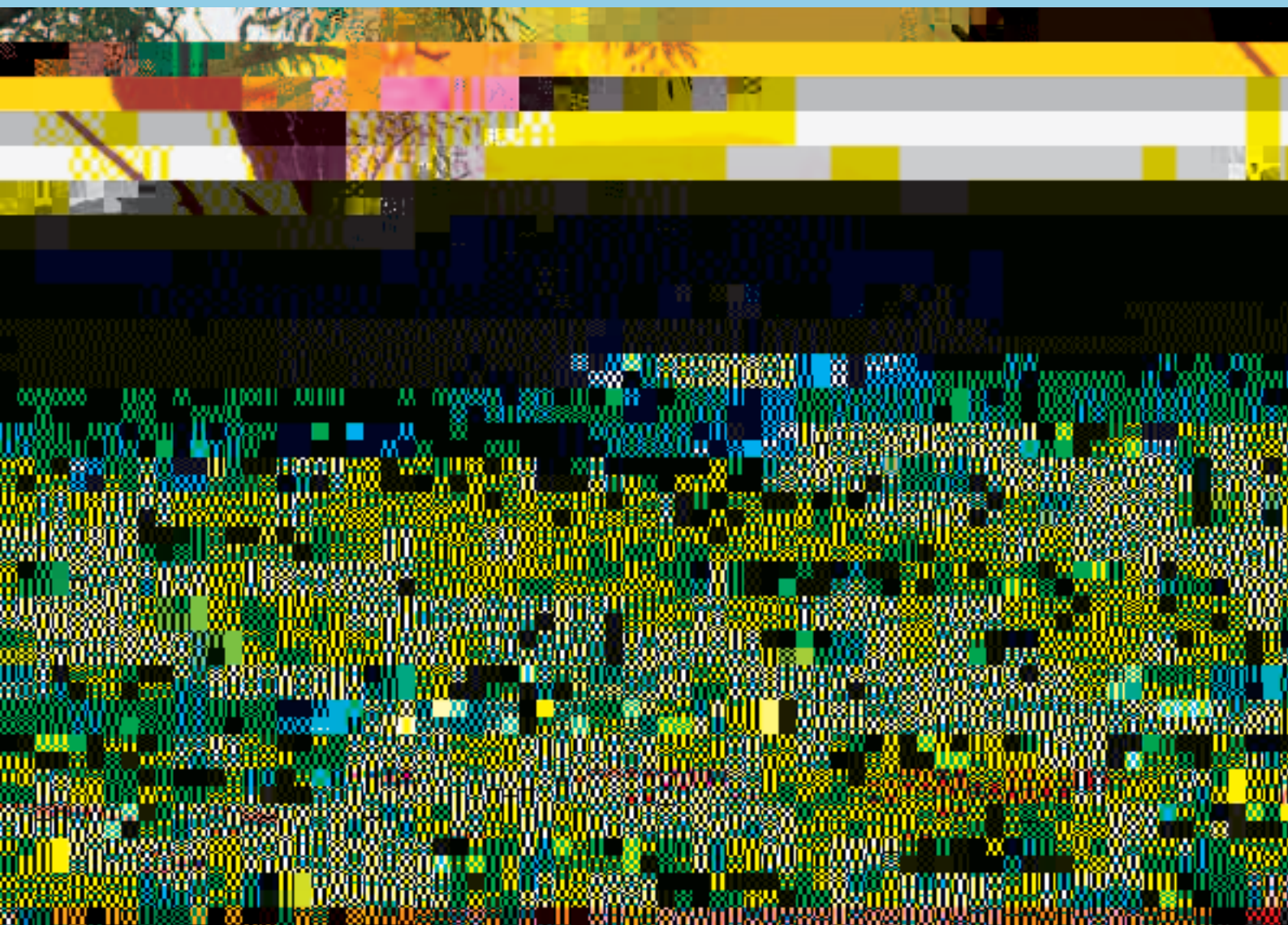


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Programme on
Protected Areas

Conservation on Private Lands: the Australian Experience

Penelope Figgis



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Note

The publication is based on a paper prepared for the Privately Owned Protected Area Workshop in the Governance Stream at the Vth World Parks Congress in Durban, South Africa, September 8-17th 2003. The Congress is convened by the World Commission on Protected Areas (WCPA), a global network of protected area professionals and a Commission of IUCN, the World Conservation Union. It is held every ten years to debate the issues surrounding protected areas. This forum is the most prestigious and influential forum in the world in determining global directions for nature conservation through reserves.

Author Profile

Penelope Figgis has contributed to the protection of the Australian environment for over 25 years through full time advocacy, holding many offices in environment organisations, board membership of statutory authorities as well as writing, lecturing, public speaking and media commentary.

Ms. Figgis is currently Vice President of the Australian Conservation Foundation and a Board member of Sydney Olympic Park Authority. She has served on the boards of the Environment Protection Authority of New South Wales, the Australian Bush Heritage Fund, Uluru Kata Tjuta National Park, the Great Barrier Reef Consultative Committee, Landcare Australia, the Australian Tourist Commission, the Commission for the Future and the Jenolan Caves Trust.

