Challenges for heritage conservation and sustainable development in the 21st Century
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Heritage Economics
Challenges for heritage conservation and sustainable development in the 21st Century

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Value conflicts between natural and cultural heritage conservation—Australian experience and the contribution of economics

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Abstract

Conflicts between natural and cultural heritage conservation occur across several domains. People disagree over the definitions of terms such as ‘natural’, ‘cultural’, and ‘wilderness’. There are a range of views on matters of principle, such as whose heritage should be considered, and whether non-negotiable standards should apply to some conservation issues. Clashes of culture occur between various stakeholders: Indigenous and non-Indigenous Australians, ‘mainstream’ and minority groups, and amongst professionals from different disciplinary backgrounds. The aspirations and behaviour of traditional owners, environmentalists, recreationists, traditional users, and those who have links with previous uses and sites, can lead to a range of management issues. On public land, management agencies face the difficult task of allocating scarce resources, and are sometimes forced to decide between natural and cultural heritage. They may also have to address conflicting management objectives.

We discuss each of these domains, and give examples of where such conflicts have influenced Australian cultural and natural heritage conservation. We then identify where economic methods and instruments have the potential to contribute to their resolution. Economics is not very useful for resolving conflicts over definitions, principles, or cultural differences. These matters must be resolved through the various participatory, deliberative, democratic and judicial processes. Economics can be used to justify public investment in heritage management, assist resource allocation and land use decisions, demonstrate the contribution heritage makes to an economy, optimise resource utilisation and establish sound pricing policies for heritage resources. Suitable economic methods for these purposes include non-market valuation and benefit cost analysis, regional economic analysis, cost effectiveness analysis and marginal cost pricing. We suggest education, research and advocacy roles for the AHC in relation to heritage economics and dispute resolution.

Introduction

People project value onto their environment, employing various overlapping and often competing notions of importance, significance, utility, recreation, beauty, history, comfort, ambience, and so forth. These values are cultural constructs that differ widely between cultural groups and between members of a single group.

Further, such values change, both over the life span of an individual as a result of his or her experiences, and from generation to generation. At the same time, individuals hold different values with varying strengths of conviction. Subjective valuation, revaluation and not ultimately prioritisation occur consciously and subconsciously on a continual basis. This fluidity of projected values, both on an individual and a collective level, occasions protracted and at times bitter conflicts, with continuously shifting ground rules.

Many environmental issues involve competing claims between heritage conservation and various forms of development such as logging, mining, agriculture and urbanisation. Less well appreciated is the fact that even within the field of heritage conservation, conflicts also arise. These may be caused by different agendas and objectives within the conservation movement, and in particular between the conservation of natural and cultural heritage. Conservation of heritage can also conflict with some recreation uses of natural areas. With respect to cultural heritage, visitors can damage sites, or gain inappropriate access to culturally sensitive areas. Conservation of cultural heritage sites or practices can conflict with the provision of opportunities for ‘wilderness’...
recreation. Of course, the notion of wilderness has been criticised because it tends to deny the fact that all Australian landscapes are, to some extent, the product of, or have been influenced by, human activities. Nonetheless, some people desire recreation experiences in settings that are devoid of any evidence, at least to recreationists, of human influences.

We will examine the various forms of conflict between cultural heritage conservation and both the provision of recreation opportunities and the conservation of natural heritage. On private land, the restoration of landscapes, though activities such as re-establishing native vegetation, is often in conflict with conserving evidence of land settlement processes. However, we will focus on conflicts in those places where natural heritage is most in evidence - protected areas managed by public sector agencies.

Many protected areas possess both natural and cultural heritage values. Four of Australia’s World Heritage properties, for example, are listed for both natural and cultural values: Tasmanian Wilderness, Willandra Lakes, Kakadu National Park and Uluru-Kata Tjuta National Park. In 1994, Uluru-Kata Tjuta became the second national park in the world to be listed as a cultural landscape.

Conflict in such areas occurs over matters of definition, over matters of principle, and between cultures. Conflicts can arise because of different stakeholder aspirations and behaviours. Management objectives that seek to maintain or enhance natural and cultural heritage values can also be in conflict. Nature conservation values can be adversely affected, or perceived to be affected, by historic features related to past European activities, current activities that have links to traditional European practices, or activities of Indigenous peoples. Cultural heritage values can be degraded or destroyed by attempts to protect or enhance natural ecosystems.

The characteristics of these various forms of conflict determine the extent to which economics can be useful in assisting their resolution. We will discuss how economics has little to contribute to resolving matters of principle or definition. It may have a role in addressing clashes of culture. Its main application is in dealing with conflicting management objectives.

Matters of definition

The Australian Heritage Commission Act 1975 (Cwth) stipulates that ‘the National Estate consists of those places being components of the natural environment of Australia or the cultural environment of Australia, that have aesthetic, historic, scientific or social significance or other special value for future generations as well as for the present community’. More recently practitioners have come to realise that such values are can not only ‘be seen in a place’s physical features, but can also be associated with intangible qualities such as people’s associations with, or feelings for, a place’ (Lennon et al. 1999, p. 8).

However, in popular and in some professional use, cultural heritage has generally been more narrowly applied to specific places or artefacts. Environmental management has tended to maintain a sharp distinction between ‘natural’ and ‘cultural’ heritage. Conservationists and heritage professionals apparently have little doubt about what constitutes natural heritage and what is cultural heritage. This seems to hold particularly true for the natural scientists among the conservation profession: the natural environment is just that, and the cultural environment is that part of the world shaped by people. Such views are overly simplistic, site specific, and do not regard cultural heritage places in their spatial and geographical contexts.

The dichotomy between natural and cultural heritage is deeply ingrained in the institutional structures and staff of many conservation agencies. While non-Indigenous resource management agencies have tended to make a distinction between ‘cultural’ and ‘natural’ heritage, Indigenous people often make no such distinction. The ‘uninitiated’ public may also blur the difference between them (cf Harris 1995, Spennemann et al. 2000).

Ongoing connections between people and land have not been well recognised. This is despite the fact that whole environments may embody evidence of past land management practices. Some forests in south-eastern Australia, for example, while they possess natural values, can also be considered as cultural landscapes arising from early timber harvesting and clearing activities. ‘Cultural landscapes’ is seen by some as a more appropriate term for the vast majority of Australian places (Ghimire
The concept of wilderness poses serious philosophical problems. The perception of ‘wilderness’ is subjective, depending on the life-experience of the person. True wilderness is an area devoid of all traces of human intervention. In Australia, parts of the landscape have been classified as ‘wilderness’, even though such areas were inhabited and managed by Indigenous Australians for millennia (Langton 1996). The European history of past utilisation, and the cultural values associated with such evidence, has also been largely ignored or set aside. Yet wilderness areas have been designated by governments and management agencies, which then raise expectations that traces of European sites need to be removed.

Australian is one large cultural site: land and sea on which a succession of generations of Aboriginal people, as well as a handful of generations of people of European descent, have created a vast cultural landscape. Cultural landscapes have been defined by Lennon & Mathews (1996, p. 4) as ‘a physical area with natural features and elements modified by human activity resulting in patterns of evidence layered in the landscape, which give a place its particular character reflecting human relationship with and attachment to that landscape’.

Landscapes have historic significance when they, or their components, have strong links or associations with important historic themes, and where the evidence assists in understanding the past (Lennon & Mathews 1996). The significance of cultural landscapes can be established at national, state, regional or local scales.

