential use of taxation-based measures to assist environmental management, have been considered by, among other bodies, the House of Representatives Standing Committee on Environment and Heritage, the Commonwealth Government and environmental organisations. In October 2001, the Commonwealth Government made changes to the capital gains tax treatment of payments for entering into conservation covenants, and introduced a conservation covenant tax deduction measure to provide further incentives for conservation.

To assist in further clarifying the complex interactions between taxation arrangements and environmental management, the Commission asked Robert Douglas, a taxation specialist, to examine the potential environmental impacts (positive and/or negative) of selected taxation arrangements. This followed earlier Commission research on taxation arrangements and potential constraints on private conservation of biodiversity.

This consultancy report is part of a broader Commission research program on environmental management, directed at informing community awareness and policy analysis in this important area.

The author gratefully acknowledges helpful comments on earlier drafts of this paper by Geoff Edwards, La Trobe University, and Professor John Freebairn, University of Melbourne. Further comments on the report are welcome and should be directed via the Commission's Economics and Environmental Studies Branch.

Glossary and Acronyms

Allowable deductions	Items that may be deducted from assessable income.
Assessable income	Gross income from all sources, including taxable capital gains.
ATO	Australian Taxation Office
Averaging	A method of adjusting tax paid by primary producers that attempts to ensure that primary producers with fluctuating incomes pay no more tax over a number of years than those on comparable but steady incomes.
CGT	Capital gains tax
GST	Goods and Services Tax
ITAA	Income Tax Assessment Act
Livestock election	Collectively describes several tax provisions designed to defer the taxation of income derived from abnormal disposals of livestock following drought, flood or fire.
Period inequity	The additional tax burden that may be associated with fluctuating taxable incomes.
Primary producer	A taxpayer who derives taxable income from primary production.
Primary production	Growing plants, maintaining animals, fishing and forestry activities undertaken with the intention of making a profit.
Tax expenditure	A ‘tax concession that is designed to provide a benefit to a specified activity or class of taxpayer’. Tax expenditures can be provided through tax exemptions, deductions or rebates, a reduced tax rate or by deferring a tax liability.
Taxable income	Assessable income minus allowable deductions (net income).

Tax offset	A tax measure that directly reduces tax payable (not to be confused with assessable deductions which reduce taxable income), and indirectly reduces tax payable.
Tax payable	The amount of tax payable on taxable income.
Tax rebate and/or credit	An earlier name for a tax offset.

OVERVIEW

Key points

- The design of the income tax and Goods and Services Tax regimes may influence private decisions to use land for conventional productive purposes compared to undertaking environmental management activities.
- Some taxation arrangements may have potential impacts on the environment:
 - expenditure on certain environmental management activities is only deductible from income taxation if undertaken by a business, and this may discourage private environmental activities that are not conducted for profit;
 - the definition of ‘primary production’ generally excludes activities such as conservation of biodiversity. This may discourage primary producers from undertaking these activities if they think they are not eligible for primary producer-related tax deductions;
 - the definition of ‘Landcare’ is targeted at land degradation and generally excludes other activities, such as conservation of biodiversity. This may discourage primary producers and other natural resource-based businesses from undertaking such conservation activities as they are not eligible for ‘Landcare’ tax deductions; and
 - income taxation provisions for valuing the natural increase of livestock may encourage heavier stocking of land.
- It is timely to explore these effects:
 - a broader-based assessment of current taxation arrangements would also need to consider net effects on taxation revenue, and the net environmental benefits from different policy responses;
 - taxation-based measures can assist environmental management, but are difficult to target to those environmental management projects with public benefits.
- While the report makes a contribution to understanding how these taxes work, it makes no recommendations about how they might be changed.

Overview

The income tax and Goods and Services Tax (GST) regimes and, in particular, the taxation provisions for primary producers, can have potential impacts (positive and/or negative) on the environment. This report identifies various taxation provisions that may have environmental consequences.

While the report makes a contribution to understanding how these taxes work, it makes no recommendations about how they might be changed. The report does not quantify the environmental impacts that it identifies, nor does it assess the revenue implications of any changes to tax arrangements. It also does not compare tax arrangements with alternative instruments that might be used to achieve environmental outcomes. These issues would all need to be considered as part of a broader-based assessment of the potential environmental impacts of taxation arrangements.

The primary role of the taxation system is to raise revenue to fund the general functions of government. A key objective of taxation policy is to enhance overall economic well being by increasing the efficiency of the taxation system, while promoting fairness, and continuing to raise sufficient revenue.

Taxation-based measures can be used to assist environmental management, but are difficult to target to those environmental management projects with public benefits. The consequence is that the revenue cost of taxation incentives can be high, compared to the marginal public benefits from the environmental management projects.

Tax bases and the environment

While income tax is a tax on net income derived over an assessment period, and the GST is a tax on private consumption, their tax bases have many similarities. As a rule, expenditure on the environment is not deductible from income tax, and is also subject to GST, unless it is related to the 'earning or the production of income' or a specific tax expenditure is introduced (such as a tax exemption, deduction or offset). As a result, the income tax and GST systems take limited account of potential impacts (positive and/or negative) of transactions on the environment.

Tax systems are designed to tax monetary transactions and those transactions whose costs and benefits can easily be valued in monetary terms. The result is that non-monetary costs and benefits are not generally dealt with by tax systems — they are implicitly exempt from tax.

Income tax and the environment — general provisions

Expenditure on environmental activities will only be tax deductible to the extent that the activities constitute ‘a business’ — broadly defined as an activity undertaken on a regular basis with the expectation of making a financial profit. A business conducting environmental activities would be entitled to the same tax provisions as any other ordinary business, but not necessarily to the additional tax provisions available to industry sectors, such as primary production and mining.

The recent business tax reforms and changes to the tax system may impact on the environment in two main ways. First, the non-commercial loss provisions may affect the commencement of new environmental businesses. Second, the ‘small business’ capital gains tax changes may favour land use for profit compared to private environmental activities that are not conducted for profit.

If an environmental business were to receive a grant or a subsidy to carry out capital works, there may be a timing mismatch between taxing the grant as income, and allowing depreciation deductions for the expenditure. This mismatch could arise because grants or subsidies received by a business could be taxed as income in the year of receipt, while the expenditure may be depreciated over a number of years. If the expenditure had been deductible under the provisions relating to ‘Landcare’ and conveying and conserving water, different provisions would prevent the timing mismatch.

Environmental impact of tax provisions for primary producers

Landcare

The ‘Landcare’ taxation provisions provide an incentive for farming and other businesses conducted on rural land to undertake capital works to combat land degradation. ‘Landcare’ is narrowly defined, and does not cover expenditure in other environmental areas, such as the conservation of biodiversity. The ‘Landcare’ provision may provide tax deductions for eradicating or exterminating native

animals as well as introduced species, and for the clearing of native vegetation and regrowth.

Conveying and conserving water

The taxation provisions for conveying and conserving water may have variable and unintended environmental impacts. The provisions may provide assistance to primary producers to invest in technologies that allow for more intensive use of water, such as drip irrigation. However, the provisions may also provide assistance for investments in water infrastructure which may affect the environment, such as constructing irrigation dams in catchments with inadequate environmental flows.

Viticulture and horticulture

The investment incentives for horticulture and viticulture may have little environmental impact at farm level, as one agricultural activity is substituted for another (for example, a change from pastoral land use to viticulture). However, at an aggregate level, they may have a major impact on water flows in some catchments. The provisions, in combination with those for conserving and conveying water, may have partly encouraged the recent expansion in viticultural plantings. In most cases, these plantings have resulted in the substitution of irrigated activities for non-irrigated activities. As a result, there has been an increase in the number of on-farm dams designed to harvest water for irrigation purposes, with reduced flows in some catchments.

Valuation of livestock

The provisions for valuing and taxing the natural increase of livestock may lead to overstocking with potential impacts on the environment, and discourage tactical stocking rate responses to address the impacts of climate variability.

A simple case study: the impact of taxation provisions

A simple case study is used to examine the tax implications of using a farm in three different ways: exclusively for agricultural purposes; setting some land aside for private non-profit conservation purposes; and conducting an eco-business on part of the land. The case study shows that the taxation system may encourage the use of rural land for agriculture, and discourage private environmental activities that are not conducted for profit.

The aggregate impact of tax provisions for primary producers

Having examined the potential environmental impact of specific tax provisions for primary producers, there remains the question of the potential environmental impact of these provisions in aggregate.

Most of the tax provisions discussed tend to encourage investment in primary production-related activities. Some provisions, such as those relating to 'Landcare', conveying and conserving water, and viticulture, are explicitly designed to provide investment incentives. The tax deferrals associated with the provisions for livestock valuation, and small business capital gains tax concessions, may also provide an implicit investment incentive.

One method of assessing if the tax system is providing investment incentives to the agricultural sector is to examine the amount of tax paid on income from agriculture.

The *1998-99 Taxation Statistics* show that primary production is the only broad 'small business' industry grouping with negative net business income (-\$354 million). In addition, primary producers who were listed in the 'large business' industry grouping had a net business loss of \$9.6 million. Tax payers whose main source of income is other than primary production appeared to make substantial tax losses from primary production activities. The tax losses of these taxpayers may have a cyclical components associated with adverse climatic effects and commodity price cycles, but significant tax losses also occur in other tax years.

The tax losses of primary producers whose main occupation is not primary production means that there may be little net taxable income from, and hence net tax paid by, individuals involved in primary production overall. Further research may be needed to assess why little net tax appears to be paid on agricultural activities, and possible implications for the environment.

1 Introduction

In recent years, the impact of taxation arrangements on the environment and the potential use of taxation-based measures to assist environmental management have been considered by, among other bodies, Parliamentary Committees, the Commonwealth Government and environmental organisations. For example, the Commonwealth House of Representatives Standing Committee on Environment and Heritage (2001) recommended in its report *Co-ordinating Catchment Management*:

Recommendation 24: The Committee recommends that the Government develop options for increasing the taxation incentives to participate in Landcare activities for landholders on low incomes.

Recommendation 25: The Committee recommends that the Government conduct a public inquiry into the disincentives for the ecologically sustainable use of Australia's landscape contained in the present taxation arrangements at all levels of government, and make recommendations for change, including costings.

The Commonwealth Government has progressively made changes to the taxation system to assist in conserving Australia's environment and heritage. In October 2001, the Commonwealth Government further amended the tax deduction and capital gains tax (CGT) provisions of the tax law to provide additional incentives for conservation of biodiversity. The amendments provided for two types of tax concession:

- an income tax deduction for any decrease in land value as a result of entering into a conservation covenant (provided the landowner receives no payment for entering into it); and
- where a conservation covenant is entered into, CGT provisions will apply as if it were a sale or gift of the land.

More recently, the Australian Bush Heritage Fund, Greening Australia and Trust for Nature (Victoria), have released a discussion paper proposing a range of financial and taxation measures to encourage philanthropy to benefit the environment (Steering Group on Incentives for Private Conservation 2002).

The primary role of the taxation system is to raise revenue to fund the general functions of government. A key objective of taxation policy is to enhance overall economic well being by increasing the efficiency of the taxation system, while promoting fairness, and continuing to raise sufficient revenue.

In general, taxation provisions should neither advantage nor disadvantage one sector over another (Henry 1996). The use of taxation provisions that favour one sector or activity over another may create perverse incentives and unintended outcomes. Overall, the community may be worse off with the taxation provision, than without.

The use of taxation-based measures is one method of government intervention to assist environmental management — governments can also use market-based mechanisms and/or regulation. Taxation-based measures may provide additional support for environmental management projects where the private benefits are less than the overall cost of the project.

However, it can be difficult with taxation-based measures to target any incentive to environmental management projects with public benefits. Hence, the use of taxation measures may not be as efficient, or as cost-effective, as other approaches, such as targeted grants or regulation.¹ At times, taxpayers may use the tax incentive for projects that will deliver the greatest private benefit, and not necessarily select projects with significant public benefits. The provision of a tax incentive for such a project would result in a ‘windfall gain’ to the taxpayer undertaking the project, when the project may have been undertaken anyway because of the private benefits. Further, the revenue cost of taxation incentives can be high compared to the marginal public benefits from the environmental management projects. In many cases, direct payments and grants can be more tightly targeted, allowing policy-makers to focus on those projects that deliver larger benefits to the community.

Just as caution needs to be exercised in considering new options for taxation incentives, so too is caution required in assessing proposals for winding back existing arrangements. The removal or reduction of specific taxation-based measures for primary producers may have positive environmental outcomes. However, an assessment of changes to the existing taxation arrangements would need to take into account the role of the taxation system, and the efficiency and effectiveness of taxation-based measures compared with other policy instruments.

1.1 Costs and benefits of inclusion of activities in the tax system

It is important to note that inclusion of an activity in the tax system (for example, primary production), has the dual impact of reducing both the net benefits received from the activity, and the net costs incurred in undertaking the activity. In effect, the

¹ For an individual primary producer, a \$1 tax saving derived from a tax concession is equivalent to a \$1 delivered through a direct subsidy.

tax system results in the community sharing financially both the costs and benefits of taxed activities.

If it is assumed that all the benefits and costs of an activity are financial and that there are no externalities, including an activity within the tax system will reduce the private net return from the activity if it is profitable, and increase the private net return if the costs exceed the benefits (ie reduce the private loss). The community will not only share in the gains from profitable activities, but in the losses from unprofitable activities. The corollary is that excluding an activity from the tax system will mean that the community will not share financially the costs and benefits of the activity. This may have the effect of increasing the financial costs of the untaxed activity, but it also results in untaxed benefits.

As a rule, it is undesirable for an activity to be subject to a ‘hybrid’ treatment, with either benefits being taxed with no allowance for costs, or allowing tax deductions for costs while income is exempt. Introducing a hybrid tax treatment that allows tax deductions for expenditure on improving the environment, without simultaneously attempting to tax environmental benefits, is likely to weaken the tax base.

However, few activities have exclusively financial benefits and costs, and externalities are common. Moreover, tax systems are designed to tax monetary transactions, and those transactions whose costs and benefits can easily be valued in monetary terms. The result is that non-monetary costs and benefits are not generally dealt with by tax systems — they are implicitly exempt from tax. This means that non-monetary benefits received, such as the use of a beach or the enjoyment of a vista, are not taxed. Similarly, it means that tax deductions are not allowed for expenditures that are unlikely to result in monetary gain.

Further, a large number of activities have either positive and/or negative externalities, which may result in costs and benefits to the community. Because these externalities may have no direct financial impact and may be difficult to measure, they also tend to be ignored by the tax system.

Theoretically, it should be possible to further integrate positive and negative externalities into a tax system. From a practical viewpoint however, difficulties would exist in attempting to measure and value an externality. The administrative and compliance costs of such a system could be large, and may exceed the possible benefits. Consequently, it is probable that the tax system may not be best method of dealing with specific environmental management issues.

1.2 Purpose of this report

The purpose of this report is to examine aspects of the income tax regime² and identify provisions that may have potential impacts (positive and/or negative) on the environment. Where relevant, reference will also be made to the Goods and Services Tax (GST)³. The report will particularly focus on the taxation provisions for primary producers. There will also be a brief reference to the concessional application of state land taxes and local government rates to land used for primary production. This report will not attempt to quantify the potential impacts as that would involve a much larger study.

While the report makes a contribution to understanding how these taxes work, it makes no recommendations about how they might be changed. The report does not quantify the environmental impacts that it identifies, nor does it assess the revenue implications of any changes to tax arrangements. It also does not compare tax arrangements with alternative instruments that might be used to achieve environmental outcomes. These issues would all need to be considered as part of a broader-based assessment of the potential environmental impacts of taxation arrangements.

This report complements the Productivity Commission's paper *Constraints on Private Conservation of Biodiversity* (PC 2001) by providing a more detailed analysis of the tax provisions discussed in that paper. The Commission's paper was written at a time of substantial change to the income tax system, particularly for capital gains tax (CGT) — it focussed on the tax law operating at the time it was written. One aim of this report is to update the Commission's paper in light of the business tax reforms.

This report is divided into six chapters. Chapter 2 examines the treatment of the environment in the tax base — both the income tax and GST tax bases take limited account of potential environmental impacts (positive and/or negative).

Chapter 3 describes the general income tax and GST provisions and their potential environmental impacts. It will be shown that environmental activities only receive tax benefits from income tax and GST when those activities are carried on by a business.

Chapter 4 examines tax provisions specific to primary producers, starting with the definitions of 'a primary production business' and 'a Landcare operation'. Some environment-friendly activities undertaken by primary producers are excluded from

² Taxes imposed under Income Tax Assessment Acts.

³ Taxes imposed under *A New Tax System (Goods and Services Tax) Assessment Act 1997*.

both definitions. If the exclusion were to be applied strictly, this may provide an impediment to primary producers undertaking such activities. Other primary producer-specific tax provisions to be examined are:

- investment incentives for conveying and conserving water;
- investment incentives for viticulture and horticulture;
- taxation of livestock;
- livestock elections; and
- GST on acquisition and sale of land.

Chapter 5 comprises a brief hypothetical case study. It examines the different tax implications that would follow from a decision to acquire two similar blocks of land, using one for primary production and the other for private conservation. The case study draws on the examples used in this report to show incentives to use land for primary production.

The final chapter examines the net amount of income tax paid on primary production income. It illustrates how taxpayers who describe their main occupation as primary production derive significant net income from primary production, but this is offset by the primary production losses of other taxpayers. It is probable that, in aggregate, individuals pay little tax a year on primary production income (after allowing for all income of trusts and partnerships to be distributed).

A Caveat. Taxation is an area where most terminology is strictly defined. As this report is aimed at a non-technical audience, the terms used are meant to take their ordinary meaning rather than that defined in a taxation provision, unless that term is italicised.