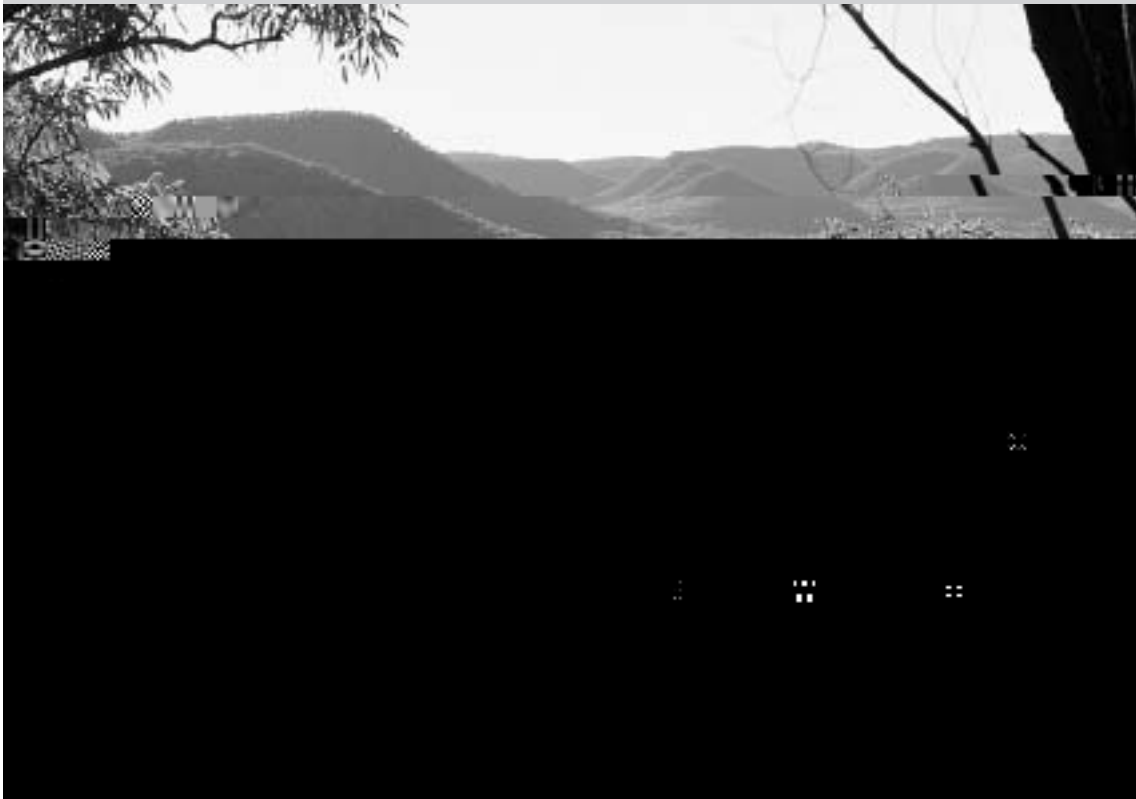
An honours graduate in political science she has taken a particular interest in policy development in world heritage, protected areas, private lands in conservation, indigenous people and tourism and the environment. She is a Member of the World Commission on Protected Areas and a member of the Australian /New Zealand Executive Committee of WCPA.

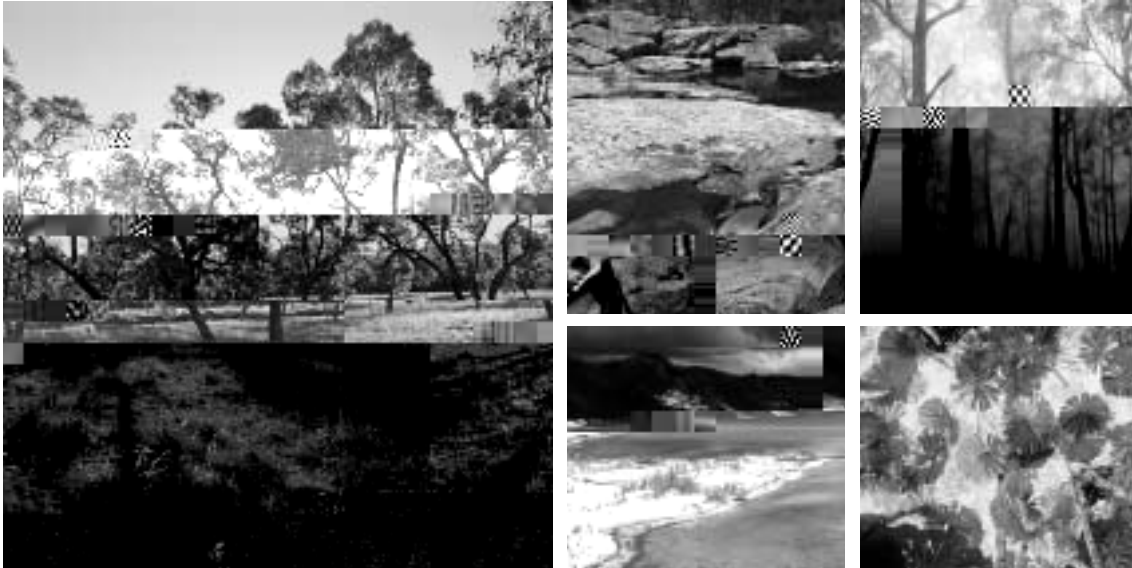
She is the author of many articles, chapters and papers. Her publications include Rainforests of Australia (ed.) 1985 and Australia's Wilderness Heritage: World Heritage Areas 1988 (co-author with J.G. Mosley) and Australia's National Parks and Protected Areas: Future Directions, 1999.

On Australia Day 1994 she was made a Member of the Order of Australia (AM) for her services to conservation and the environment and in 2003 was awarded the Centenary Medal for outstanding contribution to the environment.

Conservation on Private Lands: the Australian Experience

Penelope Figgis





Large left: Carnarvon Station Reserve, Wayne Lawler/Ecopix. Small upper left: Pools, (Chereninup Reserve, WA) Barbara Madden. Upper right: Misty morning (Burrin Burrin Reserve, NSW) Rob Blakers. Lower left: Friendly Beaches Reserve, Tas., Kate Fitzherbert. Lower right: Fan Palms, (Daintree Fan Palm Reserve), QLD, Wayne Lawler/Ecopix.

All pictures courtesy of Australian Bush Heritage Fund, www.bushheritage.asn.au

Contents

1 1.0 Introduction

2 2.0 Ecological Drivers of Change

2 2.1 Lack of Representativeness

2 2.2 'Islands to Networks'

