Crater Lakes National Park Management Statement 2013

Park size:	974ha
Bioregion:	Wet Tropics
QPWS region:	Northern
Local government estate/area:	Tablelands Regional Council
State electorate:	Dalrymple

Lake Eacham. Photo: Tourism Queensland.

Legislative framework

✔	*Nature Conservation Act 1992*
✔	*Environment Protection Biodiversity Conservation Act 1999* (Cwlth)
✔	*Aboriginal Cultural Heritage Act 2003*
✔	*Wet Tropics World Heritage Protection and Management Act 1993*
✔	*Native Title Act 1993* (Cwlth)

Plans and agreements

✔	Wet Tropics of Queensland World Heritage Area Regional Agreement 2005
✔	Bonn Agreement
✔	China–Australia Migratory Bird Agreement
✔	Japan–Australia Migratory Bird Agreement
✔	Republic of Korea–Australia Migratory Bird Agreement
✔	Recovery plan for the stream-dwelling rainforest frogs of the Wet Tropics biogeography region of north-east Queensland 2000–2004
✔	Recovery plan for the southern cassowary *Casuarius casuarius johnsonii*
✔	National recovery plan for the spectacled flying fox *Pteropus conspicillatus*
✔	National recovery plan for cave-dwelling bats, *Rhinolophus philippinensis, Hipposideros semoni* and *Taphozous troughtoni* 2001–2005
✔	Draft recovery plan for the spotted-tail quoll (northern sub-species) *Dasyurus maculatus gracilis*

Thematic strategies

✔	Level 2 Fire Strategy
✔	Level 2 Pest Strategy

Vision

Crater Lakes National Park continues to protect the unique scenic qualities of the lakes and surrounding rainforest, and the many species of conservation significance that occur there. Crater Lakes National Park continues to be a premier site for tourism, recreation, education and research. It showcases outstanding natural values.

Easy vehicular access is provided for park users.

Conservation purpose

Crater Lakes National Park was formed by the amalgamation of Lake Eacham National Park and Lake Barrine National Park in 1994. These two national parks were originally gazetted in 1934, and were subsequently included in the Wet Tropics World Heritage Area in 1988.

Crater Lakes National Park conserves two maars—or crater lakes—surrounded by rainforest (Lake Eacham and Lake Barrine). These maars are a focus for recreational activities on the tablelands.

Protecting and presenting the park's values

Landscape

Situated on the divide between the Mulgrave and Barron catchments, the park is comprised of two separate sections—Lake Barrine and Lake Eacham. Both sections protect volcanic crater lakes—or maars—surrounded by rainforest.

Surrounding land uses include agriculture, rural residential development and roads.

Regional ecosystems

Four regional ecosystems occur on the park, two of which are endangered and one of which is of concern (Table 1).

Native plants and animals

Crater Lakes National Park protects plant and animal species of conservation significance listed under the *Nature Conservation Act 1992* and *Environment Protection and Biodiversity Conservation Act 1999* (Table 2). Fourteen bird species recorded on the park are listed under international agreements (Table 3).

Although the park is not well-known as a spotlighting destination, most of the Wet Tropics endemic arboreal mammals haven been recorded on the park. The lakes once protected the Lake Eacham rainbowfish *Melanotaenia eachamensis*. This species, originally thought to be confined to these two lakes, became locally extinct after the introduction of other fish species (Barlow et al. 1987). In more recent years, this fish has been identified in nearby waterbodies, such as Winfield Creek in the park and in a nearby maar—Lake Euramoo.

A Queensland Parks and Wildlife Service (QPWS) work base and nursery is located in the Lake Eacham section of the park. Many seedlings grown in the nursery are used for revegetation works within protected areas in the local area.

Aboriginal culture

Crater Lakes National Park forms part of the traditional country of both the Ngadjon-Jii and Yidinji people. The Yidinji people are particularly associated with the Lake Barrine area. There is limited information available on Aboriginal cultural history of the park. The land, lakes, landscape features and natural resources remain culturally significant to the Ngadjon-Jii and Yidinji people today.

The tableland Yidinji people have lodged a native title claim (QC04/010) that includes the Lake Barrine section of the park.

Shared-history culture

The Lake Eacham area was occupied by the Australian and American military during World War II.

The Lake Barrine Tea House is the site of the original settlement of the Curry family. The Curry family still own and operate the tea house, and present information to visitors about the history of their family at the site.

Lake Eacham was offered as a farming selection, but a local community delegation had the land bought back as a scenic reserve.

Tourism and visitor opportunities

Crater Lakes National Park is an important centre for recreation and tourism, receiving high numbers of local visitors and tourists. Visitor opportunities are similar at both lakes, being predominantly passive, nature-based activities such as sightseeing, nature observation, walking and swimming. Both lakes have good access and constructed recreation areas with visitor facilities.

Lake Eacham tends to be favoured for local recreational use, particularly swimming. The recreation area is able to accommodate large numbers of visitors, but does not receive the coach traffic and commercial enterprises that characterise the Lake Barrine visitor experience.

Education and science

Easy access to relatively undisturbed rainforest has led to lakes Eacham and Barrine being used as research sites for the study of wet tropical rainforest ecology, as well as geomorphologic studies of the crater lakes. The isolation of the forest remnants offers opportunities for study of the ecology of species in isolated patches. An arboretum dedicated to the plant family Lauraceae has been established near the Lake Eacham nursery.

Partnerships

QPWS is legislatively responsible for the day-to-day management of the national park and Wet Tropics Management Authority regulates activity in the Wet Tropics World Heritage Area. The goal of both agencies is to present the area's significance while protecting its natural and cultural values.

While not the subject of a formal agreement, QPWS works closely with the Curry and Bayne families (owners of the Lake Barrine Tea House) to address local visitor information, access and pest management. An agreement exists for the shared use of the waste water treatment facility at Lake Barrine.

Other key issues and responses

Pest management

Pest plants

Coffee *Coffea arabica* occurs in the southeast corner of the Lake Barrine section. Currently, control activities are aimed at removal of mature plants. Once all fruiting plants are located and removed, ongoing control of seedling recruits will be necessary. Reinfestation may ultimately result if birds disperse propagules from surrounding land.

Salvinia *Salvinia molesta* is an invasive aquatic plant that occurs in Lake Eacham. The severity and extent of the infestation fluctuates seasonally, and has been significantly reduced since the introduction of salvinia weevil *Cyrtobagous salviniae* in 2009. A salvinia weevil breeding facility at the Lake Eacham nursery supplies weevils for biocontrol to landholders, local government and other land managers in the region.

Madeira vine *Anredera cordifolia* occurs as a small, discreet infestation. Initial control activities have occurred.

Pokeweed *Rivina humilis* occurs in the park, primarily along the edge of the walking track.

Pest animals

The exotic fish tilipa *Tilapia mariae* occurs in Lake Barrine. Control methods include electrofishing and manual removal by spearfishing during the nesting season.

Impacts from feral pigs *Sus scrofa* and dogs *Canis familiaris* are poorly documented and largely anecdotal.

Fire management

The area is managed within the Crater Lakes Aggregation Level 2 Fire Management Strategy.

References

Barlow, C.G., Hogan, A.E., and Rodgers, L.J. 1987 Implication of Translocated Fishes in the Apparent Extinction of the Lake Eacham Rainbow Fish, *Melanotaenia eachamensis, Australian Journal of Marine and Freshwater Research* **38**, 897–202.

Management directions

Desired outcomes	Actions and guidelines
Landscape Management of terrestrial habitats to prevent or minimise disturbance and degradation, and rehabilitate degraded areas.	A1. Maintenance of walking trail networks, car parks, and other infrastructure
Management issues Management of the lakes to minimise factors which adversely affect or threaten water quality.	A2. Water quality monitoring program to be established. A3. Negotiate with Department of Transport and Main Roads to redirect run-off from Gillies Highway out of the lake catchment.
Pest management Eradication or suppression of pest plant species.	A4. Implement integrated control measures to eradicate or limit the spread and further invasion of park habitats by pest plants and animals.

Tables – Conservation values management

Table 1: Endangered and of concern regional ecosystems

Regional ecosystem number	Description	Biodiversity status
7.8.2a	Complex mesophyll vine forest on uplands of the very wet and wet cloudy rainfall zones.	Of concern
7.3.33	Lakes within volcanic craters, including open water, and narrow shoreline sedge fringes.	Endangered
7.8.13	Simple notophyll vine forest of *Blepharocarya involucrigera* of high rainfall cloudy uplands on basalt.	Endangered

Table 2: Species of conservation significance

Scientific name	Common name	***Nature Conservation Act 1992* status**	***Environment Protection and Biodiversity Conservation Act 1999* status**	**Back on Track status**
Melanotaenia eachamensis	Lake Eacham rainbowfish	Least concern	Endangered	Low
Litoria nannotis	waterfall frog	Endangered	Endangered	Low
Litoria nyakalensis	mountain mistfrog	Endangered	Critically endangered	Low
Litoria rheocola	common mistfrog	Endangered	Endangered	Low
Litoria serrata	tapping green eyed frog	Near threatened		Low
Casuarius casuarius johnsonii	southern cassowary	Endangered	Endangered	Critical
Cyclopsitta diophthalma macleayana	Macleay's fig-parrot	Vulnerable	-	Low
Accipiter novaehollandiae	grey goshawk	Near threatened	-	Low
Nettapus coromandelianus	cotton pygmy-goose	Near threatened	-	Low
Aerodramus terraereginae	Australian swiftlet	Near threatened	-	Low
Ceoranoscincus frontalis	-	Near threatened	-	Low
Eulamprus tigrinus	-	Near threatened	-	Low
Dendrolagus lumholtzi	Lumholtz's tree kangaroo	Near threatened	-	Low
Hemibelideus lemuroids	lemuroid ringtail possum	Near threatened	-	Low

Scientific name	Common name	*Nature Conservation Act 1992* status	*Environment Protection and Biodiversity Conservation Act 1999* status	Back on Track status
Pseudochirops archeri	green ringtail possum	Near threatened	-	Low
Pseudochirulus herbertensis	Herbert River ringtail possum	Near threatened	-	Low
Antechinus godmani	Atherton antechinus	Near threatened		Low
Dasