

## **A Global Overview of Mountain Protected Areas on the World Heritage List**

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## The Mountain Theme, World Commission on Protected Areas, IUCN

A month before the 1992 Earth Summit, with its adoption of a special Chapter for Mountains, a Mountain Theme was set up in IUCN's World Commission on Protected Areas (WCPA). The appointed Vice-Chair for Mountains, Professor Lawrence (Larry) Hamilton, had before that time been playing an active role in the small group calling itself Mountain Agenda and representing WCPA, IUCN therein. This group was instrumental in laying the groundwork for the adoption of Chapter 13 for Mountains. Under the Theme, a Mountain Protected Area Network was initiated involving 41 managers and scientists working in mountain PAs. This has grown today to 495 managers from 67 countries. Though periodically pared back by elimination of inactive members, the network hovers close to the 500 mark. It is nourished by a quarterly newsletter called *Mountain Protected Areas UPDATE*, now at Issue Number 38, which usually contains 12–14 pages, hard copy.

The Network has stimulated several PA partnerships, joint research projects, and collaborative publications. In addition to producing the newsletter, the Mountain

Theme has been IUCN's principal representative in the unfolding Mountain Agenda created from the 1992 UNCED conference, whose progress was marked by the International Year of Mountains 2002. The Theme has used its very limited support-funds to cosponsor and cooperate with other organizations to implement several landmark events during this 10-year period. These include: Parks, Peaks and People Consultation (Hawaii); Desarolla Sostenible de Ecosistemas de Montaña: Manejo de Areas Frágiles en los Andes (Lake Titicaca); The Mountain Conference (Golden, Colorado); Wildlands Exchange: Beyond the Border (USA–Canada, in Paul Smiths, New York); Mountain National Parks and Biosphere Reserves (Vrchlabi, Czech Republic); and Human Use Management of Mountain Areas (Banff). Some publications resulting from Theme activities include: *Guidelines for Mountain Protected Areas: Mountain High*, IUCN Bulletin; Mountain Protected Areas, PARKS theme issue; Campaign for Cloud Forests; Transborder Protected Area Cooperation; A Global Overview of Mountain Protected Areas on the World Heritage List; *Parks, Peaks and*

*People*; dozens of articles and chapters in books (including *Mountains of the World*, *Mountain Biodiversity: A Global Assessment*, *Transboundary Protected Areas for Peace and Co-operation*, *Protected Area Management: Principles and Practice*, and *Bosques Nublado del Neotropico*).

A deputy vice-chair, Graeme Worboys, was appointed for the Mountain Theme in 2002.

Current activity includes planning for a pre-World Parks Mountain Workshop in South Africa's Drakensberg during 5–8 September 2003, participation in a Mountain Biodiversity Workshop in connection with The Millennium Assessment, preparing material for the UNEP–IUCN State of the World's PAs, and participating in Planetary Garden 2003 in Chamonix, 26–30 October.

Information on the Theme may be found at <http://iucn.org/themes/wcpa/biome/mountain/programme.htm>.

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## A Global Overview of Mountain Protected Areas on the World Heritage List

As one of the many activities that took place for IYM, Jim Thorsell and Larry Hamilton prepared an overview of the current coverage of mountain areas on the World Heritage (WH) List and identified other mountains that would have potential for nomination to this

prestigious list. The review was prepared with the advice of 15 members of WCPA's Mountain Theme Programme and published jointly by the Banff Centre for Mountain Culture and IUCN in September 2002. (Copies available on request from IUCN's Protected Area Pro-

gramme and on the UNESCO, WHC and WCMC web sites.  
<http://www.unep-wcmc.org/index.html>, <http://www.unep-wcmc.org/wh/reviews/~main>)

In setting criteria for inclusion on the list, the authors considered only sites of at least 10,000 hectares

with minimum relative relief of 1500 m. The overview determined that 55 mountain sites from all biogeographic realms of the world have been inscribed on the WH List to date, with another 3 nominations awaiting decision by the WH Committee. This total amounts to one third of all natural and mixed-natural and cultural sites on the List, which makes mountains one of the 3 most “represented” biomes on the List (the other 2 are terrestrial wetlands and marine and coastal sites). This high number is partly

explained by the fact that mountains, with their distinctive geology, outstanding scenic features, and high levels of biodiversity and endemism, often clearly qualify under the 4 WH criteria (geology, ecological processes, biodiversity, and aesthetic beauty). The attraction of mountains for people too is strong, with these 55 sites recording some 47 million visitors, about 70% of all visitors to natural WH sites.