2 Tax bases and the environment

Before beginning any review of taxation provisions, it is important to understand the base of the taxes to be described. Such an understanding first allows the observer to make judgements about the appropriateness and desirability of the tax. Second, understanding the tax base makes it possible to differentiate provisions that are design features of the tax itself, and those provisions that may have been added to meet non-tax requirements of the community⁴. For example, as income tax is imposed on net income, allowing tax deductions for expenses incurred in earning gross income is a design feature of the tax, and not a ‘concession’.

2.1 Defining tax bases

While income tax is a tax on net income derived over an assessment period and the GST is a tax on private consumption⁵, their tax bases have many similarities. The similarities arise because income is defined as:

... the increase in economic wealth between two points in time plus consumption in that period. In this definition of income, ‘consumption’ includes all expenditures, except those incurred in the earning or the production of income. (The Treasury *2001 Tax Expenditures Statement*)

The *2001 Tax Expenditures Statement* did not provide a definition of the GST tax base, but it is reasonable to expect a definition such as:

Consumption, including all expenditures, except those incurred in the earning or the production of income.

It can be seen that ‘consumption’ forms an important part of each tax base, and the following comments concerning the definition of consumption apply equally to income tax and GST.

⁴ Examples of tax provisions that are used to meet non-tax requirements of the community include exempting the income of sporting clubs, and providing tax deductions for gifts to approved charities.

⁵ The main difference between the two tax bases is that the income tax base includes private consumption and savings, while the GST tax base only includes private consumption.

2.2 Expenditure on the environment

The practical effect of accepting the Treasury definition of ‘consumption’ is that expenditure on the environment will not be deductible from income tax⁶ and also will be subject to GST unless it is related to the ‘earning or the production of income’, or unless a specific tax expenditure is introduced (tax expenditure is introduced (such as a tax exemption, deduction or rebate). As a result, the income tax and GST systems take limited account of impacts of transactions (positive and/or negative) on the environment because both tax systems are mainly focussed on monetary transactions⁷. Other activities are not accounted for by income tax and GST, for example, voluntary community service.

At this point, it is important to remember that the primary role of both taxes is to raise revenue to fund the general functions of government. Further, it should be remembered that taxation measures are but one method of government intervention to assist environmental management. The government also has the choice of using expenditure programs, market-based mechanisms and/or regulatory regimes. In general, taxation measures are best at delivering untargeted assistance to a wide range of potential beneficiaries. The beneficiaries will tend to use the assistance for projects that will deliver them the largest private benefit, and will not necessarily select projects with large public benefits.

Nonetheless, it is difficult to equate expenditure designed to improve the environment with consumption. The Penguin English Dictionary defines ‘consumption’ as:

The making use of economic goods for the satisfaction of wants or in the process of production, resulting chiefly in their destruction, deterioration or transformation.

It is obvious that most expenditure on the environment and private conservation activities would not be considered consumption under this definition.

If it were accepted that conservation and enhancement of the environment is not consumption, an enhanced environmental tax base could be used where consumption could be defined as:

Consumption, including all expenditures, except those incurred in the earning or the production of income, or in maintaining or improving the natural resource base.

The use of this definition of consumption in the respective tax bases would mean that all expenditures on environmental management and private conservation could

⁶ Some expenditures may be carried forward and reduce subsequent capital gains.

⁷ Some non-monetary transactions may be subject to income tax and/or GST.

be deducted from income in determining net income, and would not be subject to GST⁸.

However, the use of such a definition could lead to many 'boundary' and administration issues and should not be adopted lightly. An example of the type of expenditure that could qualify for tax advantages under a wide interpretation of the definition would be management of 'bush blocks' held mainly for amenity values. Another example of an activity that could be eligible would be planting of native trees in suburban backyards to provide habitat for native birds. The administrative difficulties in determining which environmental activities qualified for a tax advantage, and which did not, would be considerable.

Such a definitional change to the tax base is also likely to come at a significant revenue cost and lead to some combination of an increase in nominal tax rates, the introduction of other taxes, or a reduction in government services. Before such a change could be contemplated, a full analysis of the second-round effects of these changes in the tax base would be needed, including analysis of the impact on the distribution of income within Australia, and international competitiveness. In any event, transition costs may prevent such a major change to the tax base.

⁸ Technically, a person undertaking such expenditure could claim a GST input tax credit.

3 General taxation provisions and the environment

The Australian income tax system is designed to tax net income, that is gross income minus deductions incurred in earning that income. The tax system is divided into two sub-systems, which respectively tax ordinary income (from employment, business, welfare transfers, interest and dividends) and capital gains. The capital gains provisions are designed to be ‘catch-all’ and intended to tax the net gain on any transaction not subject to income tax under the ‘ordinary’ tax provisions⁹. In addition, there are many income exemptions and special tax deductions or offsets available to benefit ‘worthy’ activities; these will be considered later.

3.1 Income tax provisions and business activities

The ordinary income tax provisions will only affect environmental activities to the extent that the activity constitutes a business — broadly defined as an activity undertaken on a regular basis with the expectation of making a financial profit.

In determining net income, businesses can deduct any expenses necessarily incurred in carrying out that business, as shown in the following hypothetical examples.

Example 1: A landowner owns a grazing property which includes a wetland. If the property were used wholly for grazing, all expenses incurred in operating the property would be tax deductible. If the landowner were to protect the wetland by fencing it to exclude grazing animals, and set it aside for non-income earning private conservation purposes, the expenses relating to the wetland would not be tax deductible. In practice, this would mean that expenses, such as council rates, would have to be apportioned between the business portion (tax deductible) and the conservation portion (non-tax deductible). Compliance costs in performing the necessary apportionments will increase the cost to the landowner of setting the wetland aside.

⁹ If a transaction can be taxed under both the ordinary and capital gains provisions, the ordinary provisions take precedence. There are provisions to prevent double taxation.

As a rule, farming land is rated at a discount, and exempt from state land tax. These exemptions do not apply to land used for environmental purposes, such as a wetland set aside for conservation.

Example 2: Assume a private sanctuary for endangered native animals is conducted as a business. Deductible expenses could include feed for the animals, heating or cooling costs and wages for attendants. In addition, depreciation would be allowed on the costs of fencing to exclude predators and animal shelters. However, tax deductions would not be allowed for conservation activities that do not relate to the business — the expenses must be necessarily incurred in running the business.

In general, environmental activities carried on as a business will be entitled to the same tax provisions as any other ordinary business, but not necessarily to the additional tax provisions available to industry sectors, such as primary production and mining.

3.2 ‘Non-commercial’ loss provisions

In 1999, the Federal Government introduced non-commercial loss provisions which allow individuals¹⁰ to deduct tax losses¹¹ from a business activity from other taxable income so long as they can pass at least one of four tests. The tests are that the enterprise has:

- assessable income of more than \$20 000 for the year; or
- taxable profits in three of five years (the current and four preceding years); or
- real property (land) used in the business with a value of more than \$500 000; or
- plant, equipment and trading stock with a tax value of more than \$100 000.

The Commissioner of Taxation has also been given the power to disregard the provisions where he considers special circumstances apply. Examples include businesses affected by natural disasters, and start-up businesses that can demonstrate they will satisfy one of the tests in the near future.

The provisions do not apply to primary producers with less than \$40 000 assessable income from other sources; nor do they apply to ‘negative gearing’ of real estate and shares. The provisions only apply to individuals and partnerships.

¹⁰ Different (and more complex) rules apply to the deductibility of losses of companies and trusts.

¹¹ It is assumed that the taxpayer has other income sources.

Assuming a business activity fails all of the tests (and the Commissioner does not exercise his discretion), the loss from a year is carried forward and added to the next year's allowable deductions relating to that business activity. This process is carried forward until either the losses are offset against income from that business activity, or a test is satisfied and all losses carried forward to that date could be deducted against income from all sources.

The various tests (\$20 000 assessable income, \$500 000 real property, \$100 000 other assets or profits in three of last five years) prescribed in the legislation apply to each 'business activity'. 'Business activity' is not defined, and will be determined on a case-by-case basis. Every new activity conducted by a business has the potential to be classified as a 'new business activity', and subject to these provisions as shown in the following hypothetical example.

Example 3: A landowner owns a small grazing property which includes a wetland. To protect the wetland, the landowner erects a fence to exclude grazing animals. As the wetland is a home to many birds, the landowner builds a hide and constructs a screened walk to the hide. The landowner then advertises a private bushwalk to the hide, which attracts about 1000 walkers a year who pay \$5 each for the walk. A small tearoom is then built to offer refreshments to the walkers.

The Australian Taxation Office (ATO) may treat each of these activities as being separate business activities (ie a grazing business, a recreation business and a hospitality business). If one of the activities made a tax loss in a year, the activity would have to satisfy one of the prescribed tests before the loss could be allowed as a deduction in the current year. The loss from the grazing activity may be deductible from profits from the other activities if total assessable income from the other activities is less than \$40 000 (the various tests for the non-commercial loss provisions do not apply to primary producers with less than \$40 000 assessable income from other sources). A similar provision does not apply to losses from other business activities, such as the bushwalk or the tearooms.

