

WORLD HERITAGE NOMINATION

IUCN TECHNICAL REVIEW

1. IDENTIFICATION NUMBER AND NAME 167 Willandra Lakes Region
2. LOCATION: New South Wales, Australia, 143°E, 34°S.
3. NOMINATED BY: Government of the Commonwealth of Australia
4. DOCUMENTATION:

- (i) Nomination form
- (ii) Supplementary information had not yet been received by IUCN at the time of this review

5. BACKGROUND AND SUMMARY

The Willandra Lakes Region is a joint cultural and natural site, but this review deals only with the natural aspects of the area. Willandra is primarily a geological site, with fauna and flora of significant interest in an archeological sense: the Willandra Lakes may be the best locality for establishing a link between the extinction of the giant marsupial fauna and predation by humans. The Australian geological environment, with its low topographic relief and low energy systems, is unique in the longevity of the landscapes it preserves. The Willandra Lakes provide excellent conditions for recording the events of the Pleistocene Epoch, demonstrating how non-glaciated zones responded to the major glacial-interglacial fluctuations. The demonstration at this site of the close interconnection between landforms and pedogenesis, palaeochemistry, climatology, archaeology, archaeomagnetism, radio-carbon dating, palaeoecology and faunal extinction, represents a classic landmark in Pleistocene research in the Australasian area.

6. INTEGRITY

The site includes the entire lake and river system from Lake Mulurulu, the latest to hold water, to the Prungle Lakes, dry for more than 15,000 years. Its remoteness, aridity, and climate limit the impact of tourism. A draft Plan of Management for the Mungo National Park (not listed in the 1980 United Nations List of National Parks and Equivalent Reserves) will aim at preserving a sample of the fossil lake system and its associated archaeological, geomorphological and other scientifically valuable features; however, the National Park covers only a small portion of the total site (map) and the means of controlling human impacts on the remainder of the site are unclear in the nomination.

7. COMPARISON WITH OTHER AREAS

As far as IUCN has been able to discover, the Willandra Lakes Region is unique in the world.

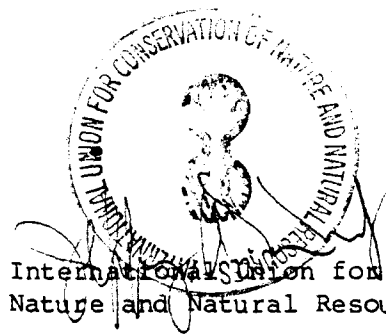
8. EVALUATION

The case made for the scientific importance of the Willandra Lakes Region is quite convincing. The major concern of IUCN is that the only part of the site which has an administrative and legal capability for management appears to be

the small Mungo National Park. The National Parks and Wildlife Service is also responsible for the conservation of Aboriginal relics, so it would seem a logical step to expand the Mungo National Park to include the entire Willandra Lakes Region, with appropriate zoning to allow the continuation of certain forms of land use. In view of its importance for science, the area might also be considered for Biosphere Reserve status.