To round out the ultimate “system” of mountain WH sites, the overview suggests 2 actions for state

parties to consider. First is to review extension proposals for 19 existing mountain sites where current boundaries are considered suboptimal. A second action is to examine the values of 28 additional mountain areas, which appear to merit nomination. Particular regions of priority attention would be the Polar regions and Central Asia.

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## A Potential New Continental-scale Conservation Corridor for Australia

### Combining the Australian Alps and the Great Escarpment of Eastern Australia Conservation Corridors

Two outstanding Australian conservation corridors have been established on public lands in southeastern Australia during 60 years of conservation land-use decisions. The Australian Alps conservation corridor straddles the Great Dividing Range and extends along natural protected area lands from central Victoria through southeastern New South Wales (NSW) to the Australian Capital Territory. Another conservation corridor is located in protected area lands along the southern section of the Great Escarpment of eastern Australia, a geomorphic feature that extends north–south from the north of Cairns in Queensland to East Gippsland in Victoria. By linking these 2 conservation corridors, a single large north–south conservation corridor that has strategic biodiversity conservation benefits on a continental scale can be formed (Figure 1). The nature of the existing conservation corridors, the steps necessary to achieve a continental-scale corridor outcome, and the national benefits of this initiative are discussed in this article.

#### **Biodiversity conservation, a global imperative**

Worldwide, habitat loss and habitat fragmentation have been a major cause of loss of biodiversity and species extinctions. According to UNEP:

Global biodiversity is being lost at a rate many times higher than that of natural extinction due to land conversion, climate change, pollution, unsustainable harvesting of natural resources and the introduction of exotic species. ... Over the last three decades decline and extinction of species have emerged as major environmental issues ... about 24% (1130) of mammals and 12% (1183) of bird species are currently regarded as globally threatened.