3 2.3 The Developing Knowledge Base

4 3.0 Social Drivers

4 3.1 Constituency Building

5 3.2 Recognition of the Rights of Indigenous People

6 4.0 Expanding the Tool Box

6 4.1 The Bioregional Model

9 4.2 Indigenous Protected Areas

10 4.3 Private Protected Area Model

12 4.4 The Private Wildlife Sanctuary

14 5.0 New Mechanisms

15 5.1 Conservation Agreements – Voluntary

15 5.1.1 Land for Wildlife

16 5.1.2 Conservation Management Networks

17 5.2 Conservation Agreements – Binding

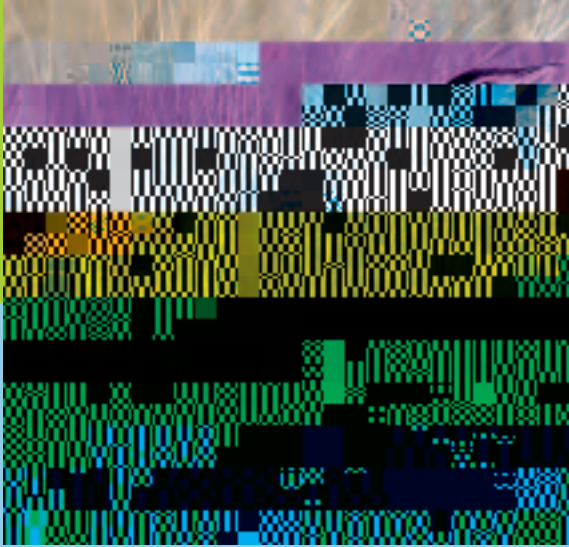
17 5.2.1 Covenants

19 5.2.2 Revolving Funds

19 5.3 Financial Incentives

22 6.0 Issues for Resolution

24 7.0 An Innovative Future



IUCN – The World Conservation Union

Founded in 1948, The World Conservation Union brings together States, government agencies and a diverse range of non-governmental organizations in a unique world partnership: over 1000 members in all, spread across some 140 countries.

As a Union, IUCN seeks to influence, encourage and assist societies throughout the world to conserve the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable.

The World Conservation Union builds on the strengths of its members, networks and partners to enhance their capacity and to support global alliances to safeguard natural resources at local, regional and global levels.

In recent years Australia has made progress in understanding its ecological diversity and advancing towards a more representative national system of protected areas. However, this has not stemmed a serious decline in Australia's biodiversity. As a consequence, both environmental decision-makers and NGO advocates are searching for additional tools to encourage biodiversity conservation on all lands. The 70% of Australia's landmass under private freehold, leasehold or indigenous title has therefore become a focus of attention. This focus on private lands and the involvement of private landholders, is a marked shift from the past when nature conservation was essentially a matter for the public sector. This paper looks at some of the key drivers of the change before outlining a variety of models – ecosystem networks, indigenous protected areas, private protected areas, binding and non-binding voluntary agreements, financial and other incentive mechanisms. The importance of such mechanisms is underscored by the fact that science tells us that protecting intact ecosystems is seven times more cost effective than trying to reestablish them after damage. The paper concludes that while the extension of models is essential these efforts should support, not replace or erode public protected areas. There must also be sustained political and community support and financial backing if real progress is to be sustained.

IUCN Publications Services Unit
219c Huntingdon Road
Cambridge, CB3 0DL, UK
Tel: + 44 1223 277894
Fax: + 44 1223 277175
E-mail: info@books.iucn.org
www.iucn.org/bookstore

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1.0 INTRODUCTION

In 2002 Australia released the *Australian Terrestrial Biodiversity Assessment*, the biggest audit of the country's wildlife and natural areas ever conducted (Commonwealth 2002). It paints a disturbing picture of this island continent's rich and globally significant biodiversity. The report's analysis divided Australia into natural bioregions and subregions and found that '...2891 threatened ecosystems and other ecological communities are identified across Australia...with the greatest numbers in the highly cleared regions of southern and eastern Australia'. It also identified 1595 threatened species.

The *Assessment* confirmed the 2001 *State of the Environment Report* which had also found that Australia's rich and distinct biodiversity is under multiple threats and still in decline (CSIRO Publishing 2001). Major threats are numerous including the loss of habitat to human settlement, agriculture and grazing, introduction and spread of alien species, pollution and altered fire regimes. However, one of the greatest is habitat destruction from landclearing. 2003 deforestation figures from the United Nations and latest Australian figures revealed that Australia's land clearing rate of approximately 500,000 hectares per annum is comparable to the worst African, South American and Asian de-forestation rates (ACF 2003). The vast majority of clearing has been occurring on private leasehold or freehold lands. Increasingly this steady loss of natural capital is understood as not just a scientific loss or an ethical failure, but a serious threat to the basis of our economic system. Fortunately recent shifts in policy and legislation especially in New South Wales and Queensland should finally slow the rate of decline from broad acre land clearing (www.wilderness.org). However, the task of biodiversity conservation and management across frequently fragmented landscapes remains.

Twentieth century environmentalists generally thought that the answer to declining vegetation and wildlife was to declare protected area status over areas. The call was generally for a national park. Nature was 'safest' in an area formally declared under legislation and managed by a government nature conservation authority. After declaration the task has been to defend this sanctuary from any human impact which would undermine its natural values (Prineas 1998). This was not a uniquely Australian approach, but a deeply held view around the world (Phillips 2003).

However, both an increasing knowledge base on biodiversity and an awareness of proliferating threats, have confronted environmental advocates and policy makers with a stark reality. Despite recent expansions, the last official figures had only 10.08% of the Australian landmass in any kind of formal protected area (Commonwealth of Australia 2003). With nearly 90% of the continent outside the system, it is clear that the conservation tools of the twentieth century, particularly legislated public national parks, while critically important, are inadequate to meet the scale of the challenge. Numerous government and scientific reports have now reiterated this point. Consequently there has been a major shift of understanding in the government, scientific and the non-government (NGO) sector over the last decade. There is now a broad consensus that, while we must continue to add to the formal national reserve network, we must also turn to other lands, especially private lands and produce workable mechanisms which will stem the decline and result in long term biodiversity gains. This will involve new communities and constituencies, often excluded from the classic paradigm described previously. In doing so a much broader concept of protected area is emerging, one which has been called 'a revolution in our approach to protected areas' (Phillips 2003).