However, if the landowner had commenced another agricultural activity to utilise the wetlands (say producing rice), it would be considered a similar agricultural activity to the grazing activity.

Many businesses, including eco-tourism and eco-activity businesses start off as small enterprises. New businesses are more likely to incur a loss than mature businesses because of high start-up costs. Quarantining tax losses from such activities is likely to be an impediment to the establishment of new small businesses.

3.3 Capital gains tax provisions

Until 1985, the Australian income tax system was designed to tax only income and did not tax most gains made on capital assets¹². Taxation of realised gains on capital assets was included in the tax base from 20 September 1985.

As stated earlier, the capital gains tax (CGT) provisions are designed to be ‘catch-all’, to ensure that the net gain on any receipt is taxed as ordinary income or a capital gain unless a specific exemption is provided. The most noteworthy CGT exemptions are the exemptions for principal residences and assets acquired prior to the introduction of CGT.

From 20 September 1985 until 21 September 1999, CGT was levied on real gains — net sale proceeds less indexed costs of acquisition.

From 21 September 1999, CGT is levied on nominal gains — net sale proceeds less nominal costs of acquisition. The extension of the tax base (from real gains to nominal gains) is offset by a series of exemptions for individual taxpayers and trusts. The principal discount for individuals where an asset has been held for more than 12 months is an exemption of 50 per cent of the gain.

There are four exemptions for small businesses which can eliminate any CGT liability where the small business is expanding, or where the business owner is retiring. The three basic conditions that have to be satisfied before a taxpayer can access any of the small business concessions are:

- a \$5 million limit on the net value of assets that the business or any related entities own;
- the asset that is subject to CGT must be an active asset; and
- the taxpayer claiming the exemption must be the controlling individual/concession stakeholder if the asset that is being disposed of is a share in a company or an interest in a trust.

The first small business exemption is a full exemption from CGT for small business assets where:

- the taxpayer is aged 55 years or more; and
- the asset has been held for 15 years or more; and
- the CGT is associated with retirement from a business.

¹² There were provisions taxing gains made on assets held for less than a year, and gains on ‘profit making activities’.

More generally, where a small business taxpayer makes a capital gain that satisfies the basic threshold conditions, a 50 per cent reduction is available. This concession may be applied in addition to the general 50 per cent discount available for individuals and trusts. The combined effect is to leave 25 per cent of the nominal gain subject to tax.

Two further exemptions can then reduce the immediate tax payable on a small business capital gain to nil. The exemptions are:

- ‘rolling’ the remaining 25 per cent taxable capital gain into a replacement small business asset. This effectively defers liability to pay tax until the replacement asset is sold; or
- depositing the remaining 25 per cent into a superannuation fund for the taxpayer’s retirement (subject to a \$500 000 lifetime limit).

Inability to access the new small business CGT concessions may provide a new impediment to private conservation activities that are not conducted as a business, as demonstrated in example 4. Prior to the 1999 changes, it was not clear that private conservation activities were disadvantaged by the CGT system.

Example 4: In example 1, a landowner had fenced off a wetland and set it aside for non-profit private conservation activities. If the landowner were to sell the farm at a capital gain, the landowner would have to apportion the capital gain between the grazing land and the wetland. The capital gain on the grazing land would qualify for the small business CGT concessions, while that on the wetland would not.

However, if the landowner had used the wetland for an eco-business, as in example 3, the entire capital gain would qualify for the small business CGT concessions.

Tradeable quotas

Tradeable quotas are increasingly being used for environmental management purposes — examples include water rights and fishing quotas.

In many cases the regulatory authority gives these quotas to existing participants in an industry, for little or no cost. If the quota is then sold, CGT will apply. As the cost of the quota is nil, the net proceeds of the sale will be fully subject to CGT. Tradeable quotas probably qualify for the small business CGT concessions because they are ‘intangible assets inherently concerned with the business’.

From a pure tax policy perspective, the CGT treatment is correct. If you get something for nothing, and make a profit selling it, you should pay tax. Even if the quota is compensation for reducing a business activity, the same argument holds.

However, it is probable that CGT liabilities that could follow from the first trade of a quota¹³ will decrease the efficiency of the market by creating a difference between the price paid by the purchaser and net price received by the vendor¹⁴.

3.4 Receipt of grants and subsidies

Any grants or subsidies received by a business should be taxed as income in the year of receipt (s. 15-10 *Income Tax Assessment Act 1997*), while expenditure may be depreciated over a number of years.

If an environmental business were to receive a subsidy to carry out capital works, there may be a timing mismatch between the income taxation of the grant, and allowing depreciation deductions for the expenditure, as illustrated in example 5.

Example 5: A landowner participated in the Victorian Bush Tender scheme to set aside the wetland for conservation. The landowner received a grant of \$5000 to assist with the cost of fencing, which cost \$10 000.

The landowner will have to include the \$5000 grant as income in the year it is received, but will probably have to depreciate the fence (see section 4.3). The maximum amount of depreciation the landowner could claim in the year the grant is received is \$1000¹⁵.

The landowner will have to pay tax on at least \$4000 in the year the grant is received. In subsequent years, the landowner will continue to receive depreciation deductions.

In practice, such a receipt may be treated as a reimbursement of expenditure and only the net expenditure (total expenditure less the grant) depreciated. The ATO has not ruled on the legality of this approach.

¹³ Subsequent purchasers will have paid for the quota, reducing the net capital gain.

¹⁴ The loss of efficiency is also known as the ‘dead-weight loss’ of the tax.

¹⁵ Depreciation deductions in the first year are prorated according to the number of days the asset was available for use. The \$1,000 assumes that the fence was erected at the start of a financial year and was not included in a ‘low-value’ pool. If the fence was included in a ‘low-value’ pool, the first year depreciation would be \$250.

If the expenditure had been deductible under the provisions relating to ‘Landcare’ and conveying and conserving water, different provisions would prevent the timing mismatch.

3.5 Specific provisions benefiting the environment

The Treasury *2001 Tax Expenditure Statement* provides a comprehensive list of income tax expenditures¹⁶. Tax expenditures that are considered to be environmentally related are shown in table 3.1.

Table 3.1 **Tax expenditures relating to the environment 2001-02**

<i>Index</i>	<i>Description</i>	<i>Treasury Functional Group</i>	<i>Cost estimate 2001-02 (\$ million)</i>
D34	CGT treatment of perpetual conservation covenants	Housing and community amenities	<1
D52 & 53	Landcare deduction & water provisions	Agriculture, forestry & fishing	20
D54	Landcare offset	Agriculture, forestry & fishing	<1
D64	Expenditure on environmental impact studies	Mining, mineral, manufacturing	Not estimated
D66	Expenditure on pollution control	Mining, mineral, manufacturing	<10

Source: The Treasury, *2001 Tax Expenditures Statement*.

To put these tax expenditures into perspective, total tax expenditures for 2001-02 are estimated to cost nearly \$30 billion, of which \$18 billion relate to social security and welfare, \$1.8 billion to fuel and energy, and \$4.5 billion to economic activities, such as mining and agriculture. The total amount of tax expenditures relating to the environment (less than \$50 million) may reflect the appropriateness and administrative feasibility of targeting tax expenditure to environmental outcomes.

In addition, there is a number of uncoded general income tax provisions that may benefit environmental organisations, such as tax deduction for gifts and the exemption from tax of income of some non-profit organisations.

Income tax deductions are available for gifts to a number of environmental organisations included on the ATO’s Register of Environmental Organisations. While these provisions apply to gifts of both money and other assets, the provisions relating to gifts of property are more restrictive. Gifts of non-monetary assets may also be subject to GST. In practice, the restrictions on gifts of property are

¹⁶ Presumably tax expenditures relating to GST will be included in the 2002 Tax Expenditure Statement.

sometimes ostensibly overcome by gifting money which is then used to purchase the property. Such a practice could confer GST as well as income advantages. However, if this strategy was adopted mainly for tax purposes, the Commissioner of Taxation could apply anti-avoidance provisions.

Some environmental organisations may also qualify for an income tax exemption for fees received from members under the principle of mutuality, or be charities. However, there is no general income tax exemption for environmental organisations, unlike: sporting, cultural and recreation clubs or societies (including animal racing clubs); community service organisations; trade unions, employee and employer associations; and non-profit aviation, tourism and industry associations.

3.6 GST and the environment — general provisions

In Australia, GST imposes a 10 per cent tax on all transactions unless a good or service is exempt from the tax. Exemptions include exports, basic foods, most health and medical services, most education and many activities of charities. There are no specific environmental exemptions.