For example, English style settings were established in and around historic buildings built last century at the Yarrangobilly Caves in Kosciuszko National Park. These areas are now managed as early recreational cultural settings by the NSW National Park & Wildlife Service. The coal and oil-shale mines of Newnes, within the Wollemi National Park in NSW, are managed as an old industrial setting. Old mining sites, whaling sites, emergency airstrips constructed in the Northern Territory in World War 2, and many other features are now managed as cultural landscapes within protected areas (Worboys et al. 2000).

In the past, protected area managers frequently demolished European heritage items in newly gazetted national parks. The wholesale destruction of the town of Kiandra in Kosciuszko National Park, or the demolition of Zanci Homestead in Mungo National Park spring to mind. Today, the situation is less extreme, but problems remain. Cultural perspectives come into play, for example, in the seemingly harmless concept of a ‘weed’ in a national park. While a weed is nothing but a plant growing ‘out of place’ the term immediately conjures up the mental image of ‘pest species’ coupled with a need for ‘containment’ and ideally ‘eradication.’

What is often forgotten is that these ‘weeds’ may well be tracer plants of prior human occupation. The Australian Alps are full of isolated apple, plum and walnut trees, hawthorn and briar rose bushes, as well as jonquils and daffodils. It is usually parks policy to eradicate these species and thereby remove a layer of history. Such actions may well be appropriate, if adequate consideration has been given to the relative significance of the natural and cultural heritage values involved. Our concern is that such consideration is the exception rather than the rule.

Much of the conflict of definition can be sheeted home to conflict or lack of communication within organisations tasked with the protection of heritage assets. Since the ‘Age of Enlightenment’, Western society has pursued and valued ‘objective’ science as the discoverer and provider of knowledge, and has consequently vested great authority in both science and scientists. The institutional culture of many conservation agencies projects this positivist attitude onto the management of the natural components of heritage and regards biodiversity and natural heritage management issues as ‘hard science’ and thus imbued with a high level of credibility and authority, while cultural heritage aspects are often merely tolerated, sometimes belittled, and on occasion totally ignored. Jeanette Hope has demonstrated the bias against cultural heritage and a marginalisation of women within the NSW NPWS (Hope 1993), though it should be recognised that reforms have since been made within the service. Nonetheless, the problem remains: how can balanced
management decisions be made, and how can natural and cultural heritage priorities be discussed on an equal footing if the organisational culture is already strongly biased? Interestingly, similar questions arose in the treatment of cultural heritage sites following natural disasters, where the institutional culture of the emergency services tended to disregard cultural heritage as an issue (Spennemann & Look 1998, Spennemann 1999). In that case, institutional education was the key (Look & Spennemann 2000, Tweedy 2000).

As long as the conceptual dichotomy between ‘natural’ and ‘cultural’ heritage is perpetuated, conflict will arise. It has been noted by many cultural heritage professionals that while almost all cultural heritage managers also tend to be ardent (natural heritage) conservationists, the opposite can only rarely be said. There needs to be cultural heritage awareness training of the wildlife biologists and vegetation managers to level the playing field. While this is occurs in some undergraduate and postgraduate degree courses, more needs to be done for existing staff in the agencies. Only when both sides are fully cognisant of the other’s objectives and value systems can solutions to conflicting values be found.

Clashes of culture and principles

Some conflicts are essentially clashes of cultural constructs about how we perceive the past, and which elements of the past we deem important. A good example is the discussion about the treatment of Aboriginal human remains by the archaeological and anthropological profession, which caused much heartache to the Aboriginal communities and resulted in verbal, but open conflict in the 1980s. Issues of human dignity and ancestral spiritual needs conflicted with Western concepts of scientific inquiry and the archival perpetuation of ‘evidence’ (Langford 1983, Webb 1987, Mulvaney 1991).

While the specifics of the debate have been resolved in favour of the traditional owners and custodians, and while an increasing number of human remains have been returned from national and overseas collections, the ethical issues still reverberate. They have resurfaced in the controversy about whether Aboriginal custodians ought to be allowed to repaint rock art, which may well be thousands of years old, with modern acrylic paints (Bowdler 1988, Lambert 1989), and are now being revisited in the arena of Aboriginal archaeology and the control of excavated artefactual materials (Allen 1995, Harris 1995).

Internationally, legislated national parks and other protected areas are the primary method used to preserve endangered species, habitats, and ecosystems. The first national park, Yellowstone was established in 1872 in the USA. The inhabitants of the area, mainly Crow and Shoshone Indians, either left for reservations after intense pressure, or were driven out (Ghimire & Pimbert 1997). In contrast, many European countries maintain a long established order of land tenure and rights of access has generally been respected. For example, British national parks recognise existing rights and maintain established patterns of land use by rural communities. However, European colonial powers transferred very little of this respect for traditional rights to their colonies. International conservation organisations and national governments have also denied the rights of Indigenous people to their traditional lands and resources, at times turning local people from hunters and cultivators into ‘poachers’ and ‘squatters’ (Colchester 1997).

Common to these conflicts is a clash of cultural values, and in particular the fundamental question of whether Indigenous communities have the right to cultural self-determination and the associated right to manage their own heritage as they see fit (Fourmile 1989). Empowerment of Aboriginal communities in Australia to be actively involved in determining the future of their own cultural heritage has led to the recognition by heritage professionals that community values (social values, spiritual values, ethnic values) need to be taken into account when assessing a site (Jonas 1991). Since then, heritage management authorities have prescribed that Aboriginal community input is required before research projects are allowed to go ahead, and before decisions on the preservation or destruction of sites are made. Here, Aboriginal community values are given preference over scientific values.
If we, in keeping with the Draft United Nations Declaration on the Rights of Indigenous Peoples (UN 1998), affirm the right to cultural self-determination and hence the right of Indigenous Peoples to manage their own heritage, as the authors do, then we also have to accept that some values are essentially non-negotiable. This, however, has several implications for the management of cultural and natural heritage in general.

The cultural significance assessment of heritage places, as practiced in Australia and in many other countries, tries to evaluate a site against a number of criteria (such as those of the Australian Heritage Commission (AHC)) and then rank a place as being of national, state, regional or local significance. Traditionally, protection regimes tended to follow these rankings, with the least amount of scrutiny and protection awarded to sites of local significance. In terms of the axiom of the inalienability of sites under the tenet of cultural self-determination, Indigenous sites of essentially local or regional significance are afforded a protection that surpasses non-Indigenous sites deemed to be of national significance.

In the cultural heritage arena, places are ascribed cultural significance according to their aesthetic, historic, scientific, and social value (Pearson & Sullivan 1995, Kerr 2000). While the assessment of scientific and historic value, aided by guidelines, has long been the prerogative of historians, architects and archaeologists, and while architects and art historians have assessed aesthetic value, the assessment of social value has often received only cursory treatment. Yet it is that value, which the

local community holds and which determines a community’s support for heritage management actions. Studies have shown that professional and community values can differ widely (Spennemann 1992, Snelling & Schapper 1993, Spennemann et al. 2000), and that sections of the community are unequally represented in heritage decisions (Bulbeck 1988, Bickford 1993, Johnson 1993).

The historic foundation of the heritage movement in Australia was rooted in the interests of archaeologists, architects and historians. These groups sought to preserve parts of Australia’s heritage for future generations for archival and demonstration purposes, or for reasons of future scientific investigations (Davison 1991, Smith 1996). Yet, despite attempts such as Johnson’s treatise on social value (Johnson 1992), the bulk of heritage places considered have been Anglo-Celtic.