The author in a 1999 monograph, *Australia's National Parks and Protected Areas: Future Directions* (Figgis 1999) has further described these important shifts in thinking especially as they affect Australia. However, the paper added an important caveat, which remains valid. These additional tools must *build on* a comprehensive, adequate and representative formal reserve system. The Ecological Society of Australia has stated 'that protected areas are the primary mechanism for biodiversity conservation in Australia and that the primary function of protected areas is to promote the persistence of biodiversity' (Ecological Society 2000). Legislated protected areas are, and should remain the *core* lands of biodiversity conservation. The initiatives described in this paper are therefore not an alternative, but a

expounded in 1967 in *The Theory of Island Biogeography*, by ecologist Robert MacArthur and biologist Edward O. Wilson. They argued that as islands shrink, species become vulnerable to inbreeding and accidents, and start to decline. This thinking was further developed by US ecologist Michael Soule into the concept of 'conservation biology'. Conservation biology identifies the need for large *networks* of well protected areas connected by buffers, corridors and linkages of sympathetically managed adjacent lands (Soule & Simberloff 1986). Biodiversity conservation would in this way be integrated into many land uses and tenures. This approach has subsequently been called the 'whole of landscape' or the bioregional approach (see 4.1).

This way of thinking about conservation was high on the agenda at the IVth World Congress on National Parks and Protected Areas, in Caracas, Venezuela in 1992 (IUCN 1993). Organised by IUCN every ten years, the Parks Congresses have become vital international fora where trends emerge and are taken back to the participant countries by key decision-makers. Between Congresses, the World Commission on Protected Areas (WCPA), an informal network of protected area professionals, promulgates its approaches through publications, committees and meetings worldwide. The Action Plan (CAP), which emerged from the conference, identified the need to 'integrate protected areas into larger planning frameworks' which meant supporting protected areas with more sympathetic land uses and promoting conservation across broader ecological landscapes.

This approach is clearly applicable to Australia where many protected areas are isolated. A reserve like the Stirling Ranges NP in south west Western Australia looks quite literally like an island, as its vegetated slopes rise above a vast 'sea' of wheat fields. Increasing research has found that many species and ecological communities only occur outside reserves, often scattered and separated. Some of the remaining islands are on public land such as local government roadsides and reserves, cemeteries, travelling stock routes as well as on private land. Therefore, while remaining committed to the priority of securing legislatively protected and publicly managed parks, the Australian environment movement has increasingly adopted the implications of science and acknowledged that protected areas must be complemented and connected with 'off reserve' conservation management (Krockenburger 1997). In the last few years a major NGO, the Wilderness Society, has made the bioregional framework a central campaign priority through its WildLands approach (see 4.1).

2.3 The Developing Knowledge Base

The international concern over the dramatic 20th century decline in species, ecosystems and genetic diversity culminated in 1992 with the Rio Earth Summit and the development of the Convention on Biological Diversity (CBD). Australia signed the Convention and developed the National Strategy for the Conservation of Australia's Biodiversity, which was formally adopted in 1996 (Commonwealth of Australia 1996). The strategy itself and the prolific documents generated by the Commonwealth Biodiversity Series Papers, have all helped to broaden understanding of the very severe problems faced by Australia's biodiversity. The last decade has seen a much deeper understanding of the roles of land degradation and clearance, habitat fragmentation, pollution, weed species, feral animals, inappropriate fire regimes and the other threatening processes. The strategy also gave great impetus to the development of research, policy, programs and legislation. All processes emphasised the need for comprehensive environmental data as a prerequisite for effective action.

The most important addition to knowledge in the context of extending protected areas in Australia, has been the development of a major framework called the Interim Biogeographic Regionalisation for Australia (IBRA). IBRA divided the continent into bioregions based on complex overlays of data and evaluated the adequacy of their representation in conservation reserves. In the marine area, the Interim Marine and Coastal Regionalisation for Australia (IMCRA) has been used to identify and establish the National Representative System of Marine Protected Areas (NRSMPA). In addition, the Regional Forest Agreement (RFA) process, which was part of the National Forest Policy, contained a core aim of

identifying forests for inclusion in protected areas (Figgis 1999). All these processes, IBRA, IMCRA and the RFA process have had a major data collection component, which has added dramatically to the knowledge and understanding of terrestrial and marine ecology in Australia (www.deh.gov.au).

A critical component in this rapid development of knowledge was the availability of unprecedented funding. In 1997 the Australian federal government, using the proceeds of a part sale of the national telecommunications network, established a \$2.5 billion dollar Natural Heritage Trust (NHT). This was extended in the 2001 budget for a further five years. The fund has been described as 'the largest effort towards environmental rescue and agricultural sustainability ever undertaken by any Australian Government (www.nht.gov.au). Additional funds of some \$1.4 billion are also available through the current National Action Plan for Salinity and Water Quality (NAPSWQ).

The NHT funded the National Land and Water Resources Audit which produced a comprehensive range of natural resource assessments. To date there have been National Assessments on Water (2000), Dryland Salinity (2000), Native Vegetation (2001), Rangelands (2001) Agriculture (2001) and Catchment, River and Estuary (2002). The cumulative data from these assessments is overlaid in the Australian Natural Resource Atlas (<http://audit.ea.gov.au>). Finally the recently released *Australian Terrestrial Biodiversity Assessment* has provided the most comprehensive assessment to date (Commonwealth of Australia 2002).

At state level there have also been major improvements in the information base which act to both highlight problems and facilitate and inform programs. There has also been a significant development in community access to information on the state of the environment. To take just one example in NSW, there is Community Access to Natural Resource Information (CANRI) which provides information on air quality, biodiversity, plants and animals, geological information and information on Landcare groups and their activities and location.

So increasingly, there is better science to inform biodiversity initiatives and efforts to standardise approaches to data collection and management have improved information accessibility. This has provided much better guidance for reserve selection and gone part of the way to addressing the key problem in reserve selection, the lack of consistent, detailed data on biophysical variation. However, this major national effort has also underscored the reality that much of the land of high biodiversity in poorly represented areas, lies on the 70%, or 500 million hectares, of private non urban land outside the reserve system. In this way it has become a major driver of conservation on private lands.

3.0 SOCIAL DRIVERS

Land allocation and use is strongly affected by the social circumstances of any society, and prevailing cultural and ethical attitudes. Globally, protected area policy is strongly influenced by different views about why and how we conserve nature and who are appropriate stewards of nature. Developments in science and an increasing public knowledge of the scale of environmental problems have been paralleled by changes in social attitudes on these issues. Over the last few decades Australia has changed from a position where conservation was seen principally as an issue for the government agencies and the environment movement, to a position which recognises many different governance models involving a much wider spectrum of society.