A GST of 10 per cent is added to all sales of non-exempt goods and services by registered enterprises, and this is remitted to the ATO. As GST is designed to tax final consumption expenditure, registered enterprises that use goods or services as inputs can claim back the GST paid on their inputs ('input tax credits'). This is achieved either by offsetting the GST on their inputs from what is owed to the ATO on their sales, or by claiming a refund directly from the ATO when the GST paid on inputs exceeds the GST collected on sales. This approach to collecting GST is efficient at taxing final consumption expenditure, but not intermediate consumption.

GST will therefore be imposed on all expenditure for environmental purposes. However, registered environmental organisations will be able to claim back the GST paid on their inputs.

All environmental businesses could register for GST, and claim back input-tax credits. Some small businesses may choose not to register because the compliance costs of claiming input tax credits may exceed the value of the tax credits.

In addition, many non-profit organisations, including environmental organisations, can also register for GST, and claim input tax credits. Registration would ensure that GST on inputs used by environmental organisations could be refunded to the organisation.

4 Environmental impact of tax provisions for primary producers

This chapter examines the potential environmental impacts (positive and/or negative) of various primary producer tax provisions.

4.1 Defining a primary production business

Many of the tax provisions examined in this report are only available to primary production businesses. The *Income Tax Assessment Act 1997* defines a primary production business as¹⁷:

Primary production business: you carry on a primary production business if you carry on a ‘business’ of:

- (a) cultivating or propagating plants, fungi or their products or parts (including seeds, spores, bulbs and similar things), in any physical environment; or
- (b) maintaining animals for the purpose of selling them or their bodily produce (including natural increase); or
- (c) manufacturing dairy produce from raw material that you produced; or
- (d) conducting operations relating directly to taking or catching fish, turtles, dugong, bêche-de-mer [sea cucumbers], crustaceans or aquatic molluscs; or
- (e) conducting operations relating directly to taking or culturing pearls or pearl shell; or
- (f) planting or tending trees in a plantation or forest that are intended to be felled; or
- (g) felling trees in a plantation or forest; or
- (h) transporting trees, or parts of trees, that you felled in a plantation or forest to the place:
 - (i) where they are first to be milled or processed; or
 - (ii) from which they are to be transported to the place where they are first to be milled or processed.

The first point to note is that only businesses — activities conducted for the purpose of profit making — can be primary producers. A non-profit activity can never be a primary producer.

¹⁷ A similar definition is used in the Goods and Services Tax Assessment Act.

The second point to note is that most conservation activities are not primary production. For example, providing a habitat for native animals can only be primary production if there is an intention to sell the animal or its produce. The position is less clear for vegetation. While there is no requirement that plants or fungi be produced for sale, there is a requirement that they be ‘cultivated or propagated’. It is arguable that activities, such as maintaining remnant vegetation or wildlife corridors, could be excluded from the definition because the native vegetation is not actively cultivated or propagated. These exclusions from the tax system are hardly surprising given that both tax bases take limited account of environmental activities.

The main consequence of an environmental activity not being classified as ‘primary production’ is that primary production-specific tax provisions cannot be accessed.

However, there may be few practical consequences on commercial farms. This is because primary production and environmental activities are not normally mutually exclusive. Livestock may be grazed on wildlife corridors; remnant vegetation may provide shade and windbreaks. Even if the activities were to be mutually exclusive, in most cases the required apportionment could be ignored. In part, this would occur because of the compliance costs of the apportionment.

Nonetheless, the perception of mixed incentives for farmers undertaking environmental activities may impede farmers undertaking such activities.

4.2 Agricultural-specific tax provisions

Income tax provisions exclusively available to primary producers or rural businesses can be divided into five categories. These are designed to:

- provide a simple mechanism to alleviate a difficult valuation problem (use of prescribed values for natural increase of livestock);
- alleviate general period inequity — the additional tax burden that may result from fluctuating incomes (Averaging);
- alleviate general period inequity and provide a risk management tool (Farm Management Deposits);
- alleviate specific instances of period inequity (livestock elections); and
- provide investment incentives.

While tax deductions for ‘Landcare’ are available to any business carried out on rural land, all other provisions are only available to primary producers. Table 4.1 lists agriculture-specific tax provisions contained in the *Income Tax Assessment Act 1997* (‘ITAA’).

Table 4.1 Agriculture-specific tax provisions categorised by function

<i>Compliance cost reduction</i>	<i>ITAA Reference</i>
Prescribed costs for natural increase of livestock	Reg. 70-55.1
Special provisions for valuation of horses (not discussed in this report)	s. 70-60
Alleviation of general period inequity	
Averaging	Div. 392
Alleviation of period inequity and encourage risk management	
Farm Management Deposits	Div. 393
Alleviation of specific period inequities	
Elections to defer income from forced disposals and death of livestock over 5 years	ss. 385-100 to 385-125
Alternative elections to defer income from forced disposals and death of livestock until replacement livestock are sold	ss. 385-100 to 385-125
Deferral over 5 years of income from insurance recoveries for loss of livestock or trees	s. 385-130
Deferral of income from second wool clip in one year until next year	Subdiv. 385-G
Investment incentives	
Deduction over 4 years for expenditure in establishing vineyards	Subdiv. 40-F, s. 40-515
Deductions over effective life for horticultural plantings	Subdiv. 40-F, s. 40-515
Immediate tax deductions for capital expenditure on Landcare	Subdiv. 40-G, s. 40-630
Deductions over 3 years for conserving and conveying water	Subdiv. 40-F, s. 40-515
Alternative Tax Rebate for capital expenditure on Landcare and conveying and conserving water (applies to expenditure before 1 July 2001)	s. 388-55
Deductions over 10 years for extending telephone and power lines (not discussed in this report)	Subdiv. 40-G, s. 40-645

Source: *Income Tax Assessment Act 1997*.

Commonwealth Treasury's estimates of the financial benefits derived by individuals and businesses eligible for the tax concessions (or tax expenditures) outlined above are shown in table 4.2. The estimates are calculated with reference to a Treasury-defined tax benchmark. It should be noted that the choice of tax benchmark can result in different estimates. Also the estimates do not necessarily represent the revenue gain to the Commonwealth arising from the abolition of the concession.

Some of the estimates may lack precision. For example, the amount shown for tax rebates or offsets for 'Landcare' was \$30 million per year for the four years 1998-99 to 2001-02 in the *Tax Expenditures Statement 1997-98*, but \$1 million or less per year for the seven years 1998-99 to 2004-05 in the *2001 Tax Expenditures Statement*. The earlier estimates were (apparently) based on the Federal Government's forward estimates for the scheme. If the 2001 estimates were accurate, the total cost of this scheme would be less than \$7 million.

Table 4.2 Treasury estimates of the revenue cost of agriculture specific tax provisions 2000-01

<i>Provision</i>	<i>Estimated cost \$ million</i>
Prescribed costs for natural increase of livestock	70
Deductions for Landcare and conveying and conserving water	20
Tax rebates for Landcare (applies to expenditure before 1 July 2001)	<1
Deductions for planting grapevines	4
Deductions for establishing horticultural crops	5
Deductions for extending telephone lines	1
Averaging	75
Farm Management Deposits	30
Livestock elections	Not costed
Total of costed provisions	206

Source: The Treasury, 2001 Tax Expenditures Statement.

4.3 Environmental impact of specific tax provisions for primary producers

While some tax provisions specific to primary producers (for example, Farm Management Deposits) may have little, if any, environmental impact, several provisions may have a greater environmental impact. Indeed, the 'Landcare' provisions were designed to encourage expenditure favourable to the environment. The provisions relating to conserving and conveying water and the elections relating to the forced disposal of livestock may have a positive and/or negative effect on the environment. Each of these tax provisions will be discussed in more depth in the following sections.

Landcare provisions

The 'Landcare' tax provisions allow an immediate tax deduction for capital expenditure to prevent and combat land degradation.

Because tax deductions may be of little or no value to low income farmers, an alternative tax offset scheme applied to expenditure incurred between 1 July 1997 and 30 June 2001. This tax rebate was up to 30 per cent of expenditure (up to a maximum of \$5000 expenditure) that would have been deductible under the 'Landcare' provisions. A problem with the tax rebate was that it is not refundable if it exceeds tax payable, but it may be carried-forward to later years.

A ‘Landcare’ operation is defined in the ITAA as:

- (1) (a) erecting a fence to separate different land classes on the land in accordance with an approved management plan for the land; or
 - (b) erecting a fence on the land primarily and principally for the purpose of excluding animals from an area affected by land degradation:
 - (i) to prevent or limit extension or worsening of land degradation in the area; and
 - (ii) to help reclaim the area; or
 - (c) constructing a levee or a similar improvement on the land; or
 - (d) constructing drainage works on the land primarily and principally for the purpose of controlling salinity or assisting in drainage control; or
 - (e) an operation primarily and principally for the purpose of:
 - (i) eradicating or exterminating from the land animals that are pests; or
 - (ii) eradicating, exterminating or destroying plant growth detrimental to the land; or
 - (iii) preventing or fighting land degradation (except by erecting fences on the land); or
 - (f) an extension, alteration or addition to an asset described in paragraph (a), (b), (c) or (d) or an extension of an operation described in paragraph (e).
- (2) Paragraph (1)(d) does not apply to an operation draining swamp or low-lying land.

