

Wilderness Within World Heritage: Te Wahipounamu, New Zealand

Les Molloy
Murray Reedy

Abstract—The Te Wahipounamu World Heritage Area, 2.6 million hectares (6,424,600 acres) of mountains, glaciers, forests, and fiords, contains New Zealand’s main wilderness resource. The Department of Conservation’s comprehensive Visitor Strategy has been used to manage visitors to the widely differing sites within the World Heritage Area system. Most management effort is focused on the increasing number of visitors who require access and facilities in the frontcountry, and the large group of discerning backcountry users who use the “Great Walks.” Four wilderness areas, making up 10 percent of the World Heritage Area, are strictly managed for wilderness recreation, and there are proposals to designate two additional areas for wilderness users. Unresolved management issues are: the need for more marine conservation, the need for better control of introduced animal pests, and the disruption of natural quiet by tourist flights.

The Southwest of New Zealand’s South Island is one of the great wildernesses of the Southern Hemisphere. It is a remote, unoccupied landscape, both forbidding and beautiful. It contains New Zealand’s most outstanding wild landscapes—the fiords, the Southern Alps, the great glaciers, and the turbulent rivers descending to the vast temperate rainforests of the West Coast, and the wide open spaces of the Eastern tussock grasslands and glacial lakes in the rainshadow of the Alps.

During the 1970’s and 1980’s, bitter resource controversies raged throughout the Southwest, with wilderness advocates opposing:

- Raising of Lake Manapouri in Fiordland National Park for hydroelectricity.
- Mining of asbestos in the Red Hills ultramafic area.
- Formation of a 120 km tourist road between Haast and Milford Sound.
- Nonsustainable logging of the magnificent Rimu and Kahikatea Forests of the river terraces and moraines of South Westland.

After 2 decades of intense resource controversy, the New Zealand government unequivocally opted for conservation by reserving the lowland rainforests of South Westland,

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Les Molloy, Heritance Works, P.O. Box 183, Wellington, New Zealand, e-mail: les.molloy@extra.co.nz. Murray Reedy, West Coast Conservancy, Department of Conservation, Private Bag 701, Hokitika, New Zealand, e-mail: mreedy@doc.govt.nz.

passing them to the management of the Department of Conservation, which already managed the primarily mountainous national parks. Soon after, in December 1991, the United Nations Educational, Scientific and Cultural Organization (UNESCO)—without hesitation—designated this 2.6 million hectare wilderness (an extraordinary 10 percent of the total area of New Zealand) as the “Te Wahipounamu (South-West NZ) World Heritage Area.”

The name “Te Wahipounamu” is an ancient Maori term for the whole area, meaning “The Place of the Greenstone.” Pounamu, or “greenstone,” is a nephrite found in isolated lenses along the path of the great Alpine Fault; pounamu is highly prized for its beauty and utility by the indigenous people, the Maori, who traveled into the interior of the wilderness to gather this “taonga” (treasure).

Te Wahipounamu has four National Parks—Fiordland, Mount Aspiring, Mount Cook, and Westland—as its cornerstones. These mountainous limbs are skirted by the lowland rainforests of Waitutu and South Westland (fig. 1).