3.1 Constituency Building

In part, this commitment to involve the broader society in conservation stems from the concept of 'constituency building'. 'Constituency building' is the global trend to search beyond government for other players and partnerships to further conservation; indigenous people, local government, private trusts, landowners and resource-based industries. The concept derives from the received wisdom that parks 'islands' will not survive in either 'seas' of ruined ecology or 'seas' of social hostility. The idea is to build widespread support for parks and conservation initiatives through building different

constituencies with an interest in the success of these efforts. This theme, of 'expanding support for protected areas', was strongly put at the IVth World Parks Congress in Caracas in 1992 (IUCN 1993) and has become an increasing theme at subsequent Congresses (Phillips 2003). IUCN has further developed these ideas into the concept of 'social sustainability'. Their 1997 publication, *Beyond Fences: Seeking Social Sustainability in Conservation*, proposed achieving conservation outcomes in concert with people, rather than imposed over them (Stevens 1997).

In Australia this way of thinking has gained a great deal of impetus from the writings of research economists, Carl Binning and Mike Young. Their papers and reports, although often built around an economic analysis, have constantly emphasised the policy advantages of governments and landholders working cooperatively for biodiversity. One of their most influential papers, *Motivating People* (1997), looked at socio-economic factors that influence landholders' decisions on vegetation. It has been said that these two economists 'set the national agenda' and influenced at least \$100 million of Commonwealth expenditure (Mussared 2002). Through the work of Binning and Young and many others, the adoption of this philosophy has led all three levels of government to involve more stakeholders in protected area planning. It has also stimulated the development of very wide range of initiatives from the private protected area or wildlife sanctuary to a myriad of instruments aimed at vegetation retention and restoration on both public and private lands.

The attitudinal receptivity of the rural sector to conservation initiatives has been greatly enhanced by the *Landcare* movement. *Landcare* is a distinctively Australian initiative that arose in the late eighties from an alliance of the leading national environment NGO, the Australian Conservation Foundation and the National Farmers Federation, an unusual and therefore powerful alliance. *Landcare* has promoted a more sustainable approach to the land over a decade with remarkable success. The 2001-2 Annual Report states that there are now 4000 *Landcare* groups and 2000 *Coastcare* groups nationwide. Although originally established to address the prevention of land degradation, the movement has focussed a great deal of attention on the broader issues of sustainability, including biodiversity loss (www.landcareaustralia.com.au).

This 'partnership approach' as it is often called also derives to some degree from a wider global trend which the author has previously described as 'the retreat of government' (Figgis 1999 p.21). This refers to the tendency for modern governments to shed or share responsibilities they believe others in the community can manage, in the interest of smaller and more efficient government.

3.2 Recognition of the Rights of Indigenous People

A key aspect of social sustainability, and a further driver of private land protection, is the recognition of the rights of indigenous people. The late eighties saw a major worldwide shift in the recognition of indigenous people as vital players in conservation programs and sustainable development (Stevens

Northern Territory returned to traditional owners under the Commonwealth Aboriginal Land Rights (Northern Territory) Act and significant areas of north-west South Australia returned under South Australian legislation. Much of this land is in areas less modified by European settlement and therefore retains high conservation value (www.atsia.gov.au). The Indigenous Protected Area (IPA) program described in 4.2 was developed to achieve a culturally acceptable means of bringing increased conservation management to these lands. However, there will need to be an ongoing effort to negotiate additional culturally appropriate models.

4.0 EXPANDING THE TOOLBOX

The drivers outlined above culminated in Australia's *National Strategy for the Conservation of Biological*

It is a term used frequently in IUCN networks but is a somewhat confusing term in Australia, as it does not relate directly to the ecological bioregional divisions of Australia (IBRA) described in 2.3. Other terms frequently used for the same concept are 'whole of landscape' approaches, 'landscape

There are also efforts to go beyond linking vegetation, to promoting sustainable industries that can buffer the reserve areas and benefit from the green branding of the biosphere. The local communities have formed the Fitzgerald Biosphere Marketing Association and are branding existing products, as well as developing products which are compatible with sustainable land management, for example wild flowers, yabbies (a form of freshwater crayfish), mallee oils, ecotourism and other products (Louise Duxbury pers.comm).

The south west region of Western Australia is also the site for the *Gondwana Link Project*. This project aims to restore ecological connectivity over a distance of almost 1,000 kilometres between the ecosystems of inland Western Australia and the unique tall karri and jarrah forests of the south west corner. Gondwana Link is a cooperative effort involving the Australian Bush Heritage Fund, Greening Australia, the Fitzgerald Biosphere Group, Friends of the Fitzgerald, Mallee Fowl Preservation Group and The Wilderness Society, community and non-government organisations representing local, regional, state and national interests (www.gondwanalink.org).

The bioregional concept has also shaped The Wilderness Society's *WildCountry* vision, which is advocating 'an Australia-wide, comprehensive system of inter-connected core protected areas, each surrounded and linked by lands managed under conservation objectives'. Inspired by the lessons of conservation biology the core of this system is to be established by identifying and protecting 'the best of what's left' of Australia's wilderness and other natural areas of high conservation value (www.tws.org.au). The most ambitious WildCountry goal is to apply the concept to Cape York Peninsula, a vast landscape of 14 million hectares. The Cape is already subject to a complex process where graziers, indigenous groups, conservation groups and the Queensland Government are endeavouring to develop a future based on reconciling their various needs while protecting the Cape.

In 2003 the South Australian government has taken up the vision and has launched *NatureLinks*, a broad landscape scale conservation effort aimed at involving different elements of the community. Its particular significance is that it is being developed to eventually key into South Australia's new Integrated Natural Resources Management (INRM) regional structure under a new Natural Resources Management Act to provide the biodiversity component of INRM on the ground. A pilot program is being set up on Eyre Peninsula (David Moyle, pers. comm., August 2003).

While the Wilderness Society has embraced the concept, some major environmental non government organisations (NGOs) have been somewhat wary about the biosphere model in the past. Although theoretically built around strictly protected cores, with the other tenures supporting or linking the core lands, some feared it would encourage the trend towards 'multiple use' reserves with little or no emphasis on strict protection (Figgis 1999, 2.2, 2.5 & 4.2). It is seen as part of the increasing 'people-based conservation approach' which has come to dominate international forums (Phillips 2003). Traditionally NGOs have been opposed to the concept of 'multiple use' within protected areas as defeating the sanctuary model and inevitably compromising conservation. Environmentalists have not accepted the assertion that many extractive industries are compatible with effective conservation. However, in Australia the primary application of the concept has been towards linking existing protected areas and support appears to be growing. This is less true in the case of marine protected areas where the debate between large multiple use parks with zones of strict protection versus a view that a protected area must be strictly 'no take', is still a live issue (Chris Smythe pers.comm).