Drawing ethnic communities into the heritage assessment process has been notoriously difficult (Canning 1999). New initiatives, such as the NSW Heritage Office’s Ethnic Communities Consultation Program, if successful, can change this. It follows, however, that if the Indigenous Peoples of Australia shall be empowered to determine the future of their heritage, then all numerically small ethnic communities should have a similar right to self-determination of their cultural identity and its manifestation in the environment. This raises the issue of the ‘Balkanisation’ or fractionation of heritage. In this, then, heritage management firmly enters the arena of the debate on the relative merits of assimilation and multiculturalism. Conceptualising this issue to the bitter end, historic and aesthetic value. Less than 1% of the total number of pages discussing the four core values was devoted to social value (Canning 1999, Canning & Spennemann in press).
we will create a multitude of spatially local, culturally ethnic and even spiritually diverse heritages that will compete with each other for public attention and limited funding.

If we were to grant every community the right to self-determine the future manifestation of its own heritage, then we will also run the risk that the past will be glorified and nostalgia will dominate (Bickford 1981, Lowenthal 1985). Dissonant heritage sites (Tunbridge and Ashworth 1996) will simply disappear in a climate of political streamlining to a contemporary ideal. In the final extreme, the right to entertain non-negotiable values will be claimed which not only create friction with rival development and land use interests, but can also create friction between competing ethnic communities in their attempts to protect their own heritage.

As Ah Kit (1995, p. 36) pointed out: ‘[A]ustralian history has been a history of colonialism and if we are to ever become a mature nation and grow out of the colonial era, we have to recognise the heritage of the people who were the victims of colonialism, as well as the heritage of the colonisers’. But how are we to prioritise potentially conflicting heritage approaches say in an Aboriginal mission, where, in an extreme, both the Aboriginal people affected by the mission and the religious denomination formerly running the mission could argue for non-negotiable values. Policy decisions for affirmative action disfavouring competing Anglo-Celtic interests, for example, have been publicly argued for (Spennemann 1993).

Respect for Indigenous resource use within protected areas is one of the most fundamental and controversial issues for policy makers (Collins et al. 1997). The vision of protected area proponents in the 1960s, 70s and into the 80s was dominated by exclusion of human evidence and influence. ‘A national park must remain a primordial wilderness to be effective. No men (sic), not even native ones, should live inside its borders’ (Grzimek & Grzimek 1977, p. 177).

Protected areas have focussed on preserving endangered species, habitats, and ecosystems (Stevens 1997). There are fundamental differences between Indigenous and non-Indigenous conceptions of nature (Morrison 1997). Protected area management has tended to reflect these differences.

‘We didn’t even know the parks existed until the authorities started sending our people to prison for hunting...I am a traditional healer in this region...but now I can’t get some drugs because I’m not allowed to gather medicine in the park. When people decided that we should not get anything from the park, did they not know that we do not have a hospital? ... If you were in my place, would you let the person die, or would you go to that park and gather the medicine?’ (Njiforti & Tchamba 1993, p. 173).

Indigenous people hold particular relationships to land inherited from parents (Goodall 1996). These relationships generate obligations to care for the land by ritual and through land management. ‘Caring for country’ means, amongst other things, that custodians will protect the land, plants, animals and people from unauthorised use, and they will manage it in such a way as to maintain its productivity. Country cared for in the proper way is ‘quiet’, in contrast to ‘wild’, uncared for country (Aboriginal and Torres Strait Islander Commission 1995, Head & Hughes 1996).

Some conservationists fear that ‘unscientific’ management of protected areas by Indigenous people may result in degradation arising from actions such as hunting and the introduction of animals such as dogs (Martin 1992). ‘The fear seems to stem from the idea that if we had control of such areas, we would lock them up; shoot everything that moves; (and) chop anything that swayed’ (Wallis 1994).

If we affirm the right of Indigenous peoples to cultural self-determination, we have to accept that Australia’s Indigenous peoples manage their own heritage and thus their past on their terms. This may well imply that some values are essentially non-negotiable and this most likely will imply a paradigm shift in how we as a nation go about managing (or interfering in) other peoples’ identities as manifested in their cultural sites. At present, notwithstanding all protestations by managers and politicians pointing to ‘consultation’, Australian heritage management of Indigenous places is essentially that of a colonial power. Hand-backs of parks and the resultant joint management still require...
communities to largely play by the colonisers’ rules. The final decisions rest with non-Indigenous people. There is the fear that total and unequivocal hand-over of control will dramatically change the approach to heritage management. Indeed, if we consider postcolonial nation states in the Pacific, this has occurred (Spennemann 1992, Spennemann & Meyenn 1996, O’Neill and Spennemann in press). Is this detrimental? Is this tolerable, and who are we to say and comment? For self-determination of Australia’s Indigenous peoples to become a reality, we have to unequivocally and unreservedly surrender the decision making power to truly independent Aboriginal and Torres Strait Islander Heritage bodies, outside the organisational conservation agency structures (as in the case of NSW).

As Indigenous decision-making is not as hierarchical in the Western corporate fashion, but decidedly more consultative of their community members, fully autonomous Indigenous control over heritage matters will doubtlessly increase the amount of time required to reach decisions on issues. The complexity is compounded by the dichotomy between the local and the dispossessed ‘urban’ communities, who by virtue of their kinship ties will have a say on matters in spatially remote areas. Another issue inherent in Indigenous decision-making is that the composition of the apparent stakeholders and their representatives is more fluid. The solution rests in a continuous and perpetual dialogue on all matters concerning natural and cultural heritage, rather than engaging in task-based negotiations. Such prolonged decision-making is likely to set up conflict situations in management agencies which, being driven by triennial political cycles, are under pressure to achieve outcomes.

Conflicts over management objectives

Cultural evidence in land now reserved as protected area can include mining and logging equipment, roads and tracks, railways, fences, sheds, yards, tree stumps, particular vegetation ages and structures, and so on. Natural area managers are increasingly recognising their responsibilities in relation to cultural heritage conservation. Even so, nature conservation and recreation values may still be emphasised to such an extent that cultural heritage is degraded. This emphasis is manifested in the allocation of resources, as well as decisions that are made when natural, recreation and cultural objectives are in conflict. Some of the potential conflicts between the three categories of objective are indicated in Table 1. Exotic plants with cultural significance can be removed, timber or metal artefacts displaced or destroyed, past building sites ‘rehabilitated’.

Protected area management agencies routinely engage with a range of stakeholders, including environmentalists, recreationists, traditional owners, traditional users, and those who have links with previous uses and sites. These stakeholders often make conflicting demands. Recreationists may desire access to sites that Indigenous people consider inappropriate. Environmentalists may object to traditional owners hunting or taking medicinal plants. Recreation activities can also damage sensitive cultural sites such as sand middens. Protected area management agencies have tended to be more responsive to those stakeholders who supported the establishment of protected areas in the first place. It must be noted that this emphasis is also consistent with the charter that most agencies have been given by their respective governments. Not surprisingly, agency staff also tend to have a primary interest in the conservation of natural heritage, so that cultural heritage concerns have often been marginalised with the organisations.

In many protected areas, priority is given to managing visitor services, facilities and activities; fire management; and pest plant and animal control. In crises such as a wildfire, heritage considerations understandably take a back seat, which frequently results in irretrievable loss of heritage items. All too often, a misinterpretation of the values and priorities held by the other profession, caused by a lack of collaborative planning and prioritisation, is at the root of the problem (Spennemann & Look 1998, Spennemann 1999).