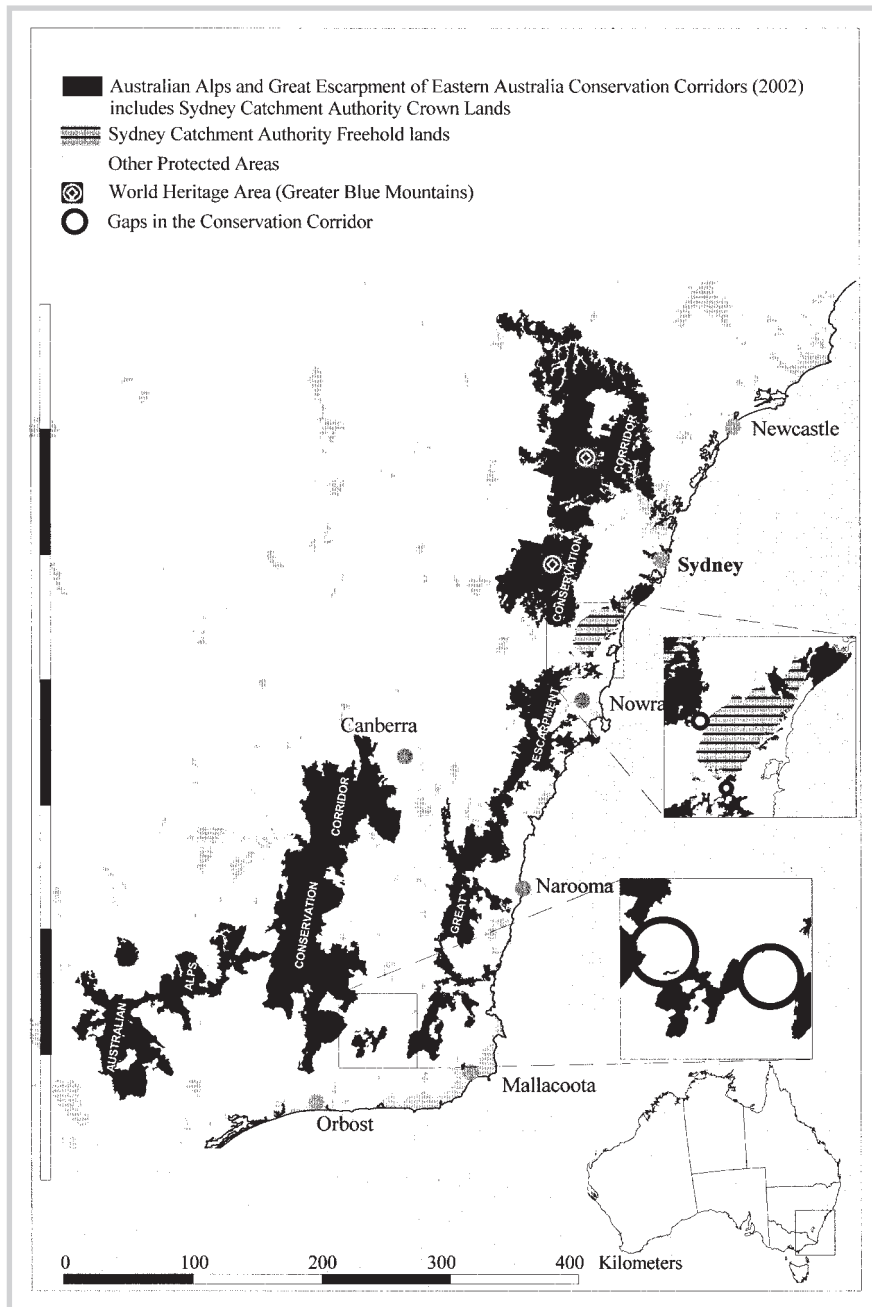
Australia also has serious problems, as portrayed by the Australian State of the Environment Committee. This report found land clearing to be the single greatest threat to Australian terrestrial biodiversity, with an estimated 565,000 hectares cleared in 2000 and 470,000 hectares cleared in 1999. This rate

of clearing was exceeded only by 4 other countries globally: Brazil, Indonesia, the Democratic Republic of the Congo, and Bolivia.

#### **Conservation corridors**

Conservation corridors are an important tool in the conservation of biodiversity. They retain an unfragmented landscape of natural habitat between two or more (usually) larger areas of natural habitat. Typically, they are protected areas or interlink protected areas and have a legal status that guarantees their existence. Conservation corridors have been adopted worldwide by conservationists, planners, and managers as an effective conservation tool. They are natural, sustainable landscapes that commonly involve human use and may include a range of land tenures.

In Australia, the concept of conservation corridors has gained steady acceptance over the past 20 years. From the 1990s, the concept of retaining interconnected natural lands through conservation corridors has become more established including zoning of habitat corri-



**FIGURE 1** Conservation corridors and connections still to be achieved. (Map courtesy of NSW National Parks and Wildlife Service)

The southern extent of the Great Escarpment has a number of interconnected protected areas in Victoria and NSW, forming a north–south conservation corridor of over 350 km in March 2003. It is these reserves that form the current conservation corridor. The linking of this conservation corridor and its several connections to the coast and tablelands have only been achieved since 1997.

#### The Australian Alps conservation corridor

The Australian Alps conservation corridor extends north–south along the spine of the watershed of the Great Dividing Range of Australia. It stretches 690 km south from Wee Jasper through the Brindabella Range on the Australian Capital Territory–NSW border, through the Snowy Mountains of NSW, and along the Great Dividing Range through to Mansfield in Victoria. The Alps form a 1,657,570-hectare continuous conservation corridor of 9 protected areas crossing State and Territory borders along the highest parts of the Australian continent.