An omission from this definition is a reference to the conservation of biodiversity. The provision is more narrowly aimed at land degradation, and it is not clear that expenditure to promote biodiversity qualifies under this provision, as shown in example 6.

Example 6: In example 3, a landowner fenced off a wetland. Would the fence be tax deductible under the ‘Landcare’ provisions? The deduction could be obtained indirectly if the landowner had an approved management plan that classified the wetland as a separate land class. However, there is no explicit provision providing tax deductions for fences erected to exclude animals from environmentally-sensitive areas.

Another issue is that paragraph (e) provides tax deductions for eradicating or exterminating native animals as well as introduced species. Furthermore, it appears that works that would merely exclude native animals from encroaching on farming activities would not qualify for a tax deduction under these provisions — see example 7.

Example 7: A landowner decides to plant a vineyard on grazing land¹⁸. The landowner finds that kangaroos like grapevine leaves, and regularly strip all the leaves off the newly-planted grapevines. The landowner erects a high fence to exclude the kangaroos from the grapevines. The fence would not qualify for a tax deduction under the ‘Landcare’ provisions¹⁹. However, the landowner could receive a tax deduction for capital works that eradicated or exterminated the ‘pests’.

A similar ambiguity arises with the provision relating to ‘destroying plant growth detrimental to the land’. It is possible that this provision could contribute to land clearing and removal of regrowth.

The original definition of ‘Landcare’ was written over 20 years ago, and focuses narrowly on land degradation. Consequently, many activities that may encourage biodiversity may not qualify for a tax deduction under existing provisions. Of course, any proposed change would need to be subject to a cost–benefit analysis. In addition, such a definition may be difficult to draft and administer.

Provisions for conserving and conveying water

Capital expenditure on conveying and conserving water can be deducted in three equal annual deductions of one-third of the expenditure. An alternative tax offset applied to expenditure incurred between 1 July 1997 and 30 June 2001. The tax offset of 30 per cent could be claimed over three years (eg, an offset or rebate of 10 per cent a year of the cost over three years).

The taxation provisions for conveying and conserving water may have variable and unintended environmental impacts. On the one hand, they may provide assistance to primary producers to invest in technologies that allow for more intensive use of water, such as drip irrigation. On the other hand, they also provide assistance to investments, such as the construction of irrigation dams, in catchments that have inadequate environmental flows.

Like the ‘Landcare’ provisions, the provisions for conserving water were introduced over 20 years ago. There may be a case for amending the provisions to ensure that assistance is not provided to projects that adversely affect the environment. However, as above, any definitional change may be difficult to draft and administer.

¹⁸ This would not be a separate enterprise under the non-commercial loss provisions.

¹⁹ Depreciation could be claimed at 10 per cent per annum diminishing value method.

Other investment incentives

The ITAA contains several other investment incentives for capital expenditure in agriculture. Of these, the provisions relating to vineyards and horticultural plants are the most utilised. The incentives are provided by allowing tax deductions at an accelerated rate when compared to a benchmark of depreciation over an item's effective life.

The costs of planting grapevines can be deducted over four years from the date of planting (equivalent to a straight-line depreciation rate of 25 per cent). As grapevines can live for more than 100 years, write-off over four years is definitely accelerated. Some vineyards may have old vines; for example, the Tahbilk vineyard produces wine from grapevines planted in 1860.

The costs of establishing horticultural plants can be deducted over their estimated effective life, with the deductions commencing from the year of first commercial harvest.

Irrigation expenses associated with establishing a vineyard or horticultural plants will normally be claimed under the provisions for conveying and conserving water (ie over three years).

These provisions may have little environmental impact at farm level, as one agricultural activity is substituted for another (for example, from pastoral land use to viticulture). However, at an aggregate level, they may have had an impact on water flows in many catchments. The provisions, in combination with those for conserving and conveying water, may have encouraged the recent expansion in viticultural plantings. In most cases, these plantings have meant the substitution of irrigated activities for non-irrigated activities. As a result, there has been an increase in the number of on-farm dams designed to harvest water for irrigation purposes. This has resulted in reduced flows in catchments. Both the New South Wales and Victorian State Governments have now regulated the construction of irrigation dams.

While the environmental impacts of these concessions are not conclusive, an important lesson is that investment incentives can potentially have negative environmental consequences which may take a number of years to manifest themselves.

The tax savings from investment incentives

The tax provisions for 'Landcare', conveying and conserving water, viticulture and horticulture are designed to act as investment incentives. However, in most cases the value of incentive is not the amount of tax saved from the immediate deduction. This is because most of the expenditure would be deductible over longer periods of time under the depreciation provisions of the ITAA, as shown in example 8.

Example 8: In example 3, a landowner fenced off a wetland. Assuming the landowner was not entitled to claim an immediate tax deduction for the fence under the 'Landcare' provisions, the landowner could depreciate the fence.

It follows that the value of an investment incentive is the net present value (NPV) of the tax savings gained under the investment incentive compared to the NPV of the tax savings that were available under the depreciation provisions.

A further phenomenon of taxation is that providing immediate tax deductions may actually reduce the NPV of tax benefits received by individuals for larger investments. This phenomenon arises because of the progressive nature of the individual rate scale, as shown in example 9.

Example 9: Assume a farmer who is not on the tax averaging system has a relatively constant income of \$40 000 per year. The farmer undertakes a 'Landcare' project with a capital cost of \$30 000 in the 2001 financial year.

If the cost were immediately deductible, the tax saving would be \$7700. However, if the cost had been deducted over three years, the tax saving would have been \$9000 (\$3000 per year). At a discount rate of 10 per cent, the tax savings over three years have a NPV of \$8206. The calculations become much more complex if it is assumed that the farmer is using tax averaging.

It appears that deducting the cost of assets over a three to five year period will optimise the tax benefit a farmer will receive (Douglas et al. 1995).

Investment incentives and capital gains tax

The investment incentives discussed will also affect the amount of capital gains tax paid if the land is eventually disposed of, as shown in example 10 (detailed calculations are in appendix A).

Example 10: Assume a landowner purchased a farm for \$200 000, and fencing of the wetland cost \$10 000. The farm is then sold some years later for \$250 000. The wetland comprises 10 per cent of the farm by area. The amount

of tax deductions received, and CGT paid for each of the scenarios discussed would be:

Scenario 1 — Farm used exclusively for grazing: Assuming the wetland was assumed to be a separate land class, the landowner would receive an immediate tax deduction of \$10 000 when the fence was erected. The landowner may pay CGT on \$12 500²⁰ when the farm is sold.

Scenario 2 — Wetland used for eco-business: As discussed earlier, the landowner would depreciate the fence, as the landowner would be ineligible to claim an immediate 'Landcare' deduction. Assume that when the farm is sold, the landowner has received \$6000 of tax deductions, and the fence is worth \$4000. The sale proceeds of \$250 000 would be apportioned with \$4000 allocated to the fence and \$246 000 to the land. In this scenario, the landowner would have received \$6000 of tax deductions for the fence and may pay CGT on \$11 500 when the farm was sold.

Scenario 3 — Wetland used for private conservation purposes: As noted earlier, the landowner would not receive an income tax deduction for the cost of erecting the fence, but would be able to add the cost of the fence to the cost base of the land for CGT. In this scenario, the landowner may pay CGT on \$10 000 when the farm was sold.

These scenarios illustrate that agricultural activities would be the most tax-favoured land use, and private conservation activities would be the least tax-favoured land use.

Valuation of livestock

It has been suggested that the provisions for taxing livestock may cause environmental problems by leading to overstocking, and discouraging tactical stocking rate responses to climate variability (see Douglas (1995) and Stafford-Smith et al. (2001) for further discussion of these matters).

Livestock are defined by the ITAA to be trading stock — items held for the purpose of resale. (It is arguable that this classification is incorrect, particularly for breeding stock which may be better classified as a capital item.) There are also special tax provisions for horses, which are not discussed in this report.

²⁰ Assume that the landowner does not elect to roll this amount into a superannuation fund for retirement purposes, or into a replacement small business asset.

The ITAA requires taxpayers to value trading stock each year at the taxpayer's choice of cost, market or replacement values. The value of trading stock on hand at the end of a financial year is then included in the taxpayer's assessable income for that year, with an offsetting tax deduction being allowed in the following year. The purpose of this mechanism is to ensure tax deductions relating to items of trading stock are taken in the year in which the trading stock is disposed of, not the year they are acquired.

Many taxpayers choose to value trading stock at cost, as both market and replacement values include any unrealised profits that the taxpayer may hope to achieve. Valuation at cost means that a taxpayer will pay tax on those profits only once they have been realised. On the other hand, use of market valuation would include unrealised profits in assessable income. In general, a lower valuation for trading stock will result in a short-term tax advantage.

Valuation at cost is (relatively) simple for items that a taxpayer has purchased, but is more complex for natural increase of livestock. Tax law provides that not only the direct costs (for example, feed costs) of producing the natural increase should be taken into account, but also indirect costs (such as an appropriate share of fertiliser costs). The determination of the cost of a calf or a lamb can be a complex exercise.

The ITAA has recognised these difficulties and provided that natural increase of livestock can be valued at an arbitrary cost prescribed by regulation, resulting in a significant reduction in compliance costs. Current prescribed costs are shown in table 4.3.

Table 4.3 Prescribed costs for natural increase

<i>Species</i>	<i>Prescribed cost</i>
Cattle	\$20.00
Deer	\$20.00
Horses ²¹	\$20.00
Pigs	\$12.00
Emus	\$8.00
Sheep	\$4.00
Goats	\$4.00
Poultry	\$0.35

Source: Income Tax Regulations.

These prescribed costs are below market value for most species of livestock, in some cases substantially. This means that when the natural increase livestock are sold, a large portion of the sale price will be taxable, as shown in example 11.

²¹ Where a service fee was paid, the minimum cost is the greater of the service fee or \$20.

Example 11: Assume a steer was born in the 2000-01 financial year. It would be included in trading stock at \$20, and the owner would include this amount in assessable income for the year. If the steer were sold the following year, the owner would be assessed on the sale proceeds (say \$580) less the cost value included in the previous year (\$20), a net \$560. It can be seen that the prescribed cost affects the allocation of income between years, but does not change the total amount of income.

To the extent that the prescribed costs are below actual cost, agriculture receives a benefit compared to other industries where actual cost is used (because a lower valuation for trading stock will result in a short-term tax advantage).

In self-replacing herds or flocks, the tax value of the herd or flock trends downward to the prescribed cost. Glau (1971) has shown that the closing value of a livestock account is a recursive relationship with a limiting value of the prescribed cost when all replacement animals are obtained from natural increase.

The tax deferral from investing in a self-replacing livestock herd can be substantial, as shown in example 12.

Example 12: Assume a landowner purchased 50 cow and calf units, a total of 100 animals, for \$100 000 when purchasing a farm. After 10 years, the herd is sold for \$100 000. In this unusual herd, artificial insemination is used and 50 calves are born each year, and 50 head are sold. All replacement livestock are acquired from the natural increase. While the artificial insemination assumption is unrealistic, it allows the only variable to be the different tax treatment of livestock.

The average tax value of livestock at the end of the first year²² is calculated using the formula.

$$\frac{\text{Value of original purchase} + (\text{number of natural increase} * \$20)}{\text{Number purchased} + \text{number of natural increase}}$$

$$\frac{\$100\,000 + (50 * \$20)}{100 + 50}$$

$$\text{Average value} = \$673.33$$

$$\text{Total tax value of closing stock} = \$67\,333$$

²² In subsequent years the same formula is used with 'opening tax value' substituted for 'value of original purchase'.

Because the closing tax value of the livestock is less than their purchase price, the difference is a tax deduction (an increase would be assessable income). Table 4.4 shows the tax value of the landowner's cattle for the 10 years, and the resultant adjustment to taxable income.

Table 4.4 Calculation of taxable income for livestock farmer

<i>Year</i>	<i>Tax value of livestock</i> \$	<i>Trading stock adjustment</i> \$
0	100 000	
1	67 333	- 32 667
2	45 555	- 21 778
3	31 036	- 14 519
4	21 357	- 9679
5	14 904	- 6453
6	10 602	- 4302
7	7734	- 2868
8	5822	- 1912
9	4548	- 1274
10	100 000	95 452

It can be seen that the landowner received a significant tax deferral from investing in livestock. However, when the landowner realised the investment, there is a substantial tax liability.

From an environmental perspective, there are suggestions that the current method of valuing livestock may lead to land degradation for two reasons (Douglas 1995). First, economic theory suggests there is over-investment in subsidised activities. With livestock, over-investment may well lead to over-stocking, with negative environmental effects.

Second, it has been suggested that the disparity between market and tax values may lead to a 'lock-in' effect, and discourage tactical stocking decisions. In times of drought, there will be a reluctance to de-stock unless the livestock elections for forced disposal (discussed below) can be accessed.

These hypotheses have recently been tested by CSIRO using 'Riskherd' — a unique stochastic model of rangelands properties, that coupled a daily time-step model of plant growth, a soil loss model, an animal nutrition and herd dynamics model with a farm financial model with full tax specifications. The model has the capacity to '... analyse the degree to which a given tax instrument may promote changes in pasture state' (see Stafford-Smith et al. 2001).

Stafford Smith et al. (2001) concluded that there would be environmental benefits, such as a reduction in soil loss and maintenance of native vegetation, from moving

from the current system of valuing livestock to one which resulted in higher valuations. The ‘long-term environmental benefits could be significant, at least in cattle regions’.

Stafford Smith et al. (2001) identified transition issues, particularly the additional tax that may be levied on producers, as a major impediment to increasing taxation values for livestock. They argued that the environmental benefits of moving to an improved system of livestock taxation may justify a substantial write-off of deferred tax liabilities.

The livestock elections

The term ‘livestock elections’ is used to collectively describe several tax provisions designed to defer the taxation of income derived from abnormal disposals of livestock following drought, flood or fire.

As noted earlier, there is frequently a large disparity between the tax and market values of livestock, with the consequence that most of the proceeds from the sale of livestock are taxable. If an abnormal number of livestock is disposed of, this can lead to a ‘bunching’ of income, and large tax liabilities. If the proceeds from the disposal are required to purchase replacement livestock, the tax system prevents replacement with an equal value.

The tax law attempts to overcome this ‘bunching’ problem by allowing farmers to choose to spread the abnormal income from certain forced disposals over a longer period, so reducing the ‘period inequity’ problem. In most cases, farmers have the choice of either paying tax on 20 per cent of the abnormal income in each of the current and four succeeding years, or carrying the abnormal income forward and offsetting it against the cost of replacement livestock. This latter election has the effect of deferring tax until the replacement livestock are sold.

Table 4.5 provides a list of available elections and their effects. In some cases, choosing to use these elections may have the perverse effect of increasing overall tax liabilities. This is because a year in which a farm has suffered a fire, flood or drought is normally a low-income year, and subsequent years may have a higher income.

From an environmental perspective, livestock elections may have a positive effect by encouraging de-stocking when there is a drought. However, it is possible that they may have the perverse effect of also encouraging farmers to delay de-stocking until they are sure they will qualify for the election.

Table 4.5 Livestock elections and effects

<i>Election and trigger</i>	<i>Effect</i>
Shearing twice in one year where the second shearing is caused by fire, flood or drought	Profit on second wool clip is deferred until subsequent year
Forced disposal of livestock caused by fire, flood or drought	Choice of spreading income over 5 years, or deferring profit to reduce tax value of replacement livestock.
Receipt of compensation for compulsory destruction of livestock	Choice of spreading income over 5 years, or deferring profit to reduce tax value of replacement livestock.
Insurance recoveries of death or destruction of livestock	Choice of spreading income over 5 years

Source: Douglas (2001).

4.4 GST provisions specific to primary production

The main GST provisions specific to agriculture that may affect the environment are those relating to the transfer of agricultural land.

Most GST regimes have provisions that allow the ‘sale of businesses as a going concern’ to be GST-free. The most probable reason for these provisions is to minimise cash flow costs on the sale of businesses, as the sale should not generate net revenue — the GST collected by the vendor being offset by the input tax credits claimed by the purchaser.

However, agricultural businesses are not usually sold as a going concern. Instead the land is sold first, and then the plant and livestock are sold separately (frequently at a clearing sale). The GST legislation provides that the sale of farmland to another intending farmer will be GST-free. The GST-free status does not apply to sales of plant or livestock.

However, the GST-free status will not apply if the farmland is purchased by a registered organisation for conservation activities. While the GST paid by the registered organisation will be refunded as an input tax credit within 3–4 months, having to pay 10 per cent more for the farm and wait for a refund can cause cash flow difficulties (see Productivity Commission (2001) for a discussion of the impact of these issues on Birds Australia).

If a farm were purchased purely for private conservation purposes by a non-registered organisation or individual, GST would be included in the purchase price.

Of course, the choice between agriculture and conservation is seldom made for whole farms, but rather is made for particular parts of farms, such as wetlands, areas

of bush and wildlife corridors. This raises the question of what happens if the vendor sets aside part of the farm for private conservation, or if the purchaser intends to set aside part of the land for private conservation purposes.

There appears to be no Australian Tax Office tax ruling on this issue. However, it is possible that the Australian Tax Office may require some form of apportionment, and require GST to be paid on the land that has been set aside/will be set aside for private conservation purposes.

