

## **WORLD HERITAGE NOMINATION - IUCN SUMMARY**

### **CENTRAL EASTERN RAINFORESTS OF AUSTRALIA (EXTENSION)**

Summary prepared by WCMC/IUCN (March 1993) based on the original nomination submitted by the Government of Australia. This original and all documents presented in support of this nomination will be available for consultation at the meetings of the Bureau and the Committee.

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The nominated property comprises the existing Australian East Coast Subtropical and Temperate Rainforest Parks World Heritage Site, in the state of New South Wales and further small areas in the State of New South Wales and larger areas in the State of Queensland. The renomination represents a 30% increase in the area of the original nomination.

#### **1. LOCATION**

The property consists of numerous reserves, in eight groups, along the coast and subcoast of mid-eastern Australia, principally along the Great Escarpment.

#### **2. JURIDICAL DATA**

The land is under state tenure. Sites in Queensland are covered by the Nature Conservation Act 1992, Land Act 1962 and Forestry Act 1959. Sites in New South Wales are covered by the National Parks and Wildlife Act 1974 and Forestry Act 1916, and are mostly part of the existing World Heritage site established in 1986.

#### **3. IDENTIFICATION**

Comprises many disjunct protected areas, within temperate rainforest or wet sclerophyll forest. The northern reserves lie predominantly along the boundary between Queensland and New South Wales. Main geological features are the Shield Volcano caldera to the east end of the northern reserves, and the Great Escarpment which runs south through the New South Wales reserves. The flora is very diverse: 170 families, 695 genera and 1,625 species of vascular plants have been recorded. About 150 species, representing 100 genera, are essentially restricted to the nominated property.

#### **4. STATE OF PRESERVATION/CONSERVATION**

The property contains about 108,450ha of rainforest, about 92% of which is in national parks. The remaining 8,600ha is located in state forest: in New South Wales, this comprises seven flora reserves; in Queensland most areas of state forest in the nominated property are in the process of transfer to the national park estate.

The national park estate can be divided into three categories: large areas with little or no evidence of human disturbance-this category takes in the majority of the nominated property; small areas of disturbed communities that with time and without active management, will recover integrity and structure; and a very small area that is heavily disturbed or weed-invaded, or both, and that will require active management to recover integrity.

The forest estate in New South Wales section of the nominated property is either pristine, or relatively undisturbed. In Queensland, logging of the rainforest stopped in 1988. Logged areas are expected to regain their old-growth structure. Very small areas of plantation of indigenous and exotic species still exist.

## 5. JUSTIFICATION FOR INCLUSION ON THE WORLD HERITAGE LIST

The nomination, as presented by the Government of Australia, provides the following justification for designation as a World Heritage property:

### Natural property

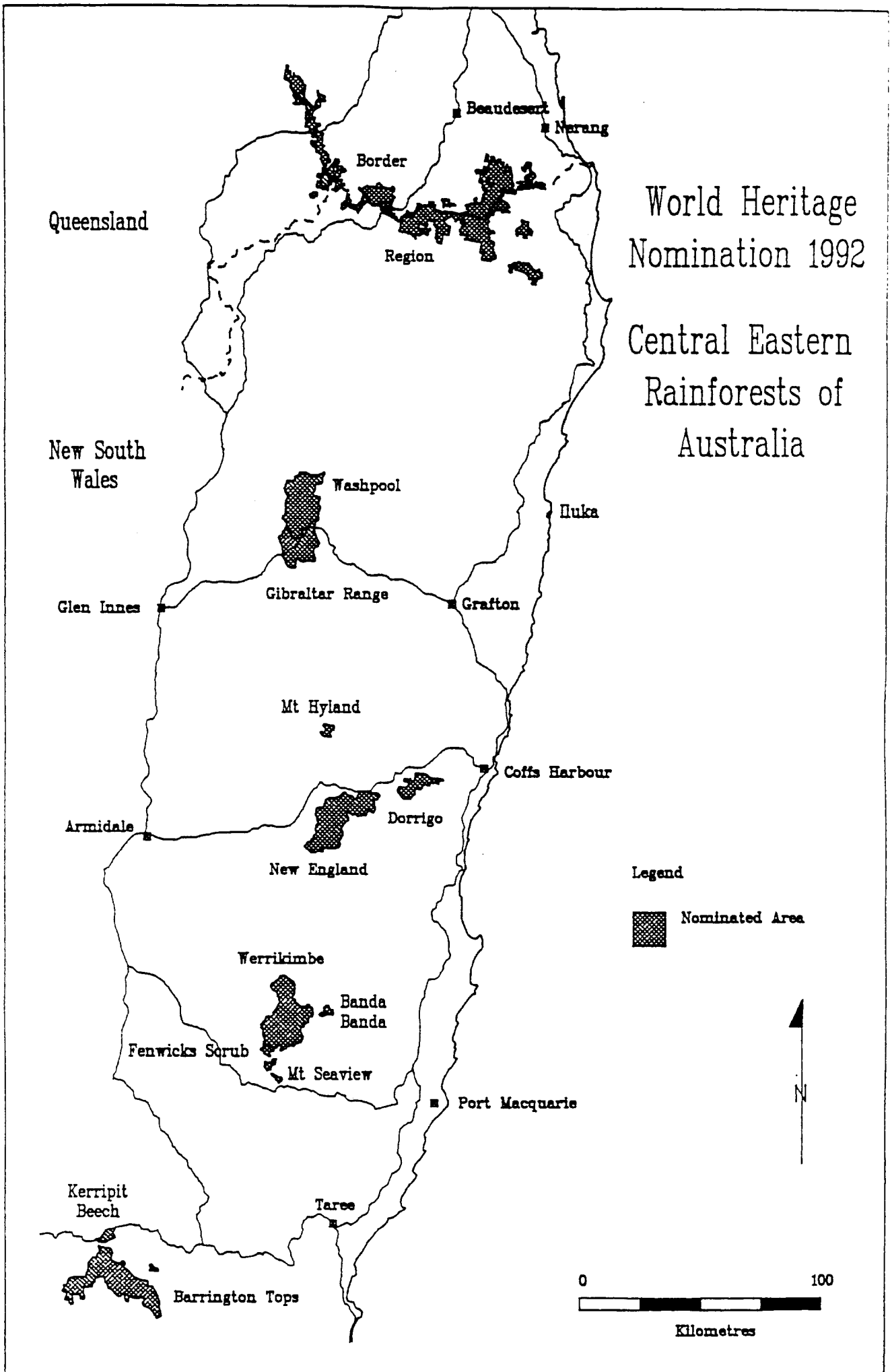
- (i) **Outstanding examples representing the major stages of the Earth's evolutionary history.** The site preserves: some of the oldest elements of the world's ferns from the Carboniferous period; one of the most significant centres of survival for araucarians; an outstanding record of Angiosperms; an outstanding number of the oldest lineages of the *Corvida* (one of the two major groups of true songbirds that evolved in the Late Cretaceous); outstanding examples of other relict vertebrate and invertebrate fauna from ancient lineages linked to the break-up of Gondwana.
- (ii) **Outstanding examples representing significant ongoing geological processes, biological evolution and man's interaction with his natural environment.** The Shield Volcano caldera, which is about 20 million years old, is an outstanding example of ongoing geological processes, and is possibly the best preserved erosion caldera in the world. The Ebor volcano further south also provides an outstanding example of ongoing erosion of a shield volcano.
- (iii) **Contains unique, rare or superlative natural phenomena, formations or features of exceptional natural beauty.** The property is of outstanding significance for the survival of relicts of palaeovegetation originating during the major climatic phases of the last 100 million years.

The nominated property contains the great majority of the rainforests occurring in the region as well as the most outstanding forested landscapes. Geologically the sites provide outstanding examples of a volcanic landscape. Striking vertical cliffs dominate the landscape, with probably the highest concentration of precipitous waterfalls on the continent. The Great Escarpment, is a major geomorphic feature. It stretches over several hundred kilometres in the region and is visually striking, forming an abrupt wall densely clothed with tall forest.