The model appears to offer an important way forward for both biodiversity and sustainable natural resource management. It is at the core of the recently released discussion paper on the future of the National Reserve System, *Directions for the National Reserve system – a Partnership Approach* (NRMMC 2004). The primary impediment remains the complexity in a three level federal system of government of putting together different land tenures and gaining the cooperation of the many public departments and agencies, as well as coordinating the private and community input. Substantial

lateralis) and ghost bat (*Macroderma gigas*). Management activities such as fox-baiting work have already shown positive results with an increase in rock wallaby numbers.

- Ø *Yalata* IPA was declared in October 1999. The 456,300 ha property at the head of the Great Australian Bight in South Australia is managed by Yalata Community Inc. *Yalata* is adjacent to other large reserves, which together form one of the world's largest contiguous areas of land and sea managed for biodiversity conservation. The cliffs on the Bight are best known as outstanding vantage points for watching whales migrate to mate and calve in the sheltered waters. The semi arid ecological zone on the edge of the Nullarbor Plain is rich in native birds, mammals and

estate. It is an independent non-government organisation, which seeks donations from supporters to buy and manage lands for conservation. The Fund has clearly filled an important place in the conservation spectrum and has built a strong supporter base. At August 2003 the Fund owned fifteen properties around Australia from tropical lowland rainforest in the Daintree region of North Queensland to coastal heathland and estuaries at Freycinet Peninsula in Tasmania. The Fund has just announced its largest purchase to date *Ethabuka Station*, 214,000 hectares of south west Queensland with abundant wildlife thriving in both desert and wetland zones (www.bushheritage.org).

Bush Heritage gives priority to purchasing highly threatened and ecologically significant examples of Australia's wildlife habitats and plant communities using the IBRA framework. It endeavours to choose land that might not otherwise be protected. Professional land managers manage the reserves under

- Ø *Newhaven Station*, in remote central Australia, covers 262,600 hectares of Australia's vast arid zone. The area contains ten vegetation communities and a wide variety of landforms, poorly represented elsewhere. *Newhaven* provides habitat to at least 15 nationally threatened species of animals and plants.

Beyond these national organisations there are state-based groups, such as the Wildlife Land Trust in Queensland (www.wildfund.org), who are purchasing and holding private property for conservation management.

4.4 The Private Wildlife Sanctuary

Vulnerability to the rising costs of management is more pressing for private protected models, which involve high cost fencing. The fenced sanctuary model was pioneered in Australia by Earth Sanctuaries, an organisation set up by John Wamsley, a colourful character from South Australia with a passion for Australian wildlife. In 1969 Wamsley developed a privately owned substantial sanctuary, *Warrawong* in the Adelaide Hills. He believes feral animals are the cause of Australia's dramatic species decline and extinction and condemns government managed parks as having failed to protect Australian species. Wamsley believes that the only hope for conservation is the private sector. Earth Sanctuaries fences large areas within their properties or the entire property, against cats, foxes and rabbits, eradicates all feral animals and reintroduces mammal species from elsewhere (Wamsley 1996).

In 2000 Wamsley surprised the business world by floating his company on the stock exchange. Earth Sanctuaries Ltd. became a public company, funding acquisition and management with shareholder capital and tourism revenues. Earth Sanctuaries developed several much larger sanctuaries and by 2001 was managing ten properties, covering 92,000 hectares. However, in late 2001 the company announced that it was selling many of its assets. The modest tourism revenues could not sustain the high cost of purchase and fencing. By August 2003 Earth Sanctuaries had, according to its website, cleared its debts and retained the original *Warrawong* Earth Sanctuary, Adelaide Hills and *Hanson Bay* on Kangaroo Island, both in South Australia and purchased two further properties, *Little River*, You Yang Ranges, Victoria and *Waratah Park*, Duffy's Forest, Sydney.

The strength of the concept of private land conservation was demonstrated by the strong interest in purchasing Earth Sanctuaries properties. Six of the ten properties sold in six months and others are under negotiation. Four properties – *Scotia*, *Yookamurra*, *Buckaringa* and *Dalantha* have been sold to another strong new group, the Australian Wildlife Conservancy (AWC), an independent non-profit organisation with a Perth base, set up by business figures Martin and Lorraine Copley (www.australianwildlife.org).

The Australian Wildlife Conservancy is principally orientated to saving Australia's native wildlife from the very real threat of extinction. They acquire land with high habitat values and protect threatened species or establish new populations where threatened species have become locally extinct. AWC owns or leases 590,000 hectares across 12 sanctuaries, not all of which are fenced. Fencing is used for management only where necessary to protect species from feral predators. Although predominantly in the west of Australia, AWC is aiming for a national network. Two examples are:

- Ø AWC's largest property is *Mornington Station*, a remote pastoral lease of 312,000 hectares in the tropical region of the Central Kimberley. It includes two river gorges, four major river systems, and the Fitzroy River. The property includes the spectacular Dimond Gorge, which environmental groups fought over for years to prevent plans to dam the site. The land has rich and diverse mammal species which are fairly intact, probably due to lack of foxes.
- Ø *Faure Island* in Western Australia's World Heritage Shark Bay. Native mammals had become extinct on the arid island. However, two other islands on the outer fringe of Shark Bay, Bernier and

Protected areas will be managed increasingly by a wide range of different kind of institutions, including private landowners, non-governmental organisations, and even private sector institutions such as tourist agencies.

5.0 LANDSCAPE M

close integration of biodiversity conservation into land restoration and sustainable land management (www.napswq.gov.au).