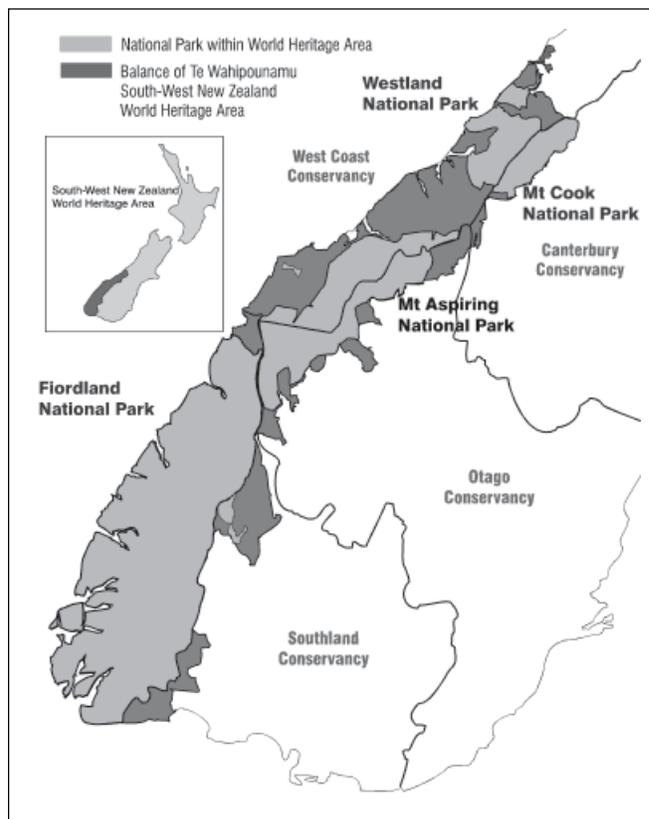


Figure 1—National Parks within Te Wahipounamu South-West New Zealand World Heritage Area.

The main tourist attractions of the South Island lie within the World Heritage Area:

- Milford Sound and the Milford Track
- Lake Te Anau and the Kepler Track
- The Routeburn Track and Mount Aspiring
- Mount Cook (Aoraki) and the Tasman Glacier
- The Franz Josef and the Fox Glaciers

A measure of the integrity and “outstanding universal value” of the South-West is the recognition by UNESCO that it meets all four criteria for World Heritage status by:

I...containing major features of earth’s geological history, especially the uplift of mountains along a plate boundary and the development of glacial and marine terrace land forms;

II...exhibiting significant on-going evolution of alpine herbfield, forest and wetland habitats since the last glaciation;

III...having many areas of exceptional natural beauty and aesthetic importance; and

IV...containing some of the most important habitats for the conservation of the biodiversity of ancient Gondwana.

Visitors Within the World Heritage

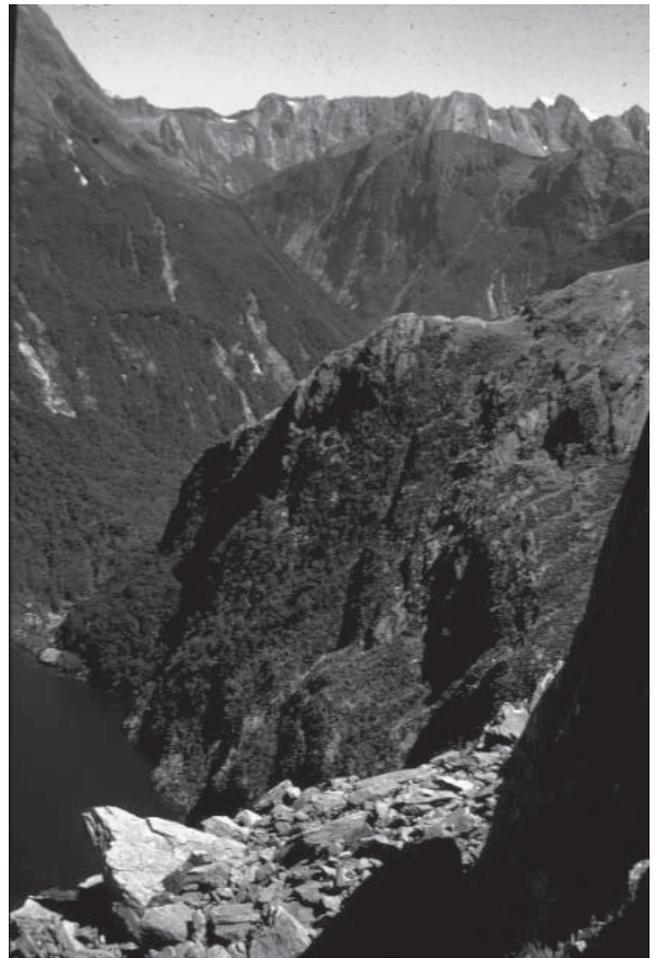
Te Wahipounamu is an extremely robust landscape, defying past human attempts at settlement. The only residents are temporary, mainly associated with tourism (regulated by the Department of Conservation) or fishing in the fiords. There are two main road corridors into and through the wilderness—the Haast Highway and the Milford Highway, each of them a narrow ribbon through the mountain passes, valleys, and forested coastal plain, each vulnerable to earthquake, rockfall, avalanche, and flooding in this most dynamic of landscapes. A network of 10 visitor centres and many interpreted nature walks are dispersed along these “Heritage Highway” corridors (or “aranui”), catering to visitors who want to learn more about the biodiversity and history of the landscape without having to venture far from the road (Molloy 1992).