- (iv) **The most important and significant habitats where threatened species of plants and animals still survive.** Rainforest, which at one time covered the entire continent of Australia, is now restricted to barely 0.25%, as an archipelago of islands along the Great Escarpment, isolated largely by sclerophyll vegetation and cleared land. More than 170 species of rare or threatened plants have been recorded for the nominated property. The major portion of the habitats of two rare bird species of universally outstanding significance to science and conservation (Albert's lyrebird and rufous scrub-bird) lie within the property.

World Heritage  
Nomination 1992

Central Eastern  
Rainforests of  
Australia



# WORLD HERITAGE NOMINATION - IUCN TECHNICAL EVALUATION

## CENTRAL EASTERN RAINFORESTS OF AUSTRALIA

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### 1. DOCUMENTATION

- i) IUCN/WCMC Data Sheet (6 references)
- ii) Additional Literature Consulted: Adam, P., 1987, NSW Rainforests, The Nomination for the World Heritage List. NPWS, 160 p; Meier, C. and Figgis, P., **Rainforests of Australia.**
- iii) Consultations: 7 external reviewers in addition to 8 from the original nomination.
- iv) Field Visit: January, 1986. April, 1994. J. Thorsell.

### 2. COMPARISON WITH OTHER AREAS

There are 3 distinct blocks of World Heritage rainforest in Australia: Tasmania Wilderness (inscribed on World Heritage List in 1989); Wet Tropics (inscribed on World Heritage List in 1988); and the portion intermediate to the above two (part of which were inscribed in 1986). A fourth block which has not been addressed from a World Heritage perspective as yet is the Iron Range/McIlwraith Range Forests of Cape York. The Committee, when inscribing the original east-central forest site within the State of NSW in 1986, noted the desirability of enlarging the property to include the contiguous areas in the State of Queensland. Thus, the renomination of the property as it is now presented is the response to that recommendation.

The renominated area falls within an intermediate position in the transect of east coast Australian forests which extend from the wet tropical rainforest of North Queensland to the temperate forests of Tasmania. The nominated sites are thus best classified as sub-tropical. Research over the past decade has demonstrated their distinctiveness from the wet tropics in North Queensland, which contain a strong Indomalayan component and lack the strong Gondwana element as well as the interspersed rainforest/sclerophyll structure and composition. Although the Wet Tropics are more species-diverse, the central forests are seen as distinctive on structural, physiognomic and floristic grounds. Similarly, although the central forests share many common species with the temperate Tasmanian forests, these, being at a lower latitude, do not have the diversity of luxuriance of the more northerly sites. So, although the NSW rainforest parks and reserves have affinities to forests to the north and south, they are a distinct unit and deserve special recognition for their particular values.

Within the Eastern Sclerophyll Biogeographic Province there are 168 protected areas on the UN List (IUCN, 1990) covering 3.6 million ha of land. The sites selected for inclusion in this nomination excluded those that did not include a significant component of rainforest or those that were not of sufficient size to ensure integrity.

### 3. INTEGRITY

The main question on the integrity of the property relates to the small size of some of the sites that make up the nomination. Twenty-two of the 39 individual properties in fact are less than 2,000

ha. It is a general principle of the field of conservation biology that there is a minimum critical size if a reserve is to retain its biological diversity. It is known, however, that minimum size for long term maintenance of floral communities is much smaller than for that of faunal communities. Since the nomination areas' values are focussed on floral values the question of small size becomes less of a concern. Moreover, several of the sites are contiguous and found in clusters which effectively adds to their viability.

Related to the question of size is the distance between the isolated fragments on the complex ecological relationships of the total rainforest ecosystem. According to the theory of island biogeography, small separated protected areas isolated by modified habitats will behave like "islands" and will lose some of their original species until a new equilibrium is reached. All of the eight clusters except for one have their separate units in reasonable proximity and are joined by corridors of semi-natural habitats and buffers.

The one exception to this is the Iluka Nature Reserve which exists as a small (136 ha) outlier 100 km from the nearest other cluster. Although this site was part of the original nomination, its value as an example of rainforest growing on sand has been vastly overshadowed by the 1992 inscription of the Great Sandy site to the north. It appeared reasonable, therefore, to exclude Iluka from the new nomination on this basis. Additionally, the Central Eastern Rainforests is a complicated site with eight clusters of 39 protected areas, and removing Iluka would make the new nomination slightly more coherent. In response to this suggestion the Australian authorities have conducted a study to look at the distinctiveness of Iluka and concluded that it be left in. Noting that it is scientifically possible to rationalize inscription of almost any protected area, the Iluka case still appears marginal to IUCN. As it is not a major discrepancy in the nomination, however, and as it already has the distinction of being part of the original nomination, IUCN would suggest that the Committee agree to its inclusion.

In all cases, compensation for small size and scattered fragments are also being made through intensive management. Standards of management in the sites are high though management plans for all sites are not yet completed.

An administrative matter dealing with integrity is the responsibilities of the 5 agencies dealing with management of various parts of the site. This has been addressed with the recent formation of a Coordinating Committee comprised of officers of the 4 State Agencies plus the Commonwealth Government. Further details confirming this were provided in October 1994.

Management efforts to strengthen integrity have included the end of rainforest logging in the Queensland section in 1988. State forest trial plantations of indigenous and wild species exist at a few sites on the Main Range but occupy only small areas and do not appear to be invading adjacent native forest. Central measures to halt the spread of exotic weeds such as mist flower and Kahill ginger, are being under taken in several of the areas. One grazing permit in 249 ha of the Main Range is not due to expire until 2016.

#### **4. ADDITIONAL COMMENTS**

- 4.1 There has been tendency in Australia to take an incremental or phased approach to delimiting boundaries of World Heritage properties. This has resulted in some substantial conservation achievements but it does entail regular re-visiting of the nominations. In the case of this nomination all of the main elements are now present but there is a need for Queensland and NSW to keep small additions under review both from a value-added viewpoint and to strengthen manageability. Several areas where further adjustments might achieve this were suggested in IUCN's 1993 evaluation.

The Australian authorities have now "fine-tuned" the boundaries and would add eight floral reserves and four other forest reserves and parks in New South Wales. A list of these has been provided but a final map and details of the total size of the new area is still awaited.

IUCN suggests that the Committee accept these as the final boundaries of the site except for small (less than 500 ha) adjustments that may be made in future.

- 4.2 The name for the property is also in need of review. "Central Eastern Rainforest Reserves (Australia) would be more in conformity with other multi-unit sites. Australia should be asked if they would agree to this modification.

## 5. EVALUATION

The documentation for the nomination of the central eastern rainforests is a very comprehensive one. The nomination is complex, incorporating a complicated array of 51 protected areas in 8 different clusters scattered over a large geographic area. In many ways the NSW rainforests can be seen as the terrestrial equivalent of the Galapagos Islands as each of the separated units, though related to the others, combine to reveal a pattern of evolution of great interest to science. In this archipelago context, no one forest remnant would be adequate on its own as a World Heritage site. Rather, it is the collection of the whole grouping that adds up in a synergistic manner to display the biological richness and evolutionary story of the rainforests of the central eastern coast.

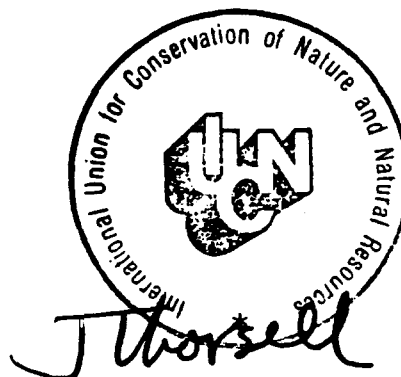
The property, therefore, merits inscription on the basis of criterion (i) the evolution of the Australian flora during and subsequent to the break-up of Gondwana; (ii) for the outstanding geological features displayed around the shield volcano Caldera and (iv) for the high numbers of rare and threatened species (mostly plants) found at the site.

The case for criterion (iii) is less convincing and is not articulated well or synthesized in the nomination. There are, however, many elements of criterion (iii) present and these could still be recognized in management.

To conclude, the re-nomination of the site has incorporated a considerable amount of new ecological information not previously available for the original nomination. That information reinforces the rationale for the property and provides clear evidence that the Queensland additions are an integral component. The (approximate) 35% increase in the overall size of the property also adds considerably to its integrity.

## 6. RECOMMENDATIONS

The re-nominated property should be inscribed on the basis of natural criteria (i), (ii), and (iv). The Australian Government should be commended for acting on the Committee's recommendation in 1986 to "complete" the property. Completion of management plans (particularly for the sites in Queensland) should be encouraged.



## WORLD HERITAGE NOMINATION - IUCN TECHNICAL EVALUATION

### 486bis: CENTRAL EASTERN RAINFORESTS OF AUSTRALIA

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4.1 There has been tendency in Australia to take an incremental or phased approach to delimiting boundaries of World Heritage properties. This has resulted in some substantial conservation achievements but it does entail regular re-visiting of the nominations. In the case of this nomination all of the main elements are now present but there is a need for Queensland and NSW to keep small additions under review both from a value-added viewpoint and to strengthen manageability. There are six small areas where further adjustments might achieve this. These are:

- Bunya Mountains National Park (Queensland) - a valuable disjunct site which might significantly enhance the property by including the main core of the Bunya Pine Araucarian forest.
- Richmond Range (NSW). The drier phase of the Border Ranges ecosystem.
- Carrai plateau and escarpment adjacent to Werrikimbe National Park to include major examples of the "Macleay" dry rainforest.



- Mt. Seaview Nature Reserve - need to proceed with previously advised plans to extend and link the two parts of the reserve.
- Mt. Hyland. Improve protection on western slopes.
- Barrington Tops. Complete previously advised intentions to link the two plateau sections. Also, scope for improvements in representation and boundary.

It would be useful to have some indication from the Government of Australia if these or any other additions can be foreseen by the time of the Committee meeting.

- 4.2 The name for the property is also in need of review. "Great Dividing Range Forest Reserves" or "Central East Coast Rainforest Reserves" would be more explicit and Australia should be asked if they would agree to suggest modifications.

## 5. EVALUATION

The documentation for the nomination of the central eastern rainforests is a very comprehensive one. The nomination is complex, incorporating a complicated array of 39 protected areas in 8 different clusters scattered over a large geographic area. In many ways the NSW rainforests can be seen as the terrestrial equivalent of the Galapagos Islands as each of the separated units, though related to the others, combine to reveal a pattern of evolution of great interest to science. In this archipelago context, no one forest remnant would be adequate on its own as a World Heritage site. Rather, it is the collection of the whole grouping that adds up in a synergistic manner to display the biological richness and evolutionary story of the rainforests of the central eastern coast.

The disparate nature of the site scattered over a distance of 600 km could be simplified slightly if the Iluka site was excised as discussed above. The adjusted property would then be reduced to 7 clusters and the loss of one of the marginal sites in the package would not be significant.

The property, therefore, merits inscription on the basis of criterion (i) the evolution of the Australian flora during and subsequent to the break-up of Gondwana; (ii) for the outstanding geological features displayed around the shield volcano Caldera and (iv) for the high numbers of rare and threatened species (mostly plants) found at the site.

The case for criterion (iii) is less convincing and is not articulated well or synthesized in the nomination. There are, however, many elements of criterion (iii) present and these should still be recognised in management.

To conclude, the re-nomination of the site has incorporated a considerable amount of new ecological information not previously available for the original nomination. That information reinforces the rationale for the property and provides clear evidence that the Queensland additions are an integral component. The 30% increase in the overall size of the property also adds considerably to its integrity.

## 6. RECOMMENDATIONS

The re-nominated property should be inscribed on the basis of natural criteria (i), (ii), and (iv). The Australian Government should be commended for acting on the Committee's recommendation in 1986 to "complete" the property. In addition to encouraging completion of management plans (particularly for the sites in Queensland), the Bureau should suggest to the authorities in Australia that they exclude the Iluka site from the nomination and suggest a more explicit name for the property.