#### A conservation corridor of continental dimensions

The interlinking of the Australian Alps conservation corridor with the Great Escarpment of eastern Australia (southern) conservation corridor may be achieved by policy decisions over public lands. The principal connection needed is in Victoria and is on public lands. The Victorian Snowy River National Park connected with the Erinundra National Park and then connected to the Coprocambra National Park (Figure 1) achieves an interconnection between the 2 conservation corridors. It is considered to be the most practical connection. The status of the public lands does not have to change. Rather, it needs a government policy commitment that recognizes the presence and status of a nationally important conservation corridor and its long-term sustainability needs.

dors in local government planning schemes and the design of new protected area reserves such as the 90,000-hectare South East Forests National Park in NSW in 1997, that was extended further in 1998 to 115,000 hectares.

The 2 major conservation corridors of southeastern Australia were established as a result of visionary reserve design and complimentary land-use planning. Other continental-scale conservation corridor initiatives in Australia were also achieved, including the Great Barrier Reef Marine Park and the Regional Reserve system of South Australia.

#### The Great Escarpment of eastern Australia conservation corridor

The Great Escarpment of eastern Australia is a major landform feature that lies to the east of the Great Dividing Range watershed for 2800 km between Cairns in the far north tropical Queensland and the NSW–Victorian border near Eden. Typically separating the tableland from the coast, the Great Escarpment of eastern Australia may be prominent in form, rising abruptly from the coastal plains by several hundred to over 1000 m in many places. It may also be obscure and, at some locations, absent.

The (southern) Great Escarpment of eastern Australia conservation corridor can also be extended northward by policy decision of the government. Currently it extends some 350 km north from Coopracambra National Park in Victoria to Budderoo National Park (Figure 1). The gaps in the conservation corridor are located along the escarpment in the upper Jamberoo Valley and between Bargo State Recreation Area and Sydney Catchment Authority protected land. These connections can extend the conservation corridor all the way to the Hunter Valley and Muswellbrook, a north–south interconnection of over 600 km. Such an initiative would need to be linked to a management framework that protects the integrity of the conservation corridor concept. In the future, it may even be possible to achieve a conservation corridor north of the Liverpool ranges in NSW to the Queensland border and Lamington National Park along the Great Escarpment of eastern Australia.

The 2 conservation corridors combined would achieve an interconnected series of public lands of national significance. They would extend from Mansfield in Victoria along the Great Dividing Range to Tumut in NSW and along the Great Escarpment of NSW to Muswellbrook in the Hunter Valley. Coastal regions near Bega would also be interconnected to the Australian Alps, achieving a coast to alpine area conservation sampling for the eucalyptus genus. Some of the finest conservation samplings of Australian moist eucalypt forests would be interconnected. A World Heritage Area (Greater Blue Mountains) and a Man and Biosphere Reserve (Kosciuszko National Park) would be interconnected.

#### **National benefits of a continental-scale conservation corridor**

A combined Australian Alps–Great Escarpment of eastern Australia

(southern section) conservation corridor is the last chance where a significant north–south unfragmented sampling of 4 Australian bioregions is possible. It is the only remaining opportunity for the retention of contiguous north–south natural lands in NSW from central Victoria to Muswellbrook. There are national benefits in implementing this initiative for the future at national and local levels. The corridors provide critical ecosystem services. They are critical genetic reservoirs of Australian fauna and flora. They are lands that have some chance of withstanding the effects of global change. They are a priceless resource for biodiversity conservation for Australia.

It is a finite opportunity. Vital interconnections are currently at risk through incremental land-use changes. There is no possible alternative remaining for such a continental scale initiative in southeastern Australia, and a continuous unfragmented system will provide economic, social, environmental, and political benefits for Australia. The outcome is a better Australia, richer for the retention of its natural heritage resources and the ecological services they maintain. Completion of the corridor would be a nationally and internationally significant conservation achievement.

New opportunities for national recognition of the combined Australian Alps and Great Escarpment of eastern Australia (southern) conservation corridors are emerging as a result of new Commonwealth Heritage legislation to amend the Environmental Protection and Biodiversity Conservation Act 1999. If passed, it will provide an opportunity for nomination of the combined Australian Alps and Great Escarpment of eastern Australia (southern) conservation corridor to the Commonwealth for consideration for listing by National Heritage as a “national exemplar” potentially under the eucalypt theme. It is a basis for further action.

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*The views and opinions expressed here are those of the authors and do not necessarily reflect the policy or policies of any organization.*

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