Wilderness Areas

At the other extreme, there are four wilderness areas (wild areas managed strictly in terms of the New Zealand Wilderness Policy) within the World Heritage site:

- Hooker-Landsborough (41,000 ha)
- Olivine (80,000 ha)
- Pembroke (18,000 ha) (fig. 2)
- Glaisnock (125,000 ha)

These areas are depicted in figure 3 in relation to the main visitor centers and Heritage Highways. The four areas are dispersed throughout the World Heritage Area and, together, add up to 10 percent of the total area. As wilderness areas, they are managed as places where visitors enter “on nature’s terms.” There are no visitor facilities such as roads, huts, and bridges; there are not even any tracks. Air access



Les Molloy

Figure 2—Lake Nevernever lies in the heart of the mountainous Pembroke Wilderness Area in Fiordland National Park.

to the wilderness areas for recreational or commercial purposes is not allowed, although the Department of Conservation periodically sanctions aerial hunting of wild introduced animals, which are serious pests because of their detrimental impacts on the native flora and fauna.

The wilderness areas are well buffered by a natural landscape that does have a degree of visitor facilities and services. Overall, Te Wahipounamu provides recreational and educational experiences for a wide range of visitors. The way in which an acceptable level of visitor use has been planned for, within such a natural World Heritage Area of high biodiversity and wilderness conservation value, is worth explaining more fully.

Planning Framework for Wilderness in Te Wahipounamu

The planning framework for the management of the wilderness resource of the Te Wahipounamu World Heritage Area is illustrated in figure 4. It spans national, regional, and local communities of interest and levels of

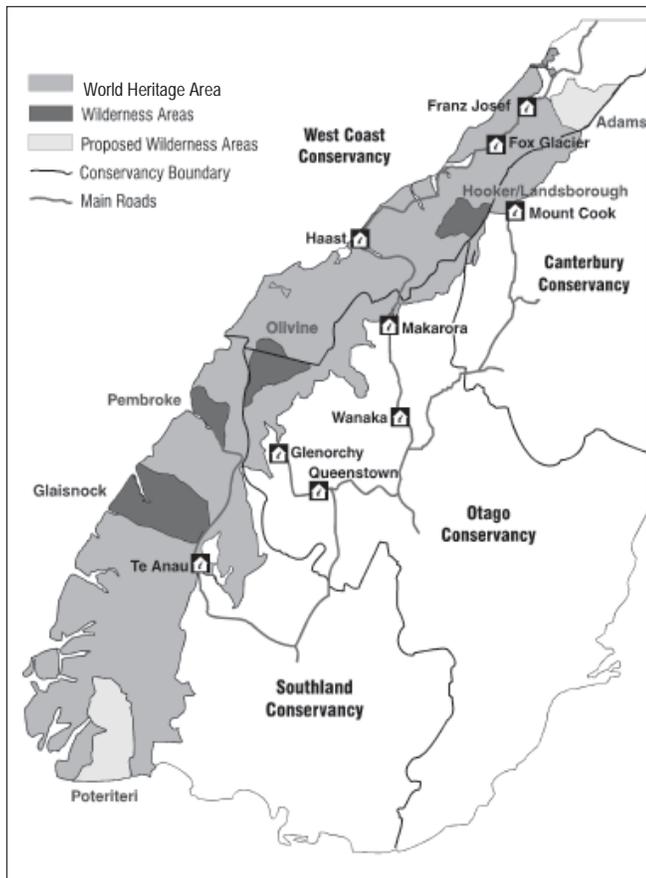


Figure 3—Conservation Visitor Centres and access to Te Wahipounamu South-West New Zealand World Heritage Area.

decisionmaking. There are four main planning entities: legislation, visitor strategy, conservation management strategies, and management plans.