5 Case study

The purpose of this simple case study is to examine the differential application of taxation to land used for both agriculture and private conservation. The case study draws on earlier examples in this report and looks at impacts on the environment from purchasing, operating and selling the farm. The tax law consequences described are based on a strict technical interpretation of the law. In practice, less strict interpretations of the law may be developed.

5.1 Scenario

A landowner purchases a grazing property that contains a wetland. The landowner believes that conservation of the wetland will be best achieved if grazing animals are excluded from it.

If the landowner purchases the farm purely for grazing, the purchase will be GST-free. If, however, part of the farm is not to be used for farming, GST must be charged on that portion. This will require apportionment of the purchase price, increasing compliance costs. If the landowner then uses the wetland for income-producing purposes, the landowner would be able to claim an input-tax credit for the GST paid. However, if the wetland were used solely for private conservation purposes, there would be no refund of the GST.

Having purchased the farm, all the landowner's operational expenditure will be tax-deductible if this farm is used purely for grazing, or if the wetland is used for commercial purposes; for example, guided nature walks. However, if the wetland was used solely for private conservation purposes, deductions could not be claimed in respect of the wetland. The required apportionments may increase compliance costs.

The costs of fencing off the wetland will not be tax-deductible if the landowner uses the wetland solely for private conservation purposes. If the wetland is used in an environmental business, depreciation would be allowed on the fence, but it is unlikely the landowner could claim an immediate tax deduction under the 'Landcare' provisions.

If the wetland is used for private conservation purposes and if the landowner were to receive a grant to assist with the costs of construction of the fence, the landowner would have to pay tax on the grant immediately, while the deductions for the fence would be depreciated over several years.

In addition, use of the wetland for conservation purposes may increase local government rates, or attract Land Tax, and the land will not be eligible for concessions available to agriculture.

Further, the non-commercial loss provisions may quarantine any loss the landowner incurs if the wetland is used for commercial conservation purposes.

Finally, when the landowner sells the farm, small business capital gains tax concessions would not be available for the wetland if it had been used for non-profit conservation purposes. In addition, the landowner may not be able to sell the entire farm GST-free.

It can be seen that the taxation system, if applied strictly, would discourage the landowner from using land for private non-profit conservation purposes.

6 The aggregate impact of tax provisions for primary producers

Having examined the possible environmental impacts of specific tax provisions for primary producers, there remains the question of the possible environmental impacts of these provisions in aggregate. A key issue is the effect of the provisions on the level of investment in primary production.

Many of the tax provisions discussed may encourage investment in primary production-related activities. Some provisions, such as those relating to 'Landcare', conveying and conserving water, and viticulture, are explicitly designed to provide investment incentives. The tax deferrals associated with the provisions for livestock valuation, and small business capital gains tax concessions, may provide an implicit investment incentive.

One method of assessing if the tax system is providing investment incentives to the agricultural sector is to examine the amount of tax paid on income from agriculture²³.

Examination of the *1998-99 Taxation Statistics*²⁴ and the amount of taxable income derived, and tax paid, by primary producers, shows that primary production is the only broad 'small business' industry grouping with negative net business income (- 354 million)²⁵. In addition, primary producers who were listed in the 'large business' industry grouping had a net business loss of \$9.6 million²⁶.

Partnerships, trusts and companies also run primary production businesses. However, partnership and trust income is distributed in the year it is derived. When partnership and trust income and losses from primary production are included, it

²³ Dr Ken Henry, then First Assistant Secretary, Taxation Policy Division, The Treasury, addressed this issue in the conclusion of his paper to the 1996 Rural Finance Summit:

'A sector 'favoured' by many tax concessions relative to other sectors is likely to have high asset prices, yet low pre-tax returns on investment, and constant pressure for low income participants to leave the sector. Farming has the symptoms of just such a sector.' (Henry 1996)

²⁴ The most recent taxation statistics available at the time of this research.

²⁵ See table 1 — Small Business Individuals: Selected Items by Industry.

²⁶ See table 1 — Large Business Individuals: Selected Items by Industry.

appears that the net taxable income derived from primary production by all individuals in 1998-99 was \$672 million (see table 6.1).

Subtracting taxable income derived from primary production by those individuals whose main activity is primary production from total taxable income from primary production for all individuals, shows taxpayers whose main occupation is not primary production appeared to make substantial tax losses from primary production activities (see table 6.1). The tax losses of these taxpayers may have a cyclical components associated with adverse climatic effects and commodity price cycles, but significant tax losses also occur in other tax years.

Table 6.1 Primary production income of taxpayers whose main occupation is not primary production

<i>Item</i>	1998-99 \$
Total taxable income from primary production ²⁷ (a)	672 461 965
Taxable income derived from primary production by individuals whose main occupation is primary production (b)	1 686 285 924
Primary production income derived by other taxpayers (a - b)	- 1 013 823 959

Source: Australian Taxation Office Taxation Statistics 1998-99.

There is no obvious explanation why primary producers whose main source of income is other than primary production make losses (in aggregate) while primary producers make profits (in aggregate). Improper use of the tax system is unlikely to be a satisfactory explanation given the ATO's recent audit effort against 'doubtful' primary producers. The *Taxation Statistics 1998-99* state that there was a drop of 33 per cent in 'doubtful' primary producers claiming losses in that year.

Another possible explanation is that primary producers whose main occupation is not primary production have been making recent investments in agriculture. Taxation deferral arrangements associated with livestock and accelerated depreciation for certain infrastructure may be providing a substantial incentive for large capital expenditure by non-primary producers.

Yet another explanation may be that the primary production businesses of primary producers whose main occupation is not primary production are relatively small, and so lack economies of size.

²⁷ Defined as the sum of primary production partnership and trust distributions profits less losses and partnership and trust primary production deductions, plus net primary production business income profits less losses, plus income equalisation withdrawals less income equalisation deposits. Carry-forward losses from prior primary production activities are ignored.

The tax losses of primary producers whose main occupation is not primary production means that there may be little net taxable income from, and hence net tax paid by, individuals involved in primary production overall. It should be remembered that most profitable primary producers will be entitled to averaging rebates, and will therefore have lower marginal tax rates, on average, than those prescribed by the scheduled income tax rates.

Further research is needed to assess why little net tax appears to be paid on agricultural activities, and possible implications for the environment.

A Detailed Capital Gains Tax calculations for example 10

Example 10: Assume a landowner purchased a farm for \$200 000 and the fencing of the wetland cost \$10 000. The farm is sold some years later for \$250 000. The wetland comprises 10 per cent of the farm by area. The amount of tax deductions received, and CGT paid for each of the scenarios discussed would be:

Scenario 1 — Farm used exclusively for grazing

Assuming the wetland was a separate land class, the landowner would receive an immediate tax deduction of \$10 000 when the fence was erected. The landowner's CGT liability would be calculated:

Nominal capital gain (\$250 000 – \$200 000)	\$50 000
50 per cent exemption	\$25 000
25 per cent small business exemption	\$12 500
Residual capital gain ²⁸	\$12 500

In this scenario, the landowner would receive \$10 000 of tax deductions for the fence and pay CGT on \$12 500 when the farm was sold.

Scenario 2 — Wetland used for eco-business

As discussed earlier, the landowner would depreciate the fence, as the landowner would be ineligible to claim an immediate 'Landcare' deduction. Assume that when the farm is sold, the landowner has received \$6000 of tax deductions, and the fence is worth \$4000. The sale proceeds of \$250 000 would be apportioned with \$4000 allocated to the fence and \$246 000 to the land. The landowner's CGT liability would be calculated:

²⁸ It is assumed that the landowner will pay tax on this amount, and not roll it into a superannuation fund, or a new business asset.

Nominal capital gain (\$246 000 - \$200 000)	\$46 000
50 per cent exemption	\$23 000
25 per cent small business exemption	\$11 500
Residual capital gain	\$11 500

In this scenario, the landowner would receive \$6000 of tax deductions for the fence and pay CGT on \$11 500 when the farm was sold.

Scenario 3 — Wetland used for private conservation purposes

As noted earlier, the landowner would not receive income tax deduction for the cost of erecting the fence, but would be able to add the cost of the fence to the cost base of the land for CGT. The landowner's CGT liability would be calculated:

Land used for private conservation

Deemed sale price (10 per cent of \$250 000)		\$25 000
Deemed cost of land (10 per cent of \$200 000)	\$20 000	
Cost of fence	<u>\$10 000</u>	<u>\$30 000</u>
Capital loss		\$5000

Land used for grazing

Deemed sale price (90 per cent of \$250 000)		\$225 000
Deemed cost of land (90 per cent of \$200 000)		<u>\$180 000</u>
Capital gain on grazing land		\$45 000
Less: Capital loss on land for private conservation		<u>\$5000</u>
Net capital gain		\$40 000
50 per cent exemption	\$20 000	
25 per cent exemption	<u>\$10 000</u>	<u>\$30 000</u>
Residual capital gain		\$10 000

In this scenario, the landowner would receive no income tax deductions for the fence, and pay CGT on \$10 000 when the farm was sold.

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