

## Handout 1

### Wet Tropics of Queensland

#### Retrospective Statement of Outstanding Universal Value

##### **Brief synthesis**

The Wet Tropics of Queensland, or Wet Tropics, stretches along the northeast coast of Australia for some 450 km. Encompassing some 894,420 ha of mostly tropical rainforest, this stunningly beautiful area is extremely important for its rich and unique biodiversity. It also presents an unparalleled record of the ecological and evolutionary processes that shaped the flora and fauna of Australia, containing the relicts of the great Gondwanan forest that covered Australia and part of Antarctica 50 to 100 million years ago. All of Australia's unique marsupials and most of its other animals originated in rainforest ecosystems, and their closest surviving relatives occur in the Wet Tropics. These living relicts of the Gondwanan era and their subsequent diversification provide unique insights to the process of evolution in general. They also provide important information for the interpretation of fossils of plants and animals found elsewhere in Australia, and about the evolution of Australia's sclerophyll flora and marsupial fauna in particular.

The property supports tropical rainforests at their latitudinal and climatic limits, and unlike most other seasonal tropical evergreen equatorial forests, are subject to a dry season and to frequent cyclonic events. Many of the distinct features of the Wet Tropics relate to its extremely high but seasonal rainfall, diverse terrain and steep environmental gradients. In addition to its complex array of species and life forms, the Wet Tropics is also recognised as an area possessing outstanding scenic features, natural beauty and magnificent sweeping landscapes.

##### **Criterion (vii)**

The Wet Tropics exhibit exceptional natural beauty, with superlative scenic features highlighted by extensive sweeping forest vistas, wild rivers, waterfalls, rugged gorges and coastal scenery. This is particularly apparent between the Daintree River and Cedar Bay, where exceptional coastal scenery combines tropical rainforest and white sandy beaches with fringing offshore coral reefs. The winding channels of the Hinchinbrook Channel contain the most extensive mangroves in the region, providing a rich visual mosaic of rainforest and mangroves, and a terrestrial continuum with the Great Barrier Reef.

##### **Criterion (viii)**

The Wet Tropics contains one of the most complete and diverse living records of the major stages in the evolution of land plants, from the very first pteridophytes more than 200 million years ago to the evolution of seed-producing plants including the cone-bearing cycads and southern conifers (gymnosperms), followed by the flowering plants (angiosperms). As the Wet Tropics is the largest part of the entire Australasian region where rainforests have persisted continuously since Gondwanan times, its living flora, with the highest concentration of primitive, archaic and relict taxa known, is the closest modern-day counterpart for Gondwanan forests. In addition, all of Australia's unique marsupials and most of its other animals originated in rainforest ecosystems, and the Wet Tropics still contains many of their closest surviving members. This makes it one of the most important living records of the history of marsupials as well as of songbirds.

### **Criterion (ix)**

The Wet Tropics provides outstanding examples of significant ongoing ecological processes and biological evolution. As a centre of endemism for the region (second only to New Caledonia in the number of endemic genera per unit area), the Wet Tropics provides fundamental insights into evolutionary patterns both in isolation from and in interaction with other rainforests. Its tall, open forests on the drier western margins of the rainforest are also significant as part of an evolutionary continuum of rainforest and sclerophyll forests. Eucalypts, that now dominate the Australian landscape, are considered to have evolved from such rainforest stock and radiated into drier environments from the margins of closed forests.

The area supports an exceptionally high level of diversity of both flora and fauna, with over 3,000 vascular plant species in 224 families, of which 576 species and 44 genera are endemic, including two endemic plant families. Vertebrate diversity and endemism are also very high, with 107 mammal species including 11 endemic species and two monotypic endemic genera. In terms of avifauna, there are 368 bird species, of which 11 species are endemic. For reptiles, there are 113 species of which 24 species are endemic, including three monotypic endemic genera. The diversity of amphibians includes 51 species of which 22 are endemic.

### **Criterion (x)**

The Wet Tropics holds a largely intact flora and fauna with hundreds of endemic species restricted to the property, of which many are classified as threatened. The majority of plant species have restricted distributions, and many monotypic plant genera and several species of marsupials, frogs and reptiles have very restricted distributions either as isolated or disjunct populations, reflecting the refugial nature of the rainforests found in several locations. The diversity of the plant communities and animal habitats of the Wet Tropics is recognised as being the most floristically and structurally diverse in Australia and is also outstanding on a global scale. Among many emblematic species occurring in the property is the flightless Australian cassowary, one of the largest birds in the world.

In an Australian context, the Wet Tropics covers less than 0.2% of Australia, but contains 30% of the marsupial species, 60% of bat species, 25% of rodent species, 40% of bird species, 30% of frog species, 20% of reptile species, 60% of butterfly species, 65% of fern species, 21% of cycad species, 37% of conifer species, 30% of orchid species and 18% of Australia's vascular plant species. It is therefore of great scientific interest and of fundamental importance to conservation.