Legislation

In New Zealand, there is no specific legislation for World Heritage Area management. The New Zealand conservation legislative provisions are well developed so that Te Wahipounamu, like other protected areas, is conserved through the provisions of the Conservation Act, National Parks Act, and Reserves Act. Each of these pieces of legislation empowers the designation of Wilderness Areas.

Visitor Strategy

The Department of Conservation manages all visitor sites within the World Heritage Area in terms of its Visitor Strategy (Department of Conservation 1996). The strategy divides all visitors into seven different visitor groups (fig. 5). The Department is committed to providing quality recreational opportunities, and where appropriate, it also provides facilities within Te Wahipounamu for six of these visitor groups:

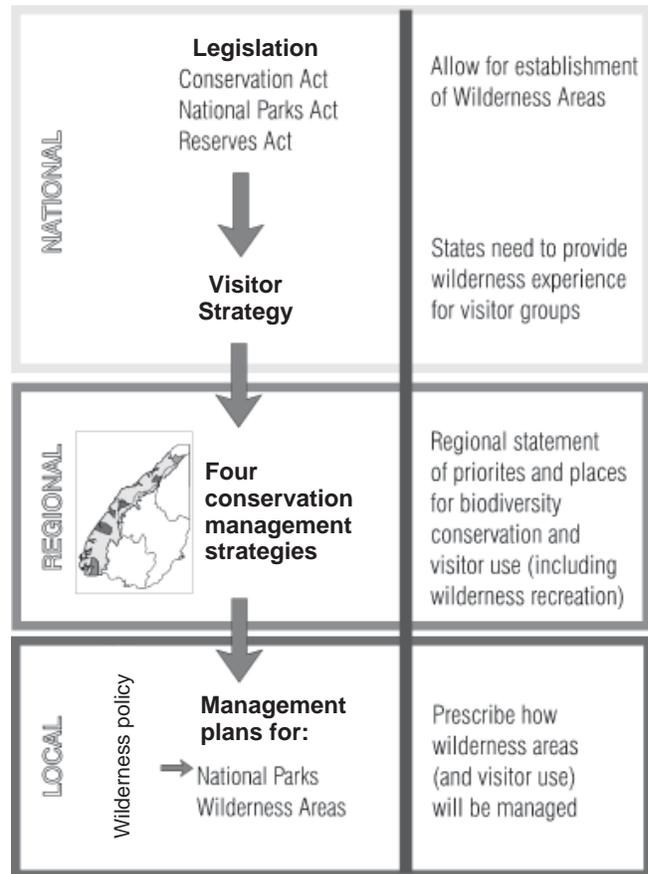


Figure 4—Framework for wilderness management.

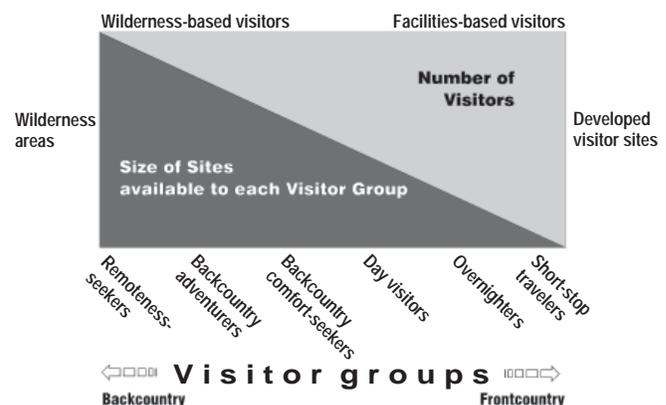


Figure 5—Recreational opportunities for visitor groups.

- Short-stop travelers
- Overnighters
- Day visitors
- Backcountry comfort-seekers
- Backcountry adventurers
- Remoteness-seekers

The seventh category, “thrill-seekers,” such as white water rafting and parapenting, may not take place within wilderness areas unless the activity complies with the strict conditions of the wilderness policy.