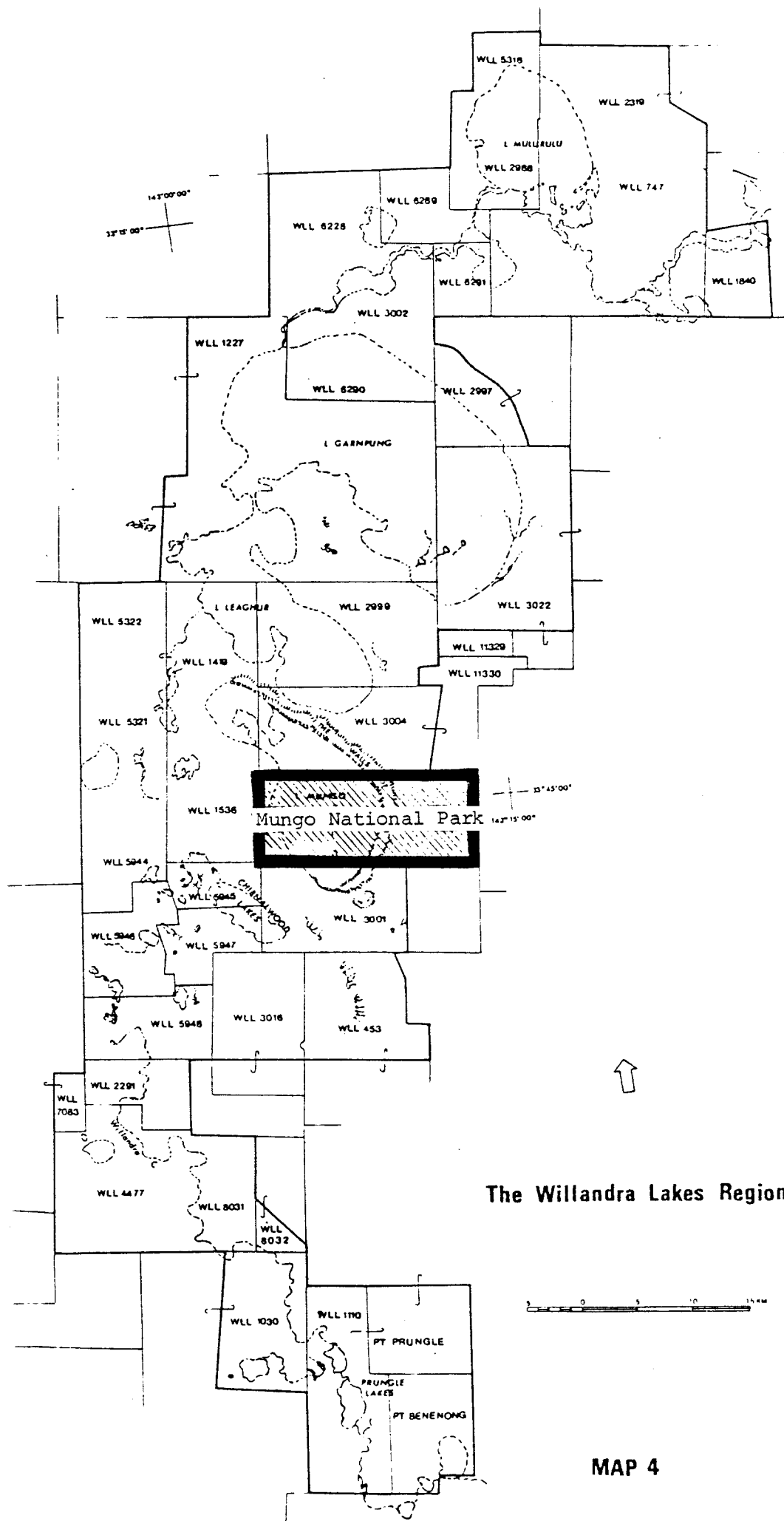
9. RECOMMENDATION

On the basis of natural criteria alone, the decision on Willandra Lakes Region should be deferred until the problems of legal status and the responsible administration are solved. The Committee might wish to request that the Australian authorities provide a management plan for the entire area nominated.



International Union for Conservation of
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The Willandra Lakes Region

MAP 4

WILLANDRA LAKES REGION (Australia)

Although man first arrived at Kakadu, it didn't take long for the entire Australian continent to be occupied by its prehistoric population of around 300,000 people. Over the next several thousand years, the giant marsupials (as well as many of their smaller relatives) became extinct. The most important site for investigating the period when man became dominant and the large species of wildlife became extinct is the Willandra Lakes Region of New South Wales.

Archeological discoveries made here are of outstanding value. They include a 26,000 year-old cremation site (the oldest in the world); a 30,000 year-old ochre burial site comparable in age to similar burial sites in France; the remains of the giant marsupials in an excellent state of preservation due to the alkaline nature of the soil; evidence from 30,000 years ago that the people were depending on freshwater resources, among the earliest indications for this sort of human economy; and grindstones from 18,000 years ago which were used to crush wild grass seeds to flour, and whose age is comparable to that claimed for the earliest seed-grinding economies in the Middle East. The Willandra Lakes system is thought by anthropologists to be as important to the global documentation of the culture of early Homo sapiens as the Olduvai Gorge is to hominid origins.

The Australian geological environment, with its ancient eroded topography and low energy systems, is unique in the longevity of the landscapes it preserves. The Willandra Lakes, which ceased to function as a lake ecosystem some 15,000 years ago, provide excellent conditions for recording the events of the Pleistocene epoch (the period when man evolved into his present form), demonstrating how non-glaciated zones responded to the major fluctuations between glacial periods and the milder climates in between.

When Willandra Billabong Creek ceased to flow and so to replenish the lakes, the lakes dried in series from the Prungle Lakes in the south to Lake Mulurulu in the north over a period of several thousand years; as each lake evaporated, it became an independent system undergoing a basic transformation from fresh water to saline water to dry lake bed. As long as water remained in a lake, dunes were accumulated along the eastern margins. It is this system of transverse crescent-shaped dunes, called "lunettes," which contain evidence of past hydrological and geochemical environments. The fresh-water lakes concentrated clean quartz sands on eastern beaches, but the lakes became more saline as they dried out, and clay pellets were chipped from the exposed lake floor by high winds to form distinctive clay lunettes. Such clay dunes are rare in world terms, and the well-preserved fossil examples in the Willandra Lakes region are an important geological resource; the 30-meter-high Lake Chibnalwood clay lunette is one of the largest in the world.

The Willandra Lakes Region is a remarkable example of a site where the economic life of Homo sapiens can be reconstructed, showing a remarkable adaptation to local resources and a fascinating interaction between human culture and the changing natural environment. The fossil landscape remains largely unmodified since the end of the last Pleistocene ice age.