Although the Wet Tropics is predominantly wet tropical rainforest, it is fringed and in a few places dissected by sclerophyll forests, woodlands, swamps and mangrove forests, adding to its diversity.

### **Integrity**

At the time of its inscription the property was identified as being an essentially intact ecosystem with the level of human impact low, especially when compared to other tropical forest regions, with 80% of the estimated cover originally present at the time of the first European settlement remaining. A substantial amount of lowland forest, however, had been cleared for agricultural purposes. A number of human disturbances that cumulatively detracted from the overall natural integrity were scattered throughout the property and included infrastructure such as transmission lines, access roads, abandoned mine sites and more extensive areas which had been selectively

logged. However the evaluation also noted that these disturbances accounted for only a small proportion of the total area of the property. In addition other local management issues that needed attention included invasions of exotic plants, animals and forest diseases.

Since inscription, the Australian and Queensland governments have worked cooperatively to put in place a comprehensive management regime for the property, outlined in the following section. Logging has been prohibited since 1987 with the infrastructure associated with this activity removed and the impacted forests allowed to recover. Maintenance activities associated with the provision of community infrastructure are now regulated under a statutory management plan and guided by environmental codes of practice.

A number of threatening processes still impact on the overall integrity of the property including invasive species, fragmentation, and altered hydrological and fire regimes. In addition, a key emerging threat to the integrity of the property is climate change, as with even a small increase in temperature, large declines in the range size for almost every endemic vertebrate species confined to the property are predicted.

### **Protection and management requirements**

In 1990 the Australian and Queensland Governments agreed to jointly fund and coordinate management of the Wet Tropics, signing an agreement that established the Wet Tropics Management Scheme. The agreement outlined the broad structural and funding arrangements for the management scheme, including the establishment of the Wet Tropics Management Authority. The management scheme also establishes a scientific advisory committee to provide advice to the Authority and a community consultative committee to report to the Authority on matters relating to the management of the property from the viewpoint of representative interest groups and the community at large.

The Queensland *Wet Tropics World Heritage Protection and Management Act 1993* (Wet Tropics Act) and the Commonwealth *Wet Tropics of Queensland World Heritage Conservation Act 1994* together give effect to the administrative and operational aspects of the agreement and facilitate the implementation of Australia's obligations under the World Heritage convention. These Acts require the Authority to produce an annual state of the Wet Tropics World Heritage Area report for the Queensland and Commonwealth parliaments respectively.

The *Wet Tropics Management Plan 1998* (WT Plan) was subsequently developed under the Wet Tropics Act. This statutory Plan provides for the regulation of potentially damaging activities within the property. The Plan includes a zoning system and a system for administration of permit applications and a penalty regime for any infringements. Under the WT Plan, the Authority is required to consider a set of principles and criteria for deciding permit applications of which the most important consideration is the likely impact of a proposed activity on the integrity of the property.

While the WT Plan applies to all lands within the Wet Tropics, the property contains a diversity of different tenures, and a corresponding range of government agencies and private land holders with responsibilities for managing these tenures, under different legislation. Since listing, the Queensland Government has transferred the majority of former forestry tenures to protected area tenure. This has resulted in the total of protected area estate being increased from 14% at listing to over 65%. The conversion to protected area estate ensures a more compatible conservation management regime.

The Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act) now provides an additional layer of protection for all World Heritage properties in Australia. Under

the EPBC Act, any action that has, will have or is likely to have a significant impact on the World Heritage values of a World Heritage property must be referred to the responsible Minister for consideration. The EPBC Act applies whether the activity is inside or outside of the boundaries of a World Heritage property. Substantial penalties apply for taking such an action without approval. In 2007, the Wet Tropics was added to the National Heritage List, in recognition of its national heritage significance under the Act.

As well as the regulatory protection mechanisms described above, the Authority has prepared a number of strategies to guide management of the property, including: the *Wet Tropics Nature Based Tourism Strategy* (2000); the *Wet Tropics Conservation Strategy* (2004); and the *WTMA Research Strategy 2010 – 2014*.

The Wet Tropics Management Authority is committed to promoting and developing partnerships with people and stakeholders with rights, responsibilities and interests associated with the Wet Tropics. The Wet Tropics Act recognises the important role that Aboriginal people can play in the management of natural and cultural heritage in the property. The *Wet Tropics World Heritage Area Regional Agreement 2005* provides for the cooperative management of the property between 18 Rainforest Aboriginal tribal groups, the Authority and the Australian and Queensland governments. This Regional Agreement has seen the formal establishment of a Rainforest Aboriginal Advisory Committee under the Wet Tropics Act and the inclusion of two Rainforest Aboriginal directors on the Authority's Board. The Authority has also established a conservation sector liaison group and a tourism industry liaison group to promote improved communication and liaison with these key stakeholders.

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