Not all sites can be protected. For many cultural heritage sites, degradation is continuous, and so remedial investment must be ongoing. Conservation of some types of sites is more costly than for others. Cultural heritage conservation must also compete with other management
imperatives such as recreation service provision and nature conservation. In day-to-day management, works associated with Aboriginal places, historic site protection, or interpretation of cultural values often receives a small share of available resources (Case study 1). In some cases, this may be appropriate. However, often the rationale for such decisions is unclear. In some cases, it appears that management decisions have been influenced as much by the predispositions and expertise of agency staff, as by a full consideration of the issues at hand.
<table>
<thead>
<tr>
<th></th>
<th>Cultural value (evidence of past practices and lifestyles)</th>
<th>Potentially conflicting nature conservation or recreation objective</th>
</tr>
</thead>
</table>
| **European settlement** | • building sites, rubbish dumps  
• medicinal, culinary and ornamental plants  
• rehabilitation of disturbed sites  
• removal of introduced plants  
• recreation in settings with no evidence of human use |                                                                                                                                 |
| **Mining**            | • quarries, open cuts etc  
• rehabilitation of disturbed sites  
• recreation in settings with no evidence of human use                      |                                                                                                                                 |
| **Logging**           | • access tracks, sawdust heaps, discarded equipment  
• rehabilitation of disturbed sites  
• recreation in settings with no evidence of human use                      |                                                                                                                                 |
| **Grazing**           | • huts, fences, stockyards  
• modified landscapes  
• ‘living history’ activities such as mustering  
• knowledge that an historic activity continues  
• restoration of vegetation communities  
• significant species conservation  
• recreation in settings with no evidence of human use                      |                                                                                                                                 |
| **Indigenous peoples’ use of cultural areas** | • continuation and evolution of traditional culture and practices  
• conservation of archaeological sites in an unchanged condition |                                                                                                                                 |
| **Indigenous peoples’ use of natural areas** | • continuation and evolution of traditional culture and practices  
• conservation of significant species |                                                                                                                                 |
Case study 1: Wet Tropics of North Queensland (adapted from Lawson 2000)

The international significance of the ecological and evolutionary values associated with the wet tropical rainforests of north Queensland were formally recognised in 1988 when approximately 900,000 ha of the region were placed on the World Heritage List. Lawson (2000) noted that the complexity and diversity of the region’s natural environment is matched by the complexity of its Indigenous and Western land tenure, management regimes and socio-political context. The Wet Tropics World Heritage Area (WTWHA) poses a major management challenges, with approximately 900 different parcels of land (including numerous freehold blocks), 16 resident Aboriginal language groups, 80% of the region potentially claimable under the Native Title Act 1993, an expanding tourist industry, a large number of rare and threatened species, and several state, Commonwealth, and local government management interests. The region’s many traditional land owning groups maintain that their cultural survival is inextricably linked to achieving a meaningful and equitable say in management of the region. For example, without the removal of restrictions that frequently prevent traditional custodians from meeting their spiritual, cultural and land management responsibilities, the complex matrix of Rainforest Aboriginal cultural landscapes will probably disappear.

The often poor relationship between Rainforest Aboriginal people and WTWHA management agencies has been the product of a number of factors. Firstly, the region has to date been listed for its natural values only. Consequently, the management of the region’s cultural heritage has run a poor second to those listed natural values that have attracted a greater level of statutory protection and management effort. Secondly, any statutory and policy provisions to have regard to Aboriginal interests tend to be described in rather vague ‘parenthood’ statements that provide little in the way of clear direction for day-to-day managers already struggling with heavy work loads and inadequate resourcing. Understandably, the result has been that priority has been given to those tasks with which managers are more familiar.

Aboriginal interests are often relegated to the ‘too hard’ basket or ‘tacked-on’ when time or funding permits. Finally, a number of Aboriginal reserves were included within the WTWHA boundaries despite cogent opposition from the relevant trustees. This has left a degree of mistrust in government process that taints consultation even today.

Managers may also fail to recognise the extent of cultural heritage within their jurisdiction, and thereby specify objectives that do not address all relevant heritage conservation issues. For example, as noted above, managers may not recognise that the natural area under their jurisdiction is a cultural landscape, and so neglect to incorporate this into their management objectives. Environmental rehabilitation can obscure or destroy historic patterns of past land use that are still evident in the landscape. Information about previous land use is often lost when management focuses on retention or rehabilitation of natural values and features. Attempts to restore vegetation or other environmental components to some former condition can destroy historic material. Management that neglects or under-emphasises cultural heritage values can lead to actions that cause damage to, or complete loss, of these values.

Perhaps as recognition of such issues, in 1997 the NSW NPWS established an Aboriginal Heritage Division to provide direction, guidelines and policy for Aboriginal heritage management across NSW, in partnership with local Aboriginal communities. The Tasmanian Parks and Wildlife Service has now also developed an Aboriginal Heritage Section. Its key roles are to cultivate, within the wider community, and in partnership with the Aboriginal community, appropriate management and conservation of Aboriginal heritage; and to transfer a viable conservation system to a representative Aboriginal organisation.

The IUCN (1994) advocated that the needs of Indigenous peoples should be taken into account in establishing management objectives for protected areas (Case study 2). The Royal Commission into Aboriginal Deaths in Custody (1991) identified Aboriginal involvement in protected area
management as a significant way of supporting Indigenous culture, through links to traditional lands and application of traditional knowledge.

**Case study 2: Great Barrier Reef**
(adapted from Smyth 2000)

In Australia, recognition of Indigenous peoples' rights and interests in the management of protected areas in the sea has lagged behind such recognition on land. In the mid 1970s, when Kakadu and Gurig National Parks in the Northern Territory were being established as Australia's first Aboriginal owned and jointly management national parks, the Great Barrier Reef Marine Park (GBRMP) was being established under Commonwealth legislation that contained no recognition of Indigenous interests. Consequently, the initial management arrangements established for the GBRMP provided no meaningful involvement of Aboriginal traditional owners over whose sea country the marine park had been established.

In 1998, the Federal Court in Darwin found that the Aboriginal Traditional owners of Melville Island continue to hold native title rights to the sea surrounding the island, and that these rights include subsistence hunting and fishing, access to their marine clan estates and protection of their cultural sites in the sea. However, the court also found that marine native title is not exclusive, does not include commercial rights to marine resources, does not give native title holders the right to control access by others, and that native title must yield to other legal rights such as commercial and recreational fishing. Aboriginal claimants and government have appealed this decision, and a further determination is expected from the full bench of the Federal Court in the near future. Native title to the sea legitimises the special status gradually being accorded to Aboriginal people associated with marine protected areas.

The GBRMP, and other marine protected areas in Australia, were established on the basis that the sea is an open common, owned and managed by the government on behalf of all Australians. In contrast, Aboriginal groups associated with the GBRMP consider much of the area to be their traditional clan estates for which they have both customary ownership and management responsibility. In addition, the consultative mechanisms established by the Great Barrier Reef Marine Park Authority (GBRMPA) did not adequately address the requirements for communication with the diversity of Aboriginal peoples and cultures associated with the marine park. In the first 15 years or so of operation, GBRMPA dealt with Aboriginal groups as 'stakeholders' whose primary interest in the marine park were restricted to traditional fishing and hunting. For most of this period, Aboriginal interests were represented on the GBRMP Community Consultative Committee by a non-Aboriginal officer of the Queensland Government's department responsible for Aboriginal affairs. From the late 1980s and throughout the 1990s, because of research supported by the GBRMPA and through the consistent lobbying of Aboriginal groups and organisations, there developed an increasing awareness among the officers and board members of the GBRMPA of a more substantial relationship between Aboriginal people and the GBRMP. Significant measures were taken to improve communication between GBRMPA and coastal Aboriginal groups and to develop mechanisms for their involvement in the planning and management of the marine park.