Conservation Management Strategies

These statutory documents are the regional conservation statements. They have been established for each administrative region of the Department of Conservation following wide-ranging public consultation. They outline the strategic priorities and key sites for biodiversity conservation and visitor recreation (including wilderness areas). Integrated conservation management for Te Wahipounamu is achieved by four of these Conservation Management Strategies because the World Heritage Area spans the contiguous conservancies of West Coast, Canterbury, Otago, and Southland (Reedy and Doole 1992).

Management Plans

Management plans are place-based statutory management prescriptions for specific sites within Te Wahipounamu, where particular conservation objectives need to be clearly set out. Each National Park has a management plan.

Sites Available to Different Visitor Groups

The inverse relationship between the “size” of the sites available to the different visitor groups and the “number” of visitors in each group is illustrated in figure 5. The three groups that use the frontcountry are numerically the largest; they are the main users of campsites, picnic areas, and short walks along the heritage highways. These visitors have different needs and expectations than visitors who use the backcountry, and the Department of Conservation has invested heavily in quality assurance programs designed to ensure that a suitable standard and range of facilities is available for each user group. Overall, frontcountry visitors are confined to highway corridors where impacts are localized.

Visitors who use the backcountry of Te Wahipounamu fall into two main groups—those who desire facilities and those who desire wilderness. There are two groups of visitors who desire facilities—the “backcountry adventurer” (BCA) and the “backcountry comfort-seeker” (BCC). The characteristics of BCA and BCC visitors are similar in only one respect, that of the requirement for huts, tracks, and bridges to facilitate access and enjoyment.

In the past 10 years or so, some BCC sites within Te Wahipounamu have become a mecca for overseas backpackers. This group desires the highest standard of facilities possible, consistent with a backcountry experience, and have become the dominant users of some of the Great Walks (such as the Milford, Kepler, Routeburn, and Greenstone Tracks), as well as a number of lesser-known Top Tracks (such as the Dusky Track, Hollyford Track, Rees-Dart Circuit, and the Copland Valley Track). On the other hand, many backcountry adventurers are New Zealanders on holiday who are now choosing more remote backcountry sites to avoid the sites that are popular with overseas backpackers.

The Department of Conservation has developed a comprehensive Visitor Asset Management Program to delineate all visitor sites with facilities (3,700 nationwide) and inventory the 15,300 structures used by the different visitor groups to these sites. This program has been established to provide quality assurance across the whole spectrum of sites that visitors use. Nationally, there are a total of 1,280 BCA and BCC sites in the backcountry. Relatively few are provided specifically for BCC’s (132); however, these sites are expensive to operate and a significant cost against the total visitor asset. Conversely, many structures on BCA sites are failing the standards now set by the quality assurance program. The dilemma of this situation is compounded by the need for the Department of Conservation to invest in facilities and opportunities that return the best outcomes for both conservation and visitors. As the new quality assurance program begins to bite, the quantum of facilities available to visitors will shrink, causing more competition for space and heightening the tensions between BCA and BCC groups.

Within Te Wahipounamu, the contrast between the two types of backcountry visitor group sites is even more acute because the BCC sites are the most popular with overseas visitors. Virtually all the BCC sites are high priority Great Walks (such as Milford, Routeburn, and Kepler Tracks), while the bulk of the BCA sites are frequented by significantly fewer visitors who are mostly New Zealanders. The likely outcome, as these BCA facilities fail to meet quality assurance standards over time, is that large sections of Te Wahipounamu will become “de facto” wilderness areas—joining the four “de jure” wilderness areas to provide a vast resource of wildland.

The eventual reduction in BCA sites, therefore, will benefit the numerically smallest backcountry visitor group, the “remoteness-seekers,” who are not facility-dependent (fig. 5). Currently, remoteness-seekers are remarkably well provided for in Te Wahipounamu, and they will eventually have approximately 2 million hectares of wilderness (including the four designated wilderness areas) available to them for wilderness recreation in the world heritage area. However, members of this group have a valid claim in their assertion that the Department of Conservation and the New Zealand Conservation Authority have been slow to implement the recommendations of the 1981 Wilderness Conference (Molloy 1983) and the government’s Wilderness Advisory Group for two more gazetted wilderness areas within Te Wahipounamu. These two proposed areas lie at the extreme ends of the World Heritage Area—Adams, based on the large névés of the Gardens of Eden and Allah, and Poteriteri in southern Fiordland. In its most recent strategic business plan (Department of Conservation 1998), the Department of Conservation identified the designation of these two wilderness areas as a priority objective.