New South Wales began implementation of this new approach in late 2003 with a major overhaul to NRM legislation. Under the new framework a Natural Resources Commission and Advisory Board have been set up and the thirteen new regional NRM statutory bodies called Catchment Management Authorities (CMAs) are in the process of being established. The membership of these authorities will be merits based and replace the Catchment Management Boards which were stakeholder representative bodies. The CMAs will integrate regional vegetation plans, catchment blueprints and investment strategies into new Catchment Action Plans (CAPs). It is a significant attempt to deal with one of the most common criticisms of natural resource management which is the complexity for a landholder in trying to deal with multiple governmental jurisdictions, multiple government agencies and numerous other bodies and interests. Its success would be a major achievement for sustainable land management and private conservation.

The policy field is clearly likely to be dynamic over the next few years and the models discussed below are likely to be augmented by new measures. A major role of these new bodies around Australia will be to engage with the community to embrace existing mechanisms for conservation and to trial new and innovative ideas to encourage conservation on all lands (www.dipnr.nsw.gov.au). The approach should enhance the potential for the broad scale bioregional approaches discussed in 4.1. The models are arranged from voluntary through to more secure measures.

After registration, owners are assisted with technical advice and continued support through newsletters and technical notes. The personal contact with extension officers has been found to be crucial to *Land for Wildlife's* success, as has the ongoing support provided by the camaraderie of membership. As such it appears to be strongest in more densely settled regions where there is a higher proportion of hobby farmers and landholders with off farm incomes and a greater capacity for groups to get together.

There is also a range of voluntary education schemes which encourage landholder involvement in conservation such as the *Landcare* movement mentioned previously. An example is *Learning from Farmers*, an NHT funded program focussed on the Murray River Catchment for distributing the knowledge and experience of farmers who have successfully integrated the protection of native vegetation into their management (www.greening.org.au).

These education initiatives are based on spreading the message of sustainable land management and encouraging biodiversity conservation in agriculture. They tend to be driven by the landholders themselves and encourage learning from each other. Most are highly dependent on some form of grant for implementing on ground change. In the past many of these have come from the *Bushcare Program*, a major NHT component which provides grants for fencing remnants, weed eradication, replanting land or feral animal control. All players regard financial assistance as the critical element in the success of encouraging such measures.

5.1.2 Conservation Management Networks

The *Conservation Management Network* (CMN) is a relatively new model created to address one of Australia's critical conservation problems, the conservation of fragmented ecological communities (Higginson, Prober, Thiele 2001). In the national work to produce a CAR reserve system, the IBRA analysis soon highlighted that, not surprisingly, ecosystems on productive soils tended to be poorly represented in the reserve system. Despite the efforts being undertaken to identify and rectify this problem, it will be very difficult to redress this legacy. Agencies have limited acquisition budgets and lands in more productive areas have higher value. In many cases even if dollars could be found, it is simply the case that very little of a particular ecosystem remains and what remains is highly fragmented.

This is certainly the case for the productive grassy ecosystems of south-eastern Australia. From the millions of hectares that once existed, there are no substantial areas left suitable for reservation as a traditional protected area. Researchers have therefore developed a new model for conserving fragmented ecosystems, which they call the *Conservation Management Network* model.

The concept consists of incorporating scattered ecosystems remnants into a network defined as 'a network of remnants, their managers and other interested parties'. The networks have both a biological aim of enhancing biodiversity conservation and a social objective of enhancing community ownership and involvement in conservation (Higginson, Prober, Thiele 2001). While remnants may be widely dispersed and under different land tenures, cooperatively they can share scientific expertise and management advice, share extension efforts, apply for grants as a network, badge their remnant as something of broader importance and undertake a wide variety of actions more effectively than as isolated entities.

A related example is the Gippsland Plains CMN which was formed in 1999 when the Trust for Nature (Victoria) purchased a number of high priority Forest Red Gum Grassy Woodlands as part of the National Reserve System Program. The Gippsland model was inspired by the CMN model but is geographically based and not restricted to a vegetation type. As such, it is in effect a hybrid with the bioregional model. The new lands were combined with existing public reserves such as the Providence Ponds Flora and Fauna Reserve and private lands with conservation covenants. Its aim has been to create an 'entity' from all the protected remnants of vegetation on the Gippsland Plain, roughly between

Sale and Bairnsdale. Originally coordinated by the Trust for Nature, and then by the Victorian Department of Natural Resources & Environment, it has since become an incorporated body, with paid membership. A ranger has been employed to oversee environmental monitoring and restoration works (J. Fitzsimons, pers. comm. August 2003).

Membership of a CMN is voluntary and open to any site that is managed primarily or partly for conservation, and has been given some formal long-term protection by its manager. Ideally the high conservation remnants will move to have a legally binding covenant and a plan of management to guide day to day operations. Without the implementation of a plan of management the most detailed covenant may not allow a remnant to flourish in the longer term.

CMN networks offer a new way to tackle the difficult issue of conservation of human induced or natural fragmentation of ecosystems in Australia. Such programs tap into a reservoir of community spirit and willingness to contribute volunteer skills, time, materials and labour. However, like so many programs, the success often depends upon the willingness of governments to support the initial set up stage and for grant programs to be available for implementation of their extension activities and communication between partners (see 5.4).

5.2 Conservation Agreements - Binding

Some instruments go beyond voluntary measures but are not permanent covenants on land title. Most states also have developed a similar tool for example Property Management Agreements apply over rural leasehold lands in the Australian Capital Territory. The agreements apply to new leases and seek to incorporate conservation and sustainable land management into the lease conditions (ANZECC 1997).

Another example is Regional Vegetation Management Plans (RVMPs) under the NSW Native Vegetation Conservation Act. The Act provides a system to prevent further inappropriate clearance through development of regional vegetation management plans, and the requirement for Development Consent for land clearing where the land is not otherwise exempt. Individual property plans can be negotiated with technical and management advice, which make the owner eligible for financial assistance under the Act. Although the agreements are binding they are limited to an agreed period (www.dipnr.nsw.gov.au).

A more recent development is the Property Vegetation Plan (PVP) which is a model developed under the recently announced New South Wales Natural Resources Management reforms discussed above (www.dipnr.nsw.gov/nvrig/index). The plans will be incentive based but binding over a fifteen year time frame. They are based around identifying property level conservation outcomes and developing management action plans. Once certified by the Catchment Management Authorities the plans will allow access to financial grants for on farm conservation. This model is likely to be duplicated under the Commonwealth/State agreements for regional delivery of both the next stage of NHT and the National Plan for Salinity and Water Quality (NAPSQW) (see 5.0).

5.2.1 Covenants

The NSW Native Vegetation Conservation Act 1997 followed a national trend to control land clearing and brought NSW into line with similar legislation introduced in South Australia in 1985, Victoria in 1989, and Western Australia in 1995. The South Australian legislation was the earliest and responded to then new satellite technology that dramatically brought home the loss of 75% of the state's native vegetation. *Heritage Agreements* were a new legal instrument under which, in return for leaving and managing native vegetation in perpetuity, landholders received financial assistance, advice and rate relief. By 2002 the scheme had involved 1000 landholders with 1266 agreements protecting 561,802 hectares of bushland (SA Department of Environment and Heritage 2002).

The mechanism of binding covenants or easements on title for conservation purposes has been widely adopted around Australia in the last decade. New South Wales has developed a covenanting model, rather confusingly called *Voluntary Conservation Agreements*. They can be entered over private land or leasehold land and can apply to all or part of a property. There are now 140 covenants covering 9,613 hectares (Lynn Webber pers. comm) The agreement is voluntary on both parties but once entered into is registered on the title of the land, is legally enforceable and binds all future owners of the land. The terms of each agreement are negotiated between the landholder and the NPWS acting on behalf of the Minister and may vary according to specific conservation requirements of the land and the wishes of the landholder. They may be restrictive, require the owner not to carry out certain activities or can include positive actions. A plan of management is negotiated that sets out an appropriate and more detailed management regime for the conservation area.

5.2.2 Revolving Funds

Revolving funds are a mechanism which builds on covenanting. Land is first purchased, then a legally binding conservation covenant is placed on the land title, and then the property is sold on to conservation minded buyers who accept the constraints of the covenant so that the capital can be used again. This model is a conservation tool on the rise. It has been dramatically successful elsewhere in the world where it is one of the key tools of the US based Nature Conservancy which claims to have protected 117 million acres worldwide since 1951 (<http://nature.org/aboutus/>). The pioneer in Australia was *The Trust for Nature (Victoria)*. It is a statutory authority of the Victorian Government which has a three pronged approach to conservation. It buys and holds or gifts lands, it assists property owners in the process of covenanting and it manages a revolving fund to purchase, covenant and then on-sell private property (www.tfn.org.au). On 2003 figures, 53 properties covering 35,492 hectares have been purchased and are managed as conservation areas by local community groups, individuals and councils and a further 51 properties covering 4300 hectares have been purchased and gifted to the Crown. They have achieved 511 covenants protecting over 22,280 hectares of private land and had 34 properties through the revolving fund covering 2638 hectares (Natalie Woodward, Trust for Nature, pers.comm). The Trust fosters a stewardship program of regular contact, advice and support for landowners who accept covenants.

The Trust was established under the *Victorian Conservation Trust Act, 1972* and receives a grant from the State Government, as well as donations and bequests. The Trust's main strength is that it is perceived as an independent body from Government and therefore the public is more likely to donate funds or negotiate with the Trust on land purchase. It has financial flexibility compared with government departments in that it can conduct appeals, offer tax deductibility for donations, receive bequests, donations and gifts, hold and invest funds, have access to philanthropic sources and broker land purchases (Whelan, pers.com. 1996). The Trust also maintains a register of properties it holds and interested purchasers can register their names with the Trust.

This model is gaining in popularity and is being encouraged by both state and the federal governments. Western Australia and South Australia (*Bushbank*) have equivalent bodies and Queensland is moving in the same direction. In 2001 NSW introduced its scheme by legislating for a *Nature Conservation Trust*. The scheme started operation in 2002 and will follow the combined emphasis on covenanting under the purchase/covenant/on-sell model. In April 2003 the Commonwealth announced a grant of \$1 million matching the NSW Government's funding to promote the Trust. Overall the Commonwealth is allocating \$5 million Australia wide to promote revolving funds (Kemp 2003).

5.3 Financial Incentives and Market Mechanisms

Natural resource management including the retention of native vegetation has been a burgeoning policy field for the last decade. A major attitudinal change is critical as Australia's land management was set up within a different mindset, which saw natural land as 'wasted' and valueless with land only acquiring value through utilisation. Land valuation, to give but one example, still tends to act as a disincentive to conservation and sustainable land management (Skitch 2000). The removal of such 'perverse incentives' will be as important as the establishment of positive incentives.

Land and Water Australia (www.lwa.gov.au) have produced a substantial series of publications which give details of incentives to encourage landholders to take up biodiversity conservation in all jurisdictions. This area is also seen as an important component of the future of regional delivery of natural resource management funded under the extension of NHT and the NAPSWQ. In the main previous funding sources like the Bushcare program will no longer deliver direct grants to community groups, but the Commonwealth, under bilateral agreements with the states, will channel funds to the state-based regional NRM body (Sally Stephens pers.comm).

two developments: that many properties are constrained by law from further clearing and that the number of organisational and private buyers of bush is increasing. In addition to providing a site for buyers and sellers of 'bush blocks', the partnership offers a print and website resource

water markets to improve irrigation practices and donate or sell water entitlements to environmental flows (www.greening.org.au).

Many agree that such incentives and market mechanisms will be a major feature of future conservation. David Farrier (1996), Professor of Law at Wollongong University has long argued the need for an attitudinal shift to encourage biodiversity conservation on private lands.

Instead of telling landholders that they are being compensated to keep their destructive hands off the

opposed by environmentalists based on the belief that privatisation would inevitably mean the domination of commercial imperatives over those of conservation.

A major issue is the dependence of many of the mechanisms on government funding. In researching

There is also the issue of management effectiveness. While this is a serious issue for all lands managed for conservation, it may be a particular issue for the private sector. The private trusts are dependent on philanthropy which is often most generous when new purchases are promoted. However, with each new purchase comes a major on-going cost in perpetuity, especially for the fenced sanctuary model. Organisations like Bush Heritage are factoring these needs into their fundraising, but it is still inevitable that with the growth of their estates the costs of effective management will rise. The monitoring of effectiveness and quality of science is also less transparent, although the major funds have instituted rigorous plans of management. It could also be argued that the private organisations can be *more*

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