However, many protected area managers are uneasy with broad endorsements of Indigenous people's resource use within protected areas. Understandably, there has been an unwillingness by nature conservation agencies to relinquish their authority over protected areas and to risk perceived threats to management standards. Concern is expressed regarding changes in resource use due to more sedentary settlement patterns, population growth, cultural change leading to a decline in conservation values, and the use of modern technology, in particular guns, motor vehicles and boats (Collins et al. 1997).
Such concerns have led to several forms of conditional recognition of Indigenous land use within protected areas. Generally, only ‘traditional’ uses are authorised. Determining what constitutes a ‘traditional’ use is not straightforward (Birckhead 1992). Both the House of Representatives Standing Committee on Environment, Recreation and Arts (HORSCERA 1993) and the Australian Law Reform Commission (ALRC 1986) recognised Indigenous rights to land and resources, but considered that the interests of conservation represented a legitimate limitation on these rights. The Australian Law Reform Commission also argued that the purpose of the activity should determine if an activity is traditional, not the technology involved (ALRC 1986). Some management agencies allow the use of firearms and vehicles when this is associated with a traditional activity (Lewis 1992). Restricting land use to traditional practices restricts self-determination and avenues of development (Stevens 1997). Commercial use of wildlife can be consistent with conservation objectives, as well as bringing economic benefits to local communities (Wilson et al. 1992, English 1997).

Co-management arrangements between agencies and Indigenous communities can provide for control of cultural sites, support traditional management practices, and allow income from tourism to be retained within the local community. There is a growing interest, particularly from international tourists, in visiting sites with a strong cultural emphasis, such as Uluru-Kata Tjuta and Kakadu. Tourism can lead to negative impacts on sites, but if managed carefully, can bring significant economic benefits to Indigenous people. In many areas, Aboriginal people have had little control over the numbers of tourists visiting significant sites. However, the traditional owners at Mutawintji Historic Site and National Park in NSW have succeeded in controlling access to, and interpretation of, significant sites, while at the same time providing themselves with employment opportunities (Case study 3).

**Case study 3: Aboriginal ownership of national parks** (adapted from Sutton 2000).

NSW legislation, passed in 1996, enabled the return of some national parks to their traditional Aboriginal owners. The Aboriginal owners then lease the lands back to the NSW NPWS, and the area is jointly managed through a board with a majority of traditional owners. The legislation also provides for an annual rental that helps ensure that the lands are managed to meet Aboriginal interests. The first park to be handed back was the 76,000 ha Mutawintji National Park in far west NSW.

Non-Aboriginal people have been visiting Mutawintji since the 1880s, for picnics, swimming and to view the Aboriginal rock art. As well as painted and stencilled art in rock overhangs, the area contains the largest collection of rock engravings in south-eastern Australia. Under NPWS management a campground, walking tracks, rangers’ residence and visitor centre were established.

In 1983, the local Paakanjii, Malyangapa, Pantjikali and Wanyapariku tribes became aware that the NPWS had purchased the two sheep stations surrounding the existing historic site and intended to have a large area gazetted as a national park. Concerns about management of the area led a large contingent of local Aboriginal people to ‘blockade’ the entrance to the historic site. Changes that were made because of this action and subsequent initiatives included:

- closure of public access to Snakes Cave (a traditional men’s initiation site) and Mushroom Rock (a traditional women’s birthing site);
- relocation of the campground near Snakes Cave to a more appropriate site;
- realignment of walking tracks to prevent disturbance to archaeological sites;
- establishment of the Mutawintji Culture Centre; and
- establishment of the locally run company Mutawintji Heritage Tours.

The Indigenous Protected Area concept is showing promise as a means of integrating cultural and nature conservation objectives (Szabo & Thackway 2000). In 1998,
Nantawarrina in the Flinders Ranges was the first Indigenous Protected Area proclaimed in Australia. Fencing and feral animal control has been undertaken to protect important natural values. Visitor management strategies have been prepared, and the area has been listed on the register of Australia’s protected areas. Nantawarrina has challenged a number of conventional notions about protected area management, including recognition of the capacity of Indigenous people as managers of protected areas; acceptance of the utilisation of biodiversity; and the recognition of cultural values of lands as equivalent to biodiversity values in protected areas (Szabo & Thackway 2000).

**Economic methods and their application to analysing conflict and informing policy**

The preceding discussion has indicated the complexity of conflicts between natural and cultural heritage conservation. Economic methods are too limited and specific to encompass the entire domain of this complexity. In particular, economics is not very useful for resolving conflicts over definitions, principles, or cultural differences. These matters must be resolved through the various participatory, deliberative, democratic and judicial processes that are either already well established, or evolving to meet this need.

Part of the underlying reason for economics’ silence in these areas is that such matters often involve competing interests that cannot be traded off against each other. The methods of natural and cultural resource economics require that individuals are willing to make trade-offs between competing values. However, issues related to matters of definition are most appropriately addressed through consideration of facts and through professional adjudication. Matters of principle or cultural difference often entail consideration of non-negotiable rights. In neither case do the methods of economics provide the necessary structures to achieve an effective resolution.

On the other hand, a particular group can capture a political process, so that it serves the interests of this group rather than the public good. This group could comprise experts whose entrenched professional values may weigh more in the decision making process than the views of the community (Throsby 1997). Heritage assessments, for example, are generally carried out by cultural heritage professionals, often with little explicit recognition of any values that may be held by the wider community. This practice is based on the implicit assumption that heritage professionals have the same value system as the community they serve, and that, therefore, they can develop plans that adequately represent the community’s interest. This is unlikely to be the case, given that such values are projected by the valuer, whose own value system is determined, inter alia, by ideological influences such as education, life experience and social-economic circumstances. One of the strengths of economic analysis is that it can generally incorporate the preferences of all stakeholders, albeit that these preference have to be expressed in a certain form.

Economic analyses assume that stakeholders have preferences concerning the issue at hand, and that these preferences meet a set of conditions determined by economic theory. Certain personal, social and moral values may not be expressed in a way that is consistent with all these conditions. Moral concerns, for example, may cause people to refuse to make trade-offs between their income and a non-market good. Moral concerns may be important with respect to both natural and cultural heritage. Some people may consider that we have a duty to protect the natural ecosystems based on their intrinsic value. Other people may regard the cultural heritage in moral terms. Nonetheless, many people are probably willing to make trade-offs between environmental quality and their personal wealth on the one hand, and between cultural heritage and their wealth on the other. Given this, economic methods can still be used to provide useful data for informing policy decisions.

Economic methods can be used to justify public investment in heritage management, assist resource allocation and land use decisions, demonstrate the contribution heritage makes to an economy, optimise resource utilisation and establish sound pricing policies for heritage resources.
Assisting decisions in relation to competing objectives

Economics can help a public sector management agency make decisions that maximise the benefits obtained from investment of public funds. Environmental economists see a part of the solution to environmental problems in terms of ensuring that the environment is properly valued to reflect the relative scarcity of natural resources and assets. The same could be said for heritage resources. It is in the area of competing management objectives, and specific proposals that are designed to address these objectives, that economics can make an important contribution. Economists can potentially assist policy and decision making by analysing the economic implications of proposals, or by contributing to the development of proposals related to the provision of heritage goods.