Issues Resolved in Management of Te Wahipounamu

In the past 20 years, a remarkable number of resource and management issues have been resolved in the South-West, each conferring stronger protection or allowing greater conservation value to be accumulated within the protected areas. Some of the major achievements have been:

1. Stopping the raising of Lake Manapouri and Lake Wanaka for electricity generation.
2. The incorporation of the mineralized Red Hills area within Mt Aspiring National Park.
3. The protection of the lowland podocarp rainforests of South Westland from logging.
4. The gradual phasing-out of grazing from the Mavora Lakes area and the valleys radiating from Mt Aspiring National Park.
5. The settlement of the Ngai Tahu Tribe's claim for redress of rights under the Treaty of Waitangi.
6. The establishment of a regime for the management of tourist concessionaires.
7. The preparation of Regional Conservation Management Strategies for the whole of Te Wahipounamu, providing the basis for integrated management by the Department of Conservation.
8. Formal protection of Hooker-Landsborough and Olivine Wilderness Areas.

The Ngai Tahu Tribe was a major partner in the nomination of the World Heritage site proposal to UNESCO and, indeed, the name "Te Wahipounamu" was their suggestion because it was a traditional name that embraced the whole South-West. The settlement of their "Treaty of Waitangi" claim has a number of interesting management implications for the World Heritage Area:

1. The name of Mount Cook (fig. 6) will become "Aoraki/Mt Cook," and 88 other topographic features (most of them in the World Heritage Area) will, in the future, have dual Maori/English names.
2. The title for Aoraki will be returned to the Ngai Tahu Tribe who will, in turn, gift Aoraki to the people of New Zealand "...as an enduring symbol of the Ngai Tahu's commitment to co-manage with the Crown, areas of high historical, cultural and conservation value."
3. The Tribe will be given rights of access and temporary occupancy for the gathering of traditional foods and other materials.



Les Molloy

Issues Still to be Resolved Within Te Wahipounamu

In a natural area as large as Te Wahipounamu, it is not surprising that there are still a number of policy and management issues that need to be resolved, including:

1. The environmental threat of a "Haast-Hollyford Road."
2. Forging of a working partnership with the Ngai Tahu iwi Tribe.
3. Preserving "natural quiet," which is often disrupted by tourist aircraft.
4. Establishing a marine component to the World Heritage Area, and better protection of the coastal "wilderness."
5. Reducing populations of introduced animal pests to ecologically acceptable levels.
6. Addressing the future of cattle grazing licenses within a few remaining valleys.

The proposal from some sectors of local government and the tourist industry, for a 120 km toll road linking Haast with the Hollyford valley (near Milford Sound), is the most overt threat to the integrity of Te Wahipounamu and its wilderness. It is an issue that seems, for the present, to have had its teeth pulled by the combination of New Zealand's stringent resource management legislation, the cost of construction, the measures required to mitigate environmental effects, and the weight of adverse public opinion. It would seriously impinge on the buffer to the Olivine Wilderness Area if it were to be constructed.

Protecting the "natural quiet" of wilderness has become a significant issue in Te Wahipounamu, where a burgeoning industry based on tourist aircraft overflights is raising tensions between backcountry visitors (RS, BCC, and BCA groups) and frontcountry visitors (SST, ON, and DV groups). Air access policies are set down in Department of Conservation regional Conservation Management Strategies; however, overflights are not able to be regulated by these documents. Department of Conservation and civil aviation

Figure 6—Mount Cook National Park is a key visitor attraction within the Te Wahipounamu World Heritage Area. The Park is also important to the Ngai Tahu Tribe, the Maori occupiers at the time of European settlement of New Zealand in 1840. In settling a claim by Ngai Tahu under the Treaty of Waitangi, the New Zealand government has decided to change the name of the Park (and the highest peak in New Zealand) to Aoraki/Mt Cook, and to recognize the future role of Ngai Tahu as comanagers of the Park.

regulatory authorities are working with air transport operators to resolve this matter in ways that accommodate the needs of all parties, but there is no universal solution yet in sight.

