



# LAND STEWARDSHIP

Private Investor Needs for Land  
Stewardship Investment



Land Stewardship  
A Victorian Catchment Management  
Council Project in collaboration with  
Catchment and Water Services Division  
(Department of Sustainability  
and Environment).

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# about this paper

This Information Paper has been commissioned by the Victorian Catchment Management Council (VCMC) and the Department of Sustainability and Environment (DSE) as part of a Land Stewardship project funded by the National Action Plan for Salinity and Water Quality (NAP). It has been prepared by the Lonsec Alternative Research Division of Lonsdale Securities Limited (ABN 56 061 751 102).

It has been developed to feed into the Land Stewardship project by challenging current thinking and presenting new ideas. The need for an information paper to address the needs of the private sector was highlighted in a paper entitled: 'Ecosystem Services through Land Stewardship Practices: Issues and Options'. That paper was developed in consultation with a range of stakeholders.

As part of the Land Stewardship project, this document forms part of a set of papers that contribute to discussion and debate

underpinning the preparation of Land Stewardship policy and program proposals. This paper focuses on private investor needs for Land Stewardship. The other papers focus on issues associated with:

- ▶ Ecosystem Services through Land Stewardship Practices (an Issues and Options Paper);
- ▶ Innovative investment vehicles for the delivery of grants and payments for ecosystem and other non-market services
- ▶ The use of environmental management systems and voluntary environmental management agreements;
- ▶ Opportunities to define environmental duty of care and use of this instrument to increase the effectiveness of catchment management;
- ▶ Social relationships to propositions for sustainable futures for the rural landscape.

## glossary

ASIC	Australian Securities and Investment Commission	MIS	Managed Investment Schemes
ATO	Australian Taxation Office	MSCI	Morgan Stanley Capital International
DJSI	Dow Jones Sustainability Index	NRM	Natural Resource Management
EMS	Environmental Management Systems	PDF	Pooled Development Fund
ESL	Earth Sanctuaries Limited	R&D	Research and Development
IBTOS	Infrastructure Borrowing Tax Offset Scheme	SAM	Sustainable Asset Management
IRR	Internal Rate of Return	SME	Small-& Medium Enterprise
		SRI	Socially Responsible Investment

# 1: introduction

The current level of landscape decline in the Australian rural environment is presenting a rising ecological, social and economic challenge. ACF states that an annual investment of around \$3.7 billion per annum of public funds alone is required for a sustained period to arrest land and water degradation (ACF 2000). Non-Government sources of funding for Natural Resource Management (NRM) come from NGOs, philanthropic activities and private sector investment. The current level of private sector investment in NRM is a significant share of overall funding.

New investment opportunities aimed at the private sector need to be developed to assist the Government's financial commitment to environmental protection (Astolfi et al, 2001). However at present, there are impediments to leveraging further private investment in landscape change, most notably the absence of competitive returns, high levels of risk and market failures.

The first section of this paper discusses these and other impediments and disincentives for private investment in land stewardship. The second section of the paper discusses the current and future sources of funding for private investment including banks, investment managers and equity markets. The third section discusses key determinants for private investor needs such as industry outlook and project management. Section four discusses the main natural resource management private investment opportunities including: management change, new infrastructure and land use change. Section five discusses rural land stewardship private investment opportunities such as new alternative agricultural/horticultural products, market-like mechanisms for public goods and Government intervention. The final section states the conclusions of the paper.

# 2: barriers and disincentives for private investment in land stewardship

In order to assess the requirements for private investment into natural resource management and ecosystem services, it is necessary to firstly discuss in detail the barriers and disincentives which currently exist.

## 2.1 LOWER COMMERCIAL RETURNS

Private sector investment in natural resource management and landscape change is driven in the long term by the returns of a project commensurate with risk. In comparison with other investment opportunities including managed funds, equities and property, the returns derived from investing in sustainable landscape change are typically lower. If the initiative does not offer returns commensurate with the increased level of risk then there is little incentive for investors to invest in sustainable landscape change and land use practices. Many of the natural resource management projects such as forestry plantations have high initial costs with a medium to long-term project life. Consequently investors have a long wait before they receive returns on investment. For this reason the majority of these projects need to be tax effective to provide a further incentive for investors.

## 2.2 HIGH LEVELS OF RISK

Long-term commercial ventures such as plantation forestry and sustainable agricultural and horticultural ventures are subject to seasonal and climatic conditions which generally increase the level of risk for investors. As sustainable land management projects that provide commercial returns for investors are an emerging industry with a limited history, the level of risk is also greater than more established investment opportunities. Enthusiasm for rural investment opportunities is also limited due to the emerging nature of this investment class and absence of long term commercial success and profit driven results for investors, hence there is increased risk.

## 2.3 ABSENCE OF AVAILABLE FUNDS

A farmer survey of 101 farmers spread across Australia and different forms of land use, indicated some land owners perceive environmental quality as a luxury good, hence demand increases only if/when an individual's level of income is high (Allen Consulting Group, 2002). The recent costs of the drought and decreasing returns from traditional primary sector industries has reduced the level of income and consequently availability of funds allocated to resource protection. This is a major issue preventing landowners from addressing environmental threats. The absence of short-term commercial benefits for natural resource managers from investing in resource protection is also an inhibiting factor.

## 2.4 MARKET FAILURES

Significant additional impediments to private investment in natural resource services have been identified in market failures associated with public goods, including poorly defined property rights, externalities, asymmetric information and intergenerational equity. Public goods are defined by two characteristics. They are "non-excludable" and "non-rival". Because they are non-excludable, public goods cannot be supplied through normal market mechanisms, in which provision is contingent on payment. Because they are non-rival, it would be inefficient to charge for their consumption, even if it were practical. Public goods are typically non-marketable goods such as biodiversity and water quality. They usually lead to the problem of free riding (tragedy of the commons) where the level of investment is less than the level of consumption resulting in the degradation of the good.

The absence of effective and/or enforceable property rights also leads to the over use and rapid depletion of natural resources such as water catchments. A common problem in natural resource management occurs when the interests of the land manager are not aligned with the interests of the public. For example, the public may benefit if a private landholder was to plant native trees on their property as it would reduce groundwater tables, increase biodiversity and improve water quality of rivers and water catchments. However there are limited short-term incentives for the private landholder to plant native trees on their property as it typically results in loss of earning income generated from more profitable agricultural resource use.

Another common problem associated with natural resources are externalities, which occur when production or consumption of a good or service results in an unpaid cost or benefit for another party. In terms of impediments to private investors, if there are positive externalities or spill overs from private investment in natural resources, the commercial return for the investor may be less than the returns gained from other investment opportunities, thus there is a disincentive to invest.

The problem of information asymmetry occurs when various players in the market have different levels of information. In relation to sustainable resource management projects, investors or funding agencies are likely to have less information on the positive environmental outcomes of projects than the business or landowner. For this reason investors may underestimate the level of environmental benefits of the project. Consequently investors may be reluctant to pay higher prices that are associated with investments with significant environmental benefits. Hence asymmetric information can lead to under investment in positive landscape change projects. Improved accountability and reporting of environmental conservation measures would also enable governments to assess to what extent environmental goals are achieved (Byron, 2000).

However, the problem coupled with asymmetric information is the relatively high cost of obtaining and collecting information.

Due to the long timeframes required to reverse environmental damage, many of the benefits and returns of current landscape change will be for the benefit of future generations. Consequently there is little commercial incentive for private investors to invest in projects with positive landscape change outcomes.

## 2.5 POLICY FAILURES

The objective of undertaking R&D projects by the private sector is to create new or improved products, processes, materials and services for commercialisation in Australia and overseas. The reduction of the R&D tax concession from 150% to approximately 125% has reduced the incentive for private investment in R&D in sustainable landscape change projects (APIC, 2002). A current inhibiting factor in these projects is the high production costs that limit the commercial viability of the projects. Increasing the level of R&D in sustainable landscape change projects would most likely reduce costs of production, thus increasing the commercial viability of the projects.

The short-term electoral cycle of the Australian political system hinders some long-term planning horizon objectives. Due to the long project life of some sustainable landscape change projects, there is a disincentive for governments to invest in long-term environmental policy (Allen Consulting Group, 2002). The absence of bi-partisan support also inhibits the success of government's environmental policy. The absence of specific legislative and regulatory frameworks also hampers the promotion of private investment in natural resource management. An example of this is the absence of a clearly defined and effective market for the trading of carbon credits, biodiversity credits and salinity credits.

## 2.6 BUSINESS AND COMMUNITY PERCEPTIONS

The lack of alignment between interests of land managers, commercial investors and the broader community, is an inhibiting factor for the success of long-term sustainable landscape change projects. Many land managers are reluctant to hand over responsibility to businesses whilst many sectors of the community are sceptical of commercial enterprises undertaking sustainable landscape change projects (Allen Consulting Group 2002). This is the case because they question whether environmental protection and sustainability is consistent with profit maximising objectives of commercial projects. Combined with this fact there is the concern that projects resulting in significant landscape change such as large-scale forestry plantations will have negative socio-economic impacts of the rural community such as decreased employment. At the other end of the spectrum, many financial intermediaries

such as banks and fund managers demonstrate limited interest in environmental projects for the reasons previously discussed, most notably the level of risk and absence of attractive returns (RIRDC, 2000). Consequently there are limited funds available for investment in sustainable landscape change projects, whilst the burden of this funding is typically leveraged from the public sector. Despite this current situation, the private sector has the potential and the responsibility to become a key player through further development of innovative and returns driven projects that focus on environmental protection and sustainable landscape change.

Table 1 summarises the disincentives for private investment in natural resource management and land stewardship. The degree of disincentive and limitation to leverage private investment in NRM is based on a qualitative assessment derived from the information provided in section 1.

Table: 1

### BARRIERS FOR PRIVATE INVESTMENT

<i>BARRIER FOR PRIVATE INVESTMENT</i>	<i>DEGREE OF DISINCENTIVE</i>	<i>LIMITATION TO LEVERAGE PRIVATE INVESTMENT IN NRM</i>
Low commercial returns	Medium	Medium
High levels of risk with low returns	Very High	High
Absence of available funds	High	High
Market failures	High	High
Policy failures	Medium	High
Business and Community perceptions	Medium	Medium

# 3: current and future sources of funding

The challenge faced by the Government and other key stakeholders is to increase the pool of funds committed to sustainable landscape change projects. This objective can only be achieved when these investment opportunities are associated with expectations of commensurate returns that are ultimately more competitive than traditional investment options. Current non-government sources of funding for investment in natural resource management projects include:

- Banks,
- Fund/Investment managers,
- Superannuation funds,
- Dollar for dollar government funding grants,
- Equity markets,
- Ethical and Socially Responsible Investment (SRI) Funds,
- Firms and Institutions,
- Bequests and donations to environmental charities.

## 3.1 BANKS

Finance for private investment in natural resource management projects is offered through both commercial and investment banks. A key consideration in determining the conditionality of the finance is the level of risk associated with the project and the investor's ability to cover finance repayments. Due to the typically high level of risk, there are limited opportunities for firms to access capital funds to undertake commercially driven projects with beneficial environmental outcomes. The absence of security (e.g. land) in the majority of MIS projects is also a disincentive for banks to finance new and emerging agricultural and horticultural industries. Banks typically appraise all propositions very cautiously and they have stringent repayment and security constraints that will not encourage investment in current NRM projects.

## 3.2 FUND/INVESTMENT MANAGERS AND SUPERANNUATION FUNDS

Sustainable land management projects that demonstrate attractive and comparable returns provide investment opportunities for fund/investment managers and superannuation funds. However, a key consideration for investment managers in alternative investments is the level of tax effectiveness. Tax deductible benefits can be a significant advantage which can be increased through negative gearing. Investors (through the fund manager) take a loan to purchase prescribed interests in the venture and expenditure of specific items prescribed by the Australian Taxation Office (ATO) are tax deductible items. However, perceptions of these projects are not positive, as a number of ventures have not fulfilled the projected long term capital gains projected in the financial forecasts. Recently introduced Australian Securities and Investments Commission (ASIC) regulations limit the promoters' ability to release long-term estimates of internal rates of returns in an attempt to prevent investors being misled.

## 3.3 DOLLAR FOR DOLLAR GRANTS

Dollar for dollar grants are usually offered to landowners and natural resource managers who are proactively investing in eco-system protection. These grants help share the burden of positive environmental investment and provide an incentive for landowners to participate in environmental positive development. However, the current level of government funds allocated to dollar to dollar grants may fall short of the costs required to arrest existing levels of environmental degradation on private land.

### 3.4 EQUITY MARKETS

At present there are only a few publicly listed companies that specialise in the provision of environmental services. Earth Sanctuaries Limited (ESL) is an eco-tourism company that develops, operates and manages Australian wildlife sanctuaries, with the aim of conserving Australian wildlife (Earth Sanctuaries Limited, 2001). ESL was able to attract a medium sized pool of funds for investment in natural resource management. However the company failed to provide adequate returns for investors and has recently undergone operational restructuring and downsizing. ESL is experiencing a number of obstacles and is possibly disadvantaged by current government policy. Nevertheless, ESL is continuing to provide a medium for private investment in ecosystem services, despite the challenges.

### 3.5 SOCIALY RESPONSIBLE INVESTMENT (SRI)

SRI is estimated to be worth around \$13.9 billion in Australia and has been steadily increasing over the last few years (Ethical Investment Association 2003). SRI reflects the growing awareness of the need for more sustainable practices and the investor's commitment to environmental quality and social justice.

Whilst SRI is currently a niche market for investors, it has potential to become a viable mainstream investment option (Lonsdale Securities, 2001). Due to the emerging nature of SRI, research on its performance is currently inconclusive. However a report prepared by Mercer Financial Planning indicated that the Dow Jones Sustainability Index, a well recognised SRI measure, outperformed the Morgan Stanley Capital International (MSCI), the conventional yardstick for global stock performance, from the period between December 1993 and December 1999. A joint project by Westpac and Monash University found a similar historical out-performance. In 2000 they launched the Eco Index, a local measure of Australia's top 150 companies rated by SRI. From 1987 and 1999, the Eco index outperformed the All Ordinaries Index over most time frames, although the tech boom was in full swing during these years (Mercer Financial Planning, 2002). Since the introduction of SRI in 1996 its growth rate has been 700% and over the same time frame SRIs in Australia have increased from 11 to 74 (Ethical Investment Association 2002). Companies are also faced with the increased costs of poor environmental performance and market reaction to negative environmental news. Over time this could force companies to become triple-bottom line compliant, resulting in a positive outcome for leveraging private investment in sustainable development.



### 3.6 FIRMS AND INSTITUTIONS

There are a number of firms and institutions that raise capital to undertake landscape change projects as well as fund new infrastructure projects that have positive environmental outcomes. The individual firm or institution is responsible for initiating the investment venture and developing a prospectus according to the relevant Corporations Laws. A key driving force for firms to initiate and manage projects is to spread the risk of capital investment across a number of investors whilst also have the potential to gain attractive promoter profits. Examples of positive landscape change projects currently offered include hardwood timber plantations and sandalwood plantations, which have the capability to reduce groundwater tables. New infrastructure projects include the upgrade of irrigation water channels, which minimise water-loss, and the installation of new processing plants to allow for the development of new industries in rural areas. A number of individual agricultural/ horticultural investment projects have been successful in raising significant funds for new industry development. They have provided confidence to others in the industry, thus stimulating further investment. However, some badly managed investment schemes have perhaps tarnished the reputation of new agricultural industry development.



### 3.7 BEQUESTS AND DONATIONS TO ENVIRONMENTAL CHARITIES

Philanthropic activities in the community have provided both funding for improved environmental outcomes and increased community awareness of environmental concerns. However donations directed at environmental goods compete with other recipients of charity that have greater incentives through the provision of tax deductions. The Federal Government is also trying to introduce new legislation that may deny organisations their standing as charitable groups if they are “attempting to change the law or government policy.” Charities lobbying for changes to government policies may lose their tax-deductible status unless they are able to show that their advocacy of reforms was “ancillary or incidental” to their core role as a charity organisation (Nathan, 2003).

# 4: key determinants for private investor needs

In the assessment of agribusiness investment projects, investment services generally focus on:

- The sustainability of the project and the project team,
- The returns to investors and to the project promoter, and
- Ensuring the project compares favourably to other investment opportunities in terms of the risk/return relationship.

Combined with these criteria investment services generally use a range of determinants to assess if private investor needs are satisfied. If sustainable landscape change projects are to attract private investors then the following criteria need to be adequately addressed:

- Industry outlook,
- Management,
- Product sales and marketing,
- Agronomy and Environmental considerations,
- Projected financial returns,
- Project assumptions,
- Risk management,
- Corporate resources,
- Investment structure,
- Application of funds and ongoing costs,
- Taxation, and
- Other investor benefits.

## 4.1 INDUSTRY OUTLOOK

One of the most important determinants for private investor needs is assessment of the relevant industry outlook and potential of the product. The investment project needs to be in a sector where independent market analysis demonstrates market demand exceeds supply. Industry analysis also focuses on the possibility of import replacement and export opportunities as well as the competitiveness in target markets and costs factors.

Threats from new technologies and substitutes as well as existing levels of industry co-operation and supporting infrastructure are also important considerations. Due to the emerging nature of alternative agricultural investments, the industry outlook is often not positive as supply markets are not established or are under developed. Industry and government supported promotion is an option for improving the industry outlook of alternative investment products as evidenced by the level of investment in the Australian plantation industry.

## 4.2 MANAGEMENT

Key areas of importance under the management criteria include the track record of the project manager as evidenced by prior project success as well as the skill, expertise, reputation and credibility of management. The on farm management skills are also an important consideration as well as the ability of the company to adapt to technical change and the effectiveness of compliance in conforming to ASIC and ATO regulations.

## 4.3 PRODUCT SALES AND MARKETING

Investor confidence in the project is high when market analysis demonstrates a project's marketing strength supported by forward sales contracts, and the ability for the company to achieve market share. Other important variables in this sector include the degree of price certainty and historical price volatility combined with the presence of industry marketing bodies. As many alternative investments have a limited history in Australia, there is an absence of efficiently operated product markets and consequently consumer awareness or demand. Industry and Government support of promotional and marketing programs is an option for improving the sales and marketing opportunities for alternative investment products.

#### 4.4 AGRONOMY AND ENVIRONMENTAL CONSIDERATIONS

For a project to score well in this criterion, the site must be independently assessed to validate the suitability of climatic and environmental conditions of the project site, disease and pest control and the track record of the product variety/species. Land use environmental benefits and costs are also considered. Although environmental considerations are not a predominant criteria for many investors, as incomes rise, people are becoming increasingly interested in issues like animal welfare and environmental protection, and are prepared to use their purchasing power in pursuit of these objectives (Kefford, 2002). The use of Environmental Management Systems (EMS) accreditation is also becoming more widespread in the larger corporate MIS projects.

#### 4.5 FINANCIAL RETURNS

Important considerations in this section of the key determinants include the potential investment Internal Rate of Return (IRR) compared to industry benchmarks, competitors and other investment class alternatives. Analysis is also carried out to determine and compare the benefit cost ratio. Sensitivity analysis and scenario modelling is also used to determine the strength of the investment opportunity. In recent years many agribusiness schemes have recorded actual financial returns to investors that were significantly lower than the forecasts published in the prospectuses. Misleadingly high projected financial returns and assumptions (price and yield) in prospectuses is presumably an attempt to increase the attractiveness of the projects to financial advisers and investors. However recently introduced ASIC regulations are restricting the promoters' ability to release long-term estimates of internal rates of returns in an attempt to prevent investors being misled.

#### 4.6 PROJECT ASSUMPTIONS

Although recent ASIC rulings have limited the ability of promoters to state project assumptions due to the inherent level of risk associated with alternative investments, good projects have commercially realistic or conservative yield and price assumptions. Projects that have highly ambitious assumptions are viewed with a degree of caution by investors. This is the case because many previous alternative investment projects with highly ambitious assumptions have fallen short of their forecast returns.

#### 4.7 RISK MANAGEMENT

All projects need to have adequate risk assessment and management plans and promoters must demonstrate their ability to minimise controllable risk. The availability of a sufficient insurance policy and asset protection scheme is also important. Price or exchange rate protection measures such as put-option agreements or currency hedging also provide benefits for potential investors. Many MIS projects need to prepare an Environmental Impact Statement (EIS), discussing the environmental impacts of the project and the ways in which potential environmental risks are mitigated.

#### 4.8 CORPORATE RESOURCES

In this section, projects need to demonstrate financial viability as well as demonstrate the use of total investor monies for the life of the project. The viability of the financial group is also assessed.

#### 4.9 INVESTMENT STRUCTURE

Projects need to offer investors maximum legal protection over their investment for the life of the project whilst also offering investors a structured exit mechanism within ATO constraints. Projects that also offer investors freehold title and water ownership are more favourable to potential investors.

#### 4.10 APPLICATION OF FUNDS AND ONGOING COSTS

Projects need to demonstrate an effective agricultural use of investor funds to maximise investor value whilst also demonstrating reduced upfront commissions for financial planners. Management fees and operating costs also need to compare favourably with other alternative investment projects. Currently this is not the case, resulting in a poor investor risk return relationship.

#### 4.11 TAXATION

Projects offering tax incentives need to have been issued with the relevant Australian Tax Office Product Ruling to ensure that deductions are covered by the ATO. The past performance of the promoter in meeting tax deadlines or compliance requirements will also determine the investment risk of the project. As the majority

of alternative investments are tax effective, this criteria for investment is important.

#### 4.12 OTHER INVESTOR BENEFITS

Other considerations for potential investors in alternative projects include the availability and competitiveness of finance, the level of communication and transparency of the promoters in regards to annual reports, as well as any other benefits offered by the project. Included in this criteria are the possible environmental benefits and options on currently non-marketable goods such as carbon trading if, and when the relevant legal framework is introduced.

Table 2 summarises the importance of key determinants for private investment in natural resource management and land stewardship. The degree of importance for investment is based on a qualitative assessment derived from the information provided in section 3.

Table: 2

#### KEY DETERMINANTS

<i>KEY DETERMINANT</i>	<i>DEGREE OF IMPORTANCE FOR INVESTMENT</i>
Industry outlook	High
Management	High
Product sales and marketing	High
Agronomy and Environmental Considerations	High
Financial returns	High
Project Assumptions	Medium
Risk management	High
Corporate resources	Medium
Investment structure	Medium
Application of funds	Medium
Taxation	Low
Other investor Benefits	Low

# 5: natural resource management private investment opportunities

There are four broad areas currently available for investment in sustainable land management practices: management change, new infrastructure, land use change and technology change.

## 5.1 MANAGEMENT CHANGE

Management change predominantly focuses on the introduction of new land management practices aimed at improving the sustainability of natural resources. The specific changes required are dependent on the current sustainability threats associated with the specific property. Examples of management change practices include controlling dryland salinity, more efficient water use, planting of deep rooted native trees to reduce groundwater tables, etc. The financial burden of management change is predominantly borne by the property manager. As management change practices can be expensive there is limited incentive for private landowners to employ such techniques. Consequently, command and control policy options are employed to enforce some management techniques. However, lack of available funds is a significant impediment for many landowners to implement management change.

## 5.2 NEW INFRASTRUCTURE

Private investment in new infrastructure includes investing in infrastructure aimed at improving the environmental sustainability of land use. Examples of infrastructure development include the construction of water infrastructure that improves the allocation and efficiency of water, wetland construction and the construction of salt traps. This area of private investment is a crucial component for sustainable natural resource management. Another example of agricultural investment in new technology is the reinvestment of surpluses generated within agricultural production from both small scale farmers and corporate and large family operated farms.

There is a role for Government to subsidise new technology for farmers that has environmental benefits.

The National Waterbank Limited is an unlisted public company currently raising capital to purchase existing water licences on the open market within the Murray-Darling Basin. The company will then trade in temporary and permanent transfer of these water rights for return on capital and capital gain (National Waterbank, 2003). This investment proposal is an innovative opportunity for private investment in natural resource management. The possible environmental benefits of this project include a more efficient allocation of water.

Due to the high costs of infrastructure development and limited access to high returns, there is little incentive for private investment in on-ground capital works designed to improve natural resource management. For this reason, State and Federal Government is typically responsible for subsidising or funding infrastructure development projects. There is also a requirement for the development of new infrastructure to support emerging alternative agricultural/forestry products such as timber processing plants and harvesting equipment. At present the high up-front costs of new support infrastructure is an inhibiting factor for the establishment for emerging markets. Further government support for the development of new infrastructure would help leverage private investment, through facilitating requirements for the development of new agricultural/forestry products that have added environmental benefits.



### 5.3 LAND USE CHANGE

Land use change is the development of new agricultural, forestry, aquacultural or horticultural products on land that was previously used for traditional rural production. These products are currently a viable option for leveraging private investment in natural resource management and ecosystem services. At present the majority of private investment devoted to land use change is secured in the forestry sector for the production of products including; hardwood, softwood and pulpwood for timber related products, oil production from mallee and sandalwood plantations, and pharmaceutical medicine production.

Currently, one of the key drivers for investment in many land use change products is the level of tax effective benefits derived from investment. However, despite the increasing size of these land use change commercial projects, there are currently a number of barriers preventing further development in the markets. Problems include: difficulties accessing finance, a lack of commercially viable options with comparable returns to other investment opportunities, high up-front and production costs with a long wait for returns and limited investment in R&D and processing facilities. There is also currently no market for new non-agricultural services such as carbon, biodiversity and salinity credits or provision of environmental services such as water quality. These products are discussed further in the following section, under the new alternative agricultural/horticultural products section.

Land transaction procedures are used for existing farmers who are interesting in purchasing a new block of land or intending on moving to a larger farm. These procedures require certification of the NRM status of farms before sale. In irrigation areas, investment in new irrigation cannot occur until a whole farm plan has been produced.

### 5.4 TECHNOLOGY CHANGE

Technology change refers to the implementation of technology aimed at improving the environmental management of natural resources, such as improved irrigation systems and input application systems. Work carried out for the Sunraysia Salinity Management Plan indicated that income could be increased by 10% if new technology was adopted in parallel with improved management, for example, irrigation scheduling and systems maintenance along with improved irrigation systems. Although there are significant long-term environmental and financial benefits from investing technology change, many private landowners cannot afford the technology change due to the typically high initial costs. For this reason there is a role for financial assistance to encourage private investment in technology change.

# 6: land stewardship private investment opportunities

With an annual investment of around \$3.7 billion required per year of public funds alone to arrest land and water degradation, new methods for leveraging private investment in natural resource management and landscape change need to be developed. The current rationale for private sector investment is derived from expectations of commensurate returns. One of the major problems previously identified is the absence of returns commensurate with risk from investments in environmental protection and ecosystem services. The following is a list of private investment options aimed at increasing the pool of funding for environmental services:

- New alternative agricultural/horticultural products,
- Further developing market-like mechanisms for public goods,
- Promotion of Socially Responsible Investments (SRI) by financial institutions,
- Government Intervention with effective tax options:
  - Increasing tax concessions for private investment in R+D,
  - Infrastructure Borrowings Tax Offset Scheme (IBTOS),
  - Other tax policy options,
- Government Intervention with policy and regulatory structures,
  - Land leasing
  - Revolving funds,
  - Pooled Development Funds (PDFs),
  - Demonstration project finance,
  - Aligning private interests with positive environmental practices.
- National levy
- Landscape amenity and community development,
- Labelling and brand marketing
- Accelerated depreciation, and
- New class of financial intermediary.

These private investment options will each be explored separately.

## 6.1 ALTERNATIVE AGRICULTURAL/HORTICULTURAL PRODUCTS

There is potential for further development of alternative investment products that result in landscape change and have positive environmental impacts. Current examples of these types of projects include Eucalypt plantations and olive groves. These types of projects have had proven positive environmental impacts including Carbon Dioxide absorption, improving fauna biodiversity, protection of water catchments and water quality in some areas. Further alternative investments include sandalwood, aquaculture, cherries, etc.

Current problems associated with alternative investment forestry products include the concentration on vegetation monocultures, which limit the attainment of biodiversity. Secondly, many of these projects are performing well in areas of high rainfall but there is limited promotion of these investments in areas with mid to low rainfall where there are often higher levels of degradation and need for landscape change. The challenge is to further develop native cultivars that will perform well in areas of where there is a greater environmental need for resource protection, whilst also offering investors attractive returns (CSIRO, 2001).

The introduction of new alternative investments that have positive environmental outcomes, such as bush foods, need to be marketed with a strong focus on the environmental benefits to both investors and consumers. However, it is of crucial importance for the product to be developed and marketed to generate returns that provide an incentive for private sector investment (Derkley, 2003). Alternative investment projects that also benefit the rural community in socio-economic areas such as employment, population and amenity should be prioritised.

## 6.2 FURTHER DEVELOPING MARKET-LIKE MECHANISMS FOR PUBLIC GOODS

A great deal of research and discussion has been devoted to the development of market-like mechanisms that aim to internalise negative environmental externalities through creating a tradeable market for public goods, such as carbon, biodiversity and salinity credits. Tradeable permit schemes would provide a greater incentive for private investment in environmental protection, however, there are currently limited legal frameworks to allow for these systems to be employed. When and if these systems do come into fruition and are marketed efficiently, there is potential for significant incentives for investment promotion for both retail and institutional investors (ABARE, 2001).

Many of the current alternative investment projects, especially the plantation timber sectors, include a clause denoting the distribution of carbon credits accrued when and if the legal framework becomes available. Incorporating biodiversity and salinity credits into an efficient legal framework would provide further incentives for leveraging private investment in sustainable landscape change and environmental services.

Auction systems such as the “Bush Tender Trial,” have also demonstrated potential to provide a price signal for traditionally non-marketable pure public goods such as biodiversity. Attaching a dollar valuation for the supply of ecosystem services and land management change can help ensure efficient allocation of available funds, thus providing sufficient information for appropriate private sector investment opportunities. Other examples discussed in detail in the Land Stewardship Initiative include the Vegetation Bank and the Cap and Trade approach.

## 6.3 PROMOTION OF SOCIALLY RESPONSIBLE INVESTMENTS (SRI) BY FINANCIAL INSTITUTIONS

There are a number of socially responsible investment (SRI) fund managers who invest in companies, which aim to create shareholder value via investing in companies that promote triple bottom line objectives, (social, environmental and economic sustainability). Sustainable Asset Management (SAM) is an example of an asset management company that invests in companies that are in line with the SAM Corporate Sustainability Assessment. Their client base in Australia is predominantly made up of superannuation funds. The global SAM Company worked in cooperation with the leading index provider, Dow Jones & Company to develop the first sustainability stock index family, the Dow Jones Sustainability Index (DJSI). The DJSI provides investors and companies with insight into the trends and events driving global supply and demand of sustainable goods and services. It is anticipated that it will increase the awareness and appreciation of sustainable investment strategies.

As previously discussed there is a role for Government to assist in the promotion of SRI through establishing a set of regulations that specifically encompass environmental corporate accountability. A ‘clean and green’ accreditation framework could be introduced to give certainty to investors that invest in SRI. Government promotion is required to further stimulate SRI due to its emerging nature and lack of general community and investor awareness.

## 6.4 GOVERNMENT INTERVENTION WITH EFFECTIVE TAX OPTIONS

### ► Increasing Tax Concessions for Private Investment in R+D

Firms privately investing in R&D are eligible to receive a tax concession of more than 100% of their R&D expenditure. The aim of the tax concession is to stimulate the private sector to participate in R&D, thus easing the financial burden of high up-front and R&D costs on the Government. The concessions also provide an incentive for private investment to develop innovative products. Increasing the level of tax concessions for R&D would provide further incentive for private investment in alternative agricultural and horticultural products, as it would effectively reduce the up-front costs whilst also reducing the level of risk associated with new product development.

### ► Infrastructure Borrowings Tax Offset Scheme (IBTOS)

The high cost of infrastructure is currently a disincentive for private investment as up-front costs are usually uncompensated for a number of years. The IBTOS attempts to negate this problem by reducing the initial up-front cost of infrastructure. The IBTOS allows infrastructure financiers to apply for a tax rebate on interest received from infrastructure providers, in return for the infrastructure providers forgoing a tax deduction on that interest. Therefore financiers are able to offer lower rates of interest or other up-front benefits to infrastructure providers (Allen Consulting Group, 2002).

This scheme allows for government support of infrastructure projects whilst also providing incentives for private investment in infrastructure. Applications are assessed by an Inter-Departmental Committee chaired by the Department of Transport and Regional Services.

The application is evaluated on the economic and social benefits and costs of the project, the commercial viability of the facility, the estimated taxation revenue that would be foregone and any other matters considered relevant.

The scheme has proven to be successful in leveraging private investment in infrastructure projects. A similar model could be followed to promote private investment in sustainable landscape change and ecosystem services where high up-front costs provide a disincentive for private investment.

### ► Other Tax Policy Options

Providing a tax incentive for investment in regionally accredited environmental land use changes would provide a further incentive for private investment via increasing the after-tax return. A tax incentive scheme may also be more effective than a Government grant program as it negates the long application and assessment process that currently discourages private investment, whilst also being more sympathetic to encouraging innovation.

Donations of environmentally sensitive land to recognised charitable organisations attract a capital gains tax even though the donor receives no money or benefit. The provision of capital gains relief would strengthen the organisations' ability to contribute to the community. Alternatively, private landowners could sell environmentally significant land at a reduced price, whilst the donor is able to claim a deduction for the difference between the reduced sale price and the market value of the land (Allen Consulting Group, 2002).

Costs associated with converting private land into native covenants are tax deductible to the value of the land subject to the covenant. Further to this, private expenses on the maintenance and management of these covenants should also be tax deductible (Hatfield-Dodds, 2003 a and b).

## 6.5 GOVERNMENT INTERVENTION WITH POLICY AND REGULATORY STRUCTURES

There is an important role for Government intervention with policy and regulatory structures that create incentives for leveraging private investment in natural resource management and ecosystem services. Command and control policies for resource management put the onus of protection on land users, but are not effective at driving further investment from the broader private sector.

As demand for improved ecosystem services and environmental goods is typically citizen driven, government policies aimed at promoting consumer awareness may drive consumer demand and thus stimulate private investment in new markets that have demonstrated potential for returns commensurate with the level of risk. Information assimilation through regulatory structures, for example, the establishment of one unified regulatory body responsible for the accreditation of bio labelling, may assist in promoting consumer awareness and demand.

Enforcement and accreditation systems for natural resource managers that are well understood by consumers have the potential to drive consumer demand for the specific product. A recognised and promoted Government regulatory structure for a “triple bottom line” style accreditation of public companies would also improve the adequacy of available information, with the potential to stimulate private investment in ethical and SRIs.

## 6.6 LAND LEASING

A farmer who seeks to expand has several options which include share farming, leasing, using contractors or entering into joint ventures with other investors. The risks and rewards associated with each of these options vary and each landowner and farmer needs to assess the suitability of the option to their needs.

A traditional lease generates a guaranteed 5-6% return for the landowner and a variable return to the farmer tenant (RIRDC, 2003). A participatory lease provides for a base return for each of the landowner and tenant and a sharing income once a certain threshold has been achieved.

More intellectual property needs to be invested into the leasing of rural land in Australia as many leases are short term and do not adequately deal with the requirements of landowners and tenants. Only 6% of all Australian farm land is leased compared to 35% in the UK and 50% in the USA. Many farm businesses would be better off financially by leasing their land and investing some of the income into land improvements (RIRDC 2003). Under this scenario, the corporate sector may not invest in NRM, but in productive agriculture in which NRM outcomes are also achieved.

## 6.6 REVOLVING FUNDS

With a revolving fund scheme, private land that has high conservation value is purchased and then the land use is modified, securing the land use change with a conservation covenant. The land is then resold to a buyer who is required to maintain the natural resource management duties, and any profits made from the sale of the land are used for the acquisition of more land.

The Trust for Nature (Victoria) is a non-profit organisation that works to protect Victoria's native bushland. Under this program, the Trust purchases land with a high conservation value and then puts a conservation covenant on the land (Trust for Nature, 2002).

The NSW Nature Conservation Trust Act 2001 also operates a similar revolving fund scheme for the protection of private land with high conservation value with the hope of transferring the management responsibilities of the scheme to the private sector in the long-term (Nature Conservation Trust Bill, 1999).



At present there is limited financial incentive for private landholders to sell private land such as structural components and the transaction costs are high. As the conservation value of specific private property increases, there may be greater opportunities for private sector involvement in revolving fund schemes. Despite this consideration, environmentally sensitive land that is rehabilitated and then re-sold to private landholders under the Trust for Nature program in Victoria, on average receives a 95% return on capital (Gunner, 2002)

### 6.7 POOLED DEVELOPMENT FUNDS (PDFs)

Pooled Development funds (PDFs) have helped assist equity raising for small to medium sized enterprises (SMEs). Under the legislation, private companies are established as the PDF to invest in SMEs on behalf of private investors. Under the Pooled Development Funds Act 1992, PDFs and their shareholders are entitled to concessional tax treatment which includes:

- PDFs are taxed at 15 percent on the SME component of their
- investment income,
- unfranked dividends are tax exempt in the hands of the investors, and
- capital gains from shares held in the PDF are tax exempt (Pooled Development Funds Registration Board, 2000).

PDFs could have a modified investment criteria focused on SMEs that are involved in natural resource management and landscape change. The significant tax advantages would provide an effective incentive to drive private investment in environmental sustainability. The key challenge is for PDFs to invest in environmentally responsible SMEs that can generate a return for investors. The proposed structure would focus on investors with larger long-term portfolios, comfortable with a high risk profile.

### 6.8 DEMONSTRATION PROJECT FINANCE

Government grants and in-kind contributions, (technology, infrastructure, human resources) for the support of demonstration projects in innovative agricultural/horticultural and aquacultural products, can lead to private investment. As previously discussed, a significant impediment to landscape change and the development of alternative products that have beneficial environmental outcome is the high up-front costs.

With greater industry and government involvement in the early stages of product development, private investors are not exposed to levels of risk that create a disincentive for innovation. Unfortunately, future returns are also reduced due to the increased cost of acquiring intellectual knowledge owned by the demonstration project vendors. As an alternative, if one private company was exposed to the risk and carried out all the R+D and paid all development and up-front costs, then that company would have the property rights for the product, and hence a potentially higher rate of return.

However, if Government and Industry have a greater level of involvement in the development stages of a new alternative product, then the level of risk is reduced whilst the level of information assimilation is increased, thus reducing the required rate of return. For environmental services and alternative products aimed at generating positive environmental outcomes, the level of government or industry support in the development stages of the project is a critical factor. Increasing the level of demonstration project finance could result in increasing the number of on-ground working examples of new agricultural technologies to demonstrate their possible commercial viability, thus increasing the potential for private investment. One example is the Integrated Agri-Aquaculture Systems carried out by the Marine and Freshwater Resources Institute, funded jointly by the Science Technology and Innovation Initiative and Fisheries Victoria (RIRDC, 2003).



## 6.9 ALIGNING PRIVATE INTERESTS WITH POSITIVE ENVIRONMENTAL PRACTICES

An example of a private company aligning interests with positive environmental practices is Banrock Station Wines. A percentage of proceeds from sales of wine sold in Australia are donated to Landcare Australia and Wetland Care Australia for the restoration of wetlands across Australia and in other countries (Earthwatch Institute, 1999). The innovative marketing program has been a very successful key driver for the company. As the general community increases awareness of sustainability issues, it is expected that companies like Banrock Station will set a precedent with their alignment of private interests with positive environmental practices.

Another example of the corporate sector promoting positive landscape change is Macquarie Bank. Macquarie has commenced a managed investment scheme forestry project, and has formed an alliance with Greening Australia to assist and undertake conservation management of the project and ensure that environmental controls are carried out (Macquarie Forestry Investment PDS, 2003). There is a possible role for Government to assist private companies to align private interests with positive environmental practices with start-up grants, promotional support or tax concessions.

## 6.10 NATIONAL LEVY

The introduction of a national levy on taxable income would allow for the provision of significant funding to be allocated to resource protection and landscape change. Although this option would raise substantial funds, it is not popular with either tax payers or the Government as it reduces the flexibility of budgets and also provides no incentive to change current natural resource degrading practices (Allen Consulting Group, 2001).

The balancing of political, economic and environmental goals may best be achieved through the development of a nationally accepted environmental scorecard. This system would be similar to many current corporate key performance processes. Realistic and achievable targets are set, and stakeholders are encouraged through a mixture of carrot and stick incentives to improve NRM over an acceptable time period.

## 6.11 LANDSCAPE AMENITY AND TOURISM DEVELOPMENT

Promoting rural and community development with an emphasis on local produce and landscape amenity has proved successful in driving economic and environmental improvements. Many rural areas, including notable wine and cheese regions, such as the Barossa Valley, Mildura and Margaret River have developed on this approach.

There are many private investment opportunities for developing landscape amenity and promoting balanced tourism. However, possible private investment opportunities need to have a strong focus on the possibility of returns, natural resource management, landscape change and rural economic development, if the objectives of the land stewardship are to be achieved.

## 6.12 LABELLING AND BRAND MARKETING

There is currently a growing market for agricultural products that meet specific requirements including bio-dynamic and organic produce. Consumers have a growing awareness of these products that attract a premium price. At present, there are a number of impediments to market growth of these premium price products including the absence of a well recognised and co-ordinated certification process and authority, consumer knowledge and understanding and insufficient monitoring.

In Australia we have seen over the years, and continue to see, a number of cases of fraud involving organic & biodynamic foods. Of great concern at present is a proliferation of processed organic products that are not certified and carrying organic labels. There is no way to authenticate these products and with the lack of controls, the temptation to be fraudulent is growing (Organic Federation of Australia, 2000).

Government intervention could remove these impediments by establishing one regulating body that oversees and monitors the certification process of labelling and branding of organic and bio-dynamic products. If Government intervention was successful in removing current barriers and promoting market demand, then new opportunities for private investment may emerge to supply the market. The increased prices for bio-labelled products may be a driving force to stimulate private investment in the emerging industries that also may have positive environmental sustainability outcomes.

### 6.13 ACCELERATED DEPRECIATION

Accelerating the level of depreciation on capital expenditure incurred in establishing alternative agricultural and horticultural investments may increase the commercial viability of projects by increasing the rate of return. This may increase the incentive for new private investment in sustainable land use.

### 6.14 NEW CLASS OF FINANCIAL INTERMEDIARY

There is a role for a new class of financial intermediaries that have the capacity to liaise between private investors and landowners involved in sustainable landscape change projects (Allen Consulting Group, 2002). These intermediaries could assist private investment in natural resource management via promoting SRIs and PDFs whilst also providing information on the availability of tax effective alternative investment projects. If a legal framework for the trading of carbon, biodiversity, and salinity credits was introduced then the financial intermediary could also buy and sell credits on behalf of investors. The main role would be to provide equity finance for commercial projects that have positive environmental outcomes.

Commercial sustainable landscape change projects can only become a viable investment opportunity when they offer comparable returns with traditional investment opportunities. As these projects typically generate below-market returns, they need to have significant tax advantages to provide incentives for private investors. When all the necessary institutions and legal frameworks are in place, there are opportunities for intermediaries to bring together private investors and natural resource managers to produce beneficial outcomes for all stakeholders.

Table 3 summarises the options for increasing private investment in natural resource management and land stewardship.

Table 3:

**SUMMARY OF OPTIONS FOR INCREASING PRIVATE INVESTMENT  
IN NATURAL RESOURCE MANAGEMENT**

<i>POLICY OPTION</i>	<i>EXAMPLES</i>	<i>CHARACTERISTICS</i>
Further development of alternative products	Timber plantations, aqua-cultural and horticultural products	Potential for attractive financial returns from tax effective investments that typically result in landscape change.
Further development of market like mechanisms for public goods	Carbon, biodiversity and salinity credits	Potential to value traditionally non-marketable goods resulting in a more efficient allocation of resource use.
Promotion of SRIs	SAM and Hunter Hall fund managers	Fund managers who aim to create shareholder value via investing in companies that promote “triple bottom line objectives.”
Government intervention with effective tax options	R&D tax concessions and IBTOS	Provide financial incentives for private investment in land stewardship.
Government intervention with policy and regulatory structures	Establishment of a unified and enforceable accreditation structure for bio-labelling and “triple bottom line.”	Provides consumer confidence in accreditation, assisting the assimilation of information and potential to enhance market premiums.
Revolving Funds	NSW Nature Conservation Trust Act 2001	Private land with a high conservation value is purchased, protected with a permanent conservation covenant and then re-sold.
Pooled Development Funds (PDFs)	Fund managers classified under the PDFs Act 1992.	Provide tax incentives for assisting equity raising for small to medium sized enterprises involved in natural resource management.
Demonstration Project Finance	The Integrated Agri-Aquaculture systems 2002	Reduces the level of risk for innovative NRM projects and helps in their commercialisation.
Aligning private interests with positive environmental practices	Banrock Station Wines (BRL Hardy)	A percentage of sales proceeds are donated to Landcare for wetland conservation, thus promoting consumer sentiment and awareness.
National Levy	Environmental levy on taxable income.	Raise public revenue for natural resource expenditure.
Landscape amenity and tourism development	Barossa Valley, Mildura, Margaret River	Promotion of rural development through highlighting positive environmental amenities.
Labelling and brand marketing	Bio-dynamic and organic produce.	Bio-dynamic and organic produce can attract price premiums for producers whilst also promoting consumer sentiment and awareness.
Accelerated depreciation	Accelerating the rate of depreciation of capital expenditure.	May make alternative agricultural and horticultural products more commercially viable.
New class of financial intermediary	New financial intermediary that can assist in the promotion of natural resource management investments.	Potential to liaise between private investors and landowners requiring capital to commence a sustainable landscape change project.

# 7: conclusions

This paper has discussed the important requirements to further leverage private investment in land stewardship. The crucial impediments currently limiting the scope of private investment in natural resource management and landscape change are the high level of risk associated with new agricultural projects and the lack of attractive returns for investors. The lack of available funds is also a significant hurdle for initiating the development of new landscape change projects. To effectively leverage private investment in land stewardship, a portfolio approach will have to be adopted that includes a number of policy options discussed in Section 6. Key requirements for successful implementation of these policy options include:

- strong leadership commitment from Government,
- strong leadership commitment from the investment community, and
- strong leadership commitment from the corporate sector.

## Strong leadership commitment from Government

Many of the tools available for overcoming the impediments for increasing private investment require government policy and regulatory intervention. At present a key driver for private investment revolves around the tax effective elements of the investment. The Government must be responsible for creating an environment which is conducive to NRM investment. Responsibilities include taxation reform to assist and promote private investment in R&D in NRM. Introducing an Infrastructure Borrowings Tax Offset Scheme (IBTOS) specifically designed for sustainable environmental projects and providing attractive tax concessions for investors in Pooled Development Funds (PDFs) that focus on alternative investments with positive environmental outcomes.

There is also scope for Government to promote awareness of the importance of private investment in NRM through advice and education programs. Government is also responsible for establishing a legal framework to allow for the trading of traditionally non-marketable goods such as carbon and biodiversity credits.

## Strong leadership commitment from the investment community

The introduction of a new class of financial intermediary that promotes investment in SRI, PDFs and alternative investment projects that have positive environmental outcomes would assist leverage private investment in NRM. The intermediary would liaise between investors and sustainable land management companies seeking investment, thus reducing search and transaction costs. The body could also assist private landowners intending to lease land to a third party for productive agriculture in which NRM outcomes are also achieved. With the assistance of Government, the investment community should also set a target for superannuation fund investment in sustainable landscape practices.

## Strong leadership commitment from the corporate sector

The corporate sector must recognise its responsibility in promoting and supporting investment in NRM. Corporate entities need to further establish and develop relationships with NRM providers, whilst also being recognised for taking the initiative by the general public and investment community. There have been many examples of successful associations between the corporate sector and NRM providers. The challenge now is to further develop these relationships for the mutual benefit of both the corporate sector and the environment. Although this is predominately the responsibility of corporate entities, there is also a role for Government in assisting and supporting these relationships.

To champion the cause of NRM, the creation of a specialist financial intermediary to facilitate NRM investment incentives, frameworks, consumer awareness, markets and trading, and government and private sector co-operation may be a worthwhile interim step to protect the Australian environment. This body could be funded by a mixture of government, corporate and superannuation funding. Despite the potential of these and other options aimed at further leveraging private investment in land stewardship, the key requirement is to provide investors with financial returns that are comparable to other investment opportunities. Until this requirement is met, there is limited incentive for private investment in land stewardship, thus jeopardising opportunities to curb or reverse current levels of environmental degradation in rural Australia.

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