A key means of judging the relative economic merits of alternative proposals is social benefit cost analysis (BCA). Such analyses involve identification and measurement of all economic benefits and costs, aggregation of these over a given time period using a discount rate to reflect the social time preference for money, and assessment of the results against criteria such as net present value or rate of return.

There are several difficulties in applying BCA to heritage resources. BCAs employ a discount rate that reflects the community’s or the investors’ time preference for money. It is usual to discount future benefits and costs back to present values using a discount rate. The higher the discount rate, the lower future benefits and costs are valued relative to the present. The use of a discount rate effectively devalues the claims of future generations, and does not address situations where some assets may become more valuable over time due to their greater scarcity or antiquity.

Both natural and cultural heritage affect future generations. If natural or cultural capital is allowed to degrade, future generations will be denied the opportunity to gain benefits from them. If our generation chooses to invest in their preservation, both current and future generations benefit. However, there are opportunity costs associated with such investment. Within a protected area, these costs include diversion of funds from other management tasks such as provision of visitor services or control of weeds and feral animals. Since we cannot afford to protect all sites, there is the problem not only of how to choose between sites based on current generations preferences, but also of how to take into account the preferences of future generations. These intergenerational considerations are important aspects of sustainability (Throsby 1997), and raise issues about matters such as the appropriateness of discounting future values.

Despite such limitations, BCA can provide useful advice to decision makers on the relative economic merits of different policy options. To our knowledge, no complete BCAs have been conducted on issues that involve conflicts between cultural heritage conservation, nature conservation and provision of ‘wilderness recreation opportunities. To incorporate all components of economic value, a BCA must take into account both market and non-market costs and benefits. An analysis that includes consideration of both these value components is sometimes termed an extended BCA.

Economists use two classes of techniques to measure these various economic values - revealed preference and stated preference methods (Freeman 1993). Conventional revealed preference approaches have relied on measurements based on behavioural expressions of value. People reveal the value they place on a good or service through transactions they make in a market. For some goods, such as recreation undertaken in protected areas, direct markets may not exist, but visitors still reveal their value through their willingness to spend time and money in order to gain access to a site. Such revealed preferences for recreation can be measured using indirect market methods based on travel cost method.

Economists have also developed methods based on what people say about, for example, their willingness to pay (WTP) for nature conservation, rather than what they reveal through their behaviour. Such stated preference methods are particularly important with respect to protected areas, because many of the potential benefits
provided by such areas are not revealed in markets, and cannot be recovered through indirect market techniques. At present, the most significant stated preference technique is contingent valuation (CV). Other stated preference techniques that have been explored include contingent rating, contingent ranking, paired comparisons and choice modelling (Mitchell & Carson 1989, Morrison et al. 1996).

We will illustrate the use of non-market valuation methods in addressing land use conflicts between natural and cultural heritage conservation by way of two Victorian case studies - one concerning grazing on the Bogong High Plains (Case study 4), and the other timber harvesting in East Gippsland (Case study 5).

**Case Study 4: Bogong High Plains grazing**

The Bogong High Plains covers some 120 square kilometres of predominantly treeless vegetation in the Victorian Alpine National Park. European exploration of the area in the 1830s was followed by grazing of cattle, sheep and horses in the 1850s. Cattle and horses were grazed annually from that time, while sheep were taken there in drought years. Stocking rates were sometimes high, with nearly 40,000 sheep taken to the area in the summer of 1902. Heavy stocking, as well as annual burning to promote feed growth, contributed to massive deterioration of the vegetation cover and soils (Johnson 1974). Cooperative activity in the 1940s between government departments and graziers led to the banning of sheep and horse grazing, as well as the restriction of stock numbers. Grazing on the majority of exposed mountain peaks was stopped in the 1950s, and grazing was withdrawn from further sensitive areas in 1991. Since 1992, several thousand head of cattle have been permitted to graze in areas of the High Plains under a leasing system. Lease areas are not transferable beyond the immediate family.

Despite extended planning and decision making processes conducted by the former Land Conservation Council (LCC) and the Department of Conservation and Natural Resources, the issue of High Plains grazing remains contentious. Representative conservation groups such as the Victorian National Parks Association and Environment Victoria continue to express opposition to the grazing based on its environmental effects. Supporters of grazing object to any reduction in the number of grazing leases.

Botanical research has indicated that some conservation values are compromised by the grazing of cattle on the High Plains. Wahren et al. (1994) reviewed evidence from nearly 50 years of data on the impacts of cattle grazing on soil erosion, vegetation structure, and species diversity. They concluded that grazing has had a substantial effect on the structure and composition of subalpine grassland and heathland. For example, grazing has inhibited the regeneration of a number of palatable herbs such as Craspedia. Loss of vegetation cover and subsequent erosion of soil is also a problem, particularly in exposed sites. Creek and pond areas suffer greater levels of trampling as cattle go to drink, and sensitive sphagnum bog communities may be badly affected. The visual impact of cattle on the High Plains, and the pollution of water catchments are also of concern.

On the other hand, the grazing is a traditional activity in the area, and the heritage values with which it is associated are commonly used as justification for continued grazing. Alpine graziers have a strong sense of identification with the High Plains. Many of the families that graze cattle at present have had a long association with the alpine area. The use of traditional grazing practices and the atmosphere associated with some of the activities such as the end of season muster are described by Johnson (1974), and have been popularised in films such as ‘The Man from Snowy River’. The continued practice of grazing and presence of cattle on the High Plains provide a tangible link with the past. The imagery and sense of history evoked by seeing cattle or cattlemen, or merely by knowing that grazing is still practiced in a traditional fashion, is important to some people.

The two sets of competing values (pro-nature conservation and pro-heritage conservation) may have economic aspects insofar as people are willing to pay to secure their preferred option. Such values
can only be assessed using stated preference surveys such as CV.

The non-market benefits of continued grazing that might motivate a respondent’s willingness to pay are:

- non-use value of heritage (the knowledge that grazing continues in the traditional manner providing a link with history);
- use value (benefits derived from using the area while knowing that cattle are still grazed, or from seeing the cattle, which may include visual appeal of cattle); and
- indirect use value (value derived from reading about, seeing pictures in books or films).

The non-market benefits that might motivate a respondent’s willingness to pay for stopping grazing are:

- non-use value (knowledge that the High Plains environment is protected from damage by grazing); and
- use value (additional utility High Plains users may derive from their use if the cattle were not present).

Lockwood et al. (1996) used two independent CV surveys - a ‘stop grazing’ version and a ‘continue grazing’ version - to measure these values. Each version established a contingent market in which respondents could choose to purchase, depending on the version, either the certainty that grazing would continue or the discontinuation of grazing.

The survey was administered by mail, and sent to two random samples of 555 addressees selected from telephone listings across Victoria. The two versions of the surveys presented identical background information on the issue, including a description of the High Plains and alpine grazing, the associated heritage values, and the possible environmental effects. Attitudinal and demographic questions were included to facilitate interpretation of willingness to pay results and check for sample representativeness.

The response rates were 62.5% for the ‘continue grazing’ version and 64.0% for the ‘stop grazing’ version. Respondents generally approved of High Plains grazing, with 73% of respondents to the ‘continue grazing’ version and 69% of respondents to the ‘stop grazing’ version expressing support for continued grazing.

The survey found that the values for heritage conservation which were greater than those for the competing value of preserving the natural environment. The ‘continue grazing’ version estimated the average household WTP for maintaining grazing to be $86. The ‘stop grazing’ version estimated the average household WTP for removing cattle to be $5. Median willingness to pay for both versions was zero - that is, less than half the respondents had any WTP.

The WTP for the ‘stop grazing’ scenario was correlated with responses to questions concerning an expectation that they will visit the area in the future, a view that there should be more parks, and that bushwalking was an important aspect of their use of the BHP. The WTP for the ‘continue grazing’ scenario was correlated with responses to attitudinal questions concerning ‘preserving heritage’ and ‘history of grazing’. However, it is possible that the latter respondents, rather than valuing the cultural heritage benefits described in the scenario, are responding to the concept of continued grazing on a symbolic level.

Some heritage values associated with the mountain cattlemen could survive discontinuation of grazing on the Bogong High Plains.

Such problems could potentially be overcome by the use of another stated preference method - choice modelling (CM). In CM, participants are presented with several sets of choices each involving two or more options. Participants are asked to select their preferred option in each choice set. Options are typically defined in terms of salient attributes, including a dollar willingness to pay. Choice models produce estimates of the values of changes in individual attributes within an option, as well as the value of aggregate changes. The analysis of the results of the CM provides a reflection of the trade-offs that each individual makes between the attributes. Application of CM to the BHP issue could establish the relative important of the various attributes that constitute the heritage value of BHP.
grazing. Bennett (2000) examines the potential of CM for cultural heritage applications.

To date the issue of Bogong High Plains grazing has been tackled directly through the political process, and through the deliberations of the now disbanded LCC. The current extent of High Plains grazing is a result of government acceptance of LCC recommendations made in 1979 and 1983. The management plan for the Alpine National Park, which also involved extensive public participation, generally reinforced these recommendations. However, this public participation was dominated by mountain cattlemen on one hand, and conservationists on the other. These groups have attempted to influence government decisions through direct lobbying, demonstrations, media activity, as well as participation in the LCC and management planning processes.

Neither the LCC nor the broader government deliberations were able to capture a representative cross section of relevant community values. CV surveys of representative populations capture the values of people who do not directly participate in current decision making procedures. The data is also more useful than a simple referendum poll, in that CV records both the direction and strength of a respondent’s preferences.

Of course, CV should be used as a complement for the existing processes of land use decision making, not as a substitute. As an economic valuation technique, CV has nothing to say about non-economic values which may be motivated, for example, by ethical concerns for cultural heritage conservation or the intrinsic value of native plants. It is of interest to note that more than 50% of respondents had no willingness to pay for either scenario, despite strong expressions of concern for both cultural heritage and nature conservation in the attitudinal questions. This suggests that many peoples’ values associated with the issue may be not be captured using an economic methodology such as CV.

**Case study 5: Timber harvesting in East Gippsland**

Economics generally assumes that consumers get utility from the outputs of an economy, and that society’s value of inputs is merely derived from the demand for related outputs. Thus, the economic value of inputs such as timber or minerals is largely related to the demand for output they create. While conventional economic theory suggests that public WTP for an activity that produces goods they would not consume is equal to zero, it is possible that inputs may also have some economic value beyond their derived demand value - a non-market economic value of an input that is additional to the value of both the commodity it produces and any direct or indirect employment or regional economic development associated with its production.

Passmore (1974, p. 39) described two important traditions in Western culture, both of which consider the human race to have particular moral responsibilities towards nature. The first emphasises the need to conserve the earth’s fertility, by culling and pruning and good management. The second looks to the perfection of nature by humans. These moral responsibilities suggest the existence of a resource use ethic. Some people might hold such beliefs, considering they have a moral responsibility to use and manage natural resources independent of the net utility of the goods produced.

A non-market WTP may derive from a conviction that natural resources must be used and not ‘wasted’, even if doing so confers no direct market economic advantage either to society or to particular individuals. It may also relate to the value people place on traditional use of an area, regardless of the value of the outputs from this use. Lockwood et al. (1994) termed such a value an ‘intrinsic production value’ and tested for its existence in the context of a study into the non-market value of reserving national estate forests in south-eastern Australia from timber harvesting.

To measure both the preservation and possible non-market intrinsic production values a series of CV surveys were conducted that determined the magnitude of Victorians’ WTP for protecting areas of south-eastern Australian native forest in national parks. The key issue examined was whether East Gippsland unreserved national estate forests should be placed in national parks or be available for timber production. As well as
measuring community WTP for reserving East Gippsland national estate forests in national parks, Lockwood et al. (1994) also tested for any WTP to ensure logging of these forests, and estimated the proportion of this WTP which might be attributed to an intrinsic production value.

The mean WTP for continued logging was $38, and the median was zero. Respondents allocated 29% of their WTP to the opportunity cost of unemployment and 30% to the non-market value of ‘just knowing the forests are used for logging’. This figure is about 4% of the mean WTP for reserving the same areas in National Parks of about $255 (Lockwood et al. 1994).

### Justifying public investment

Natural capital is the stock of environmental components, dependent on natural processes for their distribution and abundance, that provides goods and services in support of socio-economic activity (van den Bergh 1996). Extending this notion, Throsby (1997, p. 15) described cultural capital as the capital value that can be attributed to a place ‘which is additional to the value of the land and buildings purely as physical entities of structures, and which embodies the community’s valuation of the asset in terms of its social, historical or cultural dimension’. Like other forms of capital, natural and cultural capital can degrade if they are neglected, and can be enhanced or created by judicious investment.

Both natural and cultural assets are, at least in part, public goods, so that their supply must, again at least in part, be funded by government. The public sector is required to provide those social goods and services required by the community where the market is an inefficient producer, and to manage situations where externalities arise that affect social welfare. This conclusion is supported by economic theory, and by most natural and cultural resource economists (Throsby 1997).

Government instruments that are typically applied in relation to public goods include setting standards, prescribing behaviour, limiting land use, establishing decision processes, establishing infrastructure and institutions, direct government ownership and operation, defining property rights, providing information, designating, classifying or labelling goods to indicate their status, as well as voluntary measures directed at other governments, the private sector and individuals such as strategies, guidelines, codes of practice, charters, grants and tax incentives (Young et al. 1996, James 1997, Throsby 1997, Miles et al. 1998). Economic analysis can be used to explore the implications of such interventions in terms of their economic efficiency, cost effectiveness, or contribution to employment and economic development. Methods directed towards the latter two ends are briefly considered in the next subsections.

Considering the efficient supply of public goods, it is well known that markets under supply public goods such as biodiversity conservation and some cultural heritage items over which individual property rights cannot meaningfully be allocated. Under supply of public goods constitutes a failure to maximise economic welfare. However, intervention must lead to improved allocation outcomes over those of the free market and the ensuing benefits should exceed the cost of such intervention, including those of enforcement and market distortions (Panayotou 1992). It is therefore important that policies designed to provide economic incentives and establish cost-sharing arrangements are based on assessment of all economic benefits and costs of heritage conservation. Quantification of the relative economic benefits of natural and cultural heritage protection can help an agency argue for and justify allocation of public money to the maintenance and enhancement of heritage assets. Again, BCA can be used for this purpose.

### Demonstrating economic impact

Moves towards greater market orientation in the public sector, including heritage conservation, have led to pressures for evaluation of the extent that heritage tourism contributes to local economies, as well as improved cost recovery, usually through imposition of user charges (Hansen et al. 1998). Economic impact analysis examines how a policy will affect important components of an economic system, such as employment, economic growth, or the revenues of particular industry sectors. It can be used to assess how much additional economic activity is generated by an
investment of public funds at a local, regional or national level. An analysis of the importance of a project for attracting visitors and their expenditure needs to take into account factors such as how the project displaces visitors and their spending from other regional attractions. Cost per job created is one measure that is used for assessing the cost effectiveness of public investments (Hansen et al. 1998).

A technique used to measure how an allocation of resources would affect regional income, expenditures and employment is called Input-Output analysis. For example, the regional economic impacts of the Dorrigo and Gibraltar Range National Parks in northern NSW were assessed by Powell & Chalmers (1995) using Input-Output analysis.

**Optimising resource utilisation**

Economics can assist in optimising returns on investment, as well as ensuring the sustainability of resource production. To give two examples, economic and biological information, together with traditional ecological knowledge, can be used to develop harvesting regimes for native species that satisfy both nature conservation and cultural objectives. Cost effectiveness analysis can be used to establish the least expensive way of achieving a given outcome.

For cultural heritage sites, managers have to make a choice between conserving it in its present state, slowing its deterioration, restoring it to some former state, or changing it to some new state, which may involve adaptive re-use. Adaptive re-use of a site can be an economically viable alternative to letting it degrade. The old shearers’ quarters at Kinchega National Park, for example, has been turned into tourist accommodation. Coolart Homestead, an historic farm site managed by Parks Victoria, has been refurbished to cater for nature conservation activities that take place in the surrounding landscape. At Coolart, the conservation plan provides for adaptive re-use that does not diminish the general form and character of the buildings, or of the wider site (Grinpukel 2000).

Investment analysis, which is similar to BCA, except that only direct financial expenditure and revenue are considered, can indicate whether such projects could enable a site to be self funding, or at least less expensive to manage.

**Pricing visitor services**

Economic principles can be used to help determine who should pay for the provision of natural and cultural heritage. The full cost of providing services to specific identifiable beneficiaries should be recovered by way of charges to them. The costs of providing public benefits that are unable to be attributed and charged to specific beneficiaries should be treated as community service obligations and funded collectively, usually through tax revenue. Where costs are subsidised by government, they should be defined explicitly so that unsustainable precedents are not established.

Visitors may enjoy a range of economic benefits from heritage resources. Visitors derive use value from facilities such as walking tracks and visitor centres. Non-visitors may value the existence of the resource, without necessarily needing to access the site. Businesses may offer services directly associated with the resource such as tours, and regional businesses and local communities may gain benefits from visitors purchasing fuel, food, accommodation and other services.

Economic analysis can help an agency to identify appropriate pricing policies for providing such visitor services related to natural and cultural heritage. Managers should be able to justify their pricing of visitor goods and services so that decisions are neither arbitrary nor inequitable (Loomis & Walsh 1997). Ultimately, the question of whether to charge fees for using natural and cultural areas is a political one. It can depend on management objectives, as well as legal and administrative constraints. Objectives for developing a user pays policy may include: equitable provision of visitor opportunities; cost recovery; generation of profit; and management of visitor impacts to reduce or redistribute numbers, reduce congestion, user conflicts and environmental damage (Lindberg 1998).

There is an important philosophical difference in paying for the product rather than for the right to enter a protected area (SECARC 1998). It may be appropriate to use economic principles to set charges for
value-added services. Where user charges can be justified, the economically efficient solution is to adopt a policy of marginal cost pricing. Demand and supply functions have been used, for example, to estimate an efficient price for recreation in Queensland's Girraween National Park (Beal & Harrison 1997). Costs can be calculated to include both the direct costs of providing facilities and services, and external effects associated with rectifying any environmental impacts of the visitor activities. However, such marginal cost pricing may not cover the average total costs faced by an agency. Effective competition among private suppliers would tend to drive user fees to minimum cost levels, but protected area agencies tend to have a different cost structure. Charging a price equal to the average total cost will ensure that an agency does not make a loss, but this may not produce an efficient amount of visitor services (that is, net benefits may not be maximised).

There are also a number of other issues to consider in pricing visitor resources. Should the present generation of users contribute towards rehabilitating damage arising from past visitor use? How do managers prevent a focus on user pays diverting attention away from core non-commercial management functions? Should user charges be retained for the management of that particular park? Clearly, establishing a visitor pricing policy is a complex task. It is not surprising therefore, that many agencies are having difficulty grappling with these complexities. In particular, some agencies seem reluctant to use economic expertise to help them establish sound pricing policies. Economic understandings of visitor demand can assist a manager to improve their decisions.

Implications for the Australian Heritage Commission

Cultural heritage is the visual manifestation of the identity of a cultural group and its constituent individuals. Thus, to a large degree, cultural heritage policy making has much overlap with contemporary social policy. The way we see and treat our natural environment is also a social construct, determined by the values we bring to it.

The way we phrase approaches to public decision-making influences the outlook of present and future generations. The current trend to call rate payers 'customers' rather than 'citizens,' for example, sets up a semantic field whereby the obligations of the council to the individual are reinforced, while the obligations of the individual to the community are entirely removed. That interest in community service seems to be dropping is not surprising. This goes hand in hand with the current trend to regard heritage places as assets to be managed in manners almost akin to the corporate car fleet or rented office space for the administration. While this may appear as semantic hair-splitting, we have to be conscious that such terms can create and perpetuate unintended outcomes.

Economic methods can make a powerful contribution to addressing some types of heritage conflicts, but care should be taken that their application does not result in the commodification of nature and culture. There are a number of areas, particularly in relation to non-negotiable values, where economic methods simply cannot function.

Given this, the AHC may wish to consider the following education, research and advocacy roles in relation to heritage economics and dispute resolution.

1. Conflicts over definitions, principles, or cultural differences must continue to be resolved through participatory, deliberative and democratic and judicial processes. We have highlighted several features of such conflicts, in particular the imbalance that exists between the status of cultural and natural heritage values. The AHC has a significant role in facilitating and contributing to the debate about such matters. The AHC could further encourage, through targeted education programs, a more balanced and informed approach amongst decision makers and park professionals in heritage management agencies.

2. Research is needed into how we might better address conflicts that involve competing non-tradeable values. Such research might also address the time pressure implications of a genuine commitment to fully engage with Indigenous peoples. We have indicated that economics cannot effectively
address such conflicts. However, there may be other formal methods that could augment the various processes that are currently used. Citizens' juries, for example, are one approach that may merit further investigation. Though perhaps too much to ask, it would be particularly useful if an approach could be developed that was accepted by all stakeholders.

3. Economic methods directed towards assisting resource allocation and land use decisions, optimising resource utilisation and establishing sound pricing policies for heritage resources, are of more use to protected area management agencies, than to an organisation such as the AHC. Though more research is always useful, the greater challenge is helping management agencies to make effective use of the available tools. We do not see a significant role for the AHC in these areas, unless it is one of advocating to management agencies the advantages of using economic methods for the purposes listed above.

4. The AHC may wish to fund, or advocate the use of, economic methods to justify public investment in heritage management, and demonstrate the contribution heritage makes to economies. Continued data collection and dissemination in these areas would be a useful contribution to the conservation of natural and cultural heritage in Australia.

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