The two most important biodiversity conservation issues remaining are (1) the lack of marine protection in the fiords and along the south coast of Fiordland, and (2) the continuing need for control of the wild, introduced animals that negatively impact the flora and fauna of the World Heritage Area.

The marine environment of Te Wahipounamu is not protected by the National Park or Conservation Area status of the adjoining land. In Fiordland National Park, the marine ecosystem within the fiords is unique in the world for the combined effects of freshwater and saltwater circulation, and the diversity of warm-, cold-, and deep-water marine species. Added to this is the unparalleled wilderness value of the 1,900 kilometers of unprotected, wild, uninhabited coastline within the sheltered environment of the fiords.

Protection of the World Heritage Area coastal and marine environments has been complicated by a set of circumstances similar to those regarding the protection of "natural quiet." Regional Conservation Management Strategies can advocate for protection of the coastal and marine environment, but they are dependent on partnerships with communities, other agencies, iwi Maori, and the support of other statutory planning documents.

In the case of Te Wahipounamu, two Marine Reserves have been established in the Fiords, and additional areas have been identified for protection. These measures are as yet insufficient for ecosystem protection, and more consideration needs to be given to other protection measures. Some recent measures have been taken to protect the wilderness values of the "wild" coastline by coordinating the statutory policies of the Department of Conservation (Mainland Southland Conservation Management Strategies) and Local Government (Southland District Plan).

Introduced herbivores and predators are having a severe impact on the natural diversity of Te Wahipounamu. Red deer are widespread; other browsing mammals such as wapiti, fallow deer, goat, and chamois have restricted distributions, but the combination of these animals threatens the integrity of the forest and alpine ecosystems. In the north and west of the World Heritage Area, the Australian brushtail possum (*Trichosurus vulpecula*) has caused severe mortality in montane hardwood forests, and introduced mustelids and rodents have had a widespread and devastating impact on indigenous fauna. Several species have become extinct and others are endangered or in decline.

The Department of Conservation has had to find innovative ways to deal with these threats to stave off further extinctions and loss of biodiversity. Historically, the thrust has been toward species management, but in recent years, new initiatives have focused on integrated programs targeted at the critical pests within priority places. This method has required conservation biologists and ecologists to identify places where natural diversity is greatest and where specifically targeted interventions will have the greatest outcomes for conservation.

An example of an integrated program is the management interventions directed at conserving the endangered Okarito

Brown Kiwi (*Apteryx* "Okarito Brown")—a rare ground nesting bird that is confined to a relatively small area of lowland forest otherwise occupied by many introduced pests. In this situation, research has determined that just two pests, stoats (*Mustela ermina*) and Australian brushtail possum, are critical threats to the survival of Okarito Brown Kiwis. Control measures against these two pests have significant conservation benefits when integrated with species-specific conservation measures.

Conclusions

The vast wilderness resource within Te Wahipounamu can now be said to be under sound management with regard to the provision of opportunity and the regulation of impacts from visitors. The integrity of New Zealand's greatest wild landscape has been protected from human exploitation—no easy task. The designation of further strict wilderness areas within the World Heritage Area is a definite prospect.

There are a number of remaining concerns for biodiversity conservation, especially from the impacts of introduced animal pests. In many respects, this remains the single greatest threat to the natural diversity of Te Wahipounamu. It could be argued that the protected marine ecosystems adjacent to Te Wahipounamu are not sufficient to provide a representative marine component to the World Heritage Area. However, regional Conservation Management Strategies have set priorities and goals for biodiversity conservation, including protection of the coastal and marine systems, and these will be systematically implemented.

There is a question as to the need for a process that might better integrate the four Conservation Management Strategies that relate to Te Wahipounamu. These strategies are the principal means of achieving the conservation and protection goals of the World Heritage Area, but they are essentially stand-alone documents. It remains to be seen if the statutory framework that underpins the protected status of the area is sufficient to ensure that management can achieve all of the conservation outcomes required to ensure the continuing integrity of Te Wahipounamu as a Natural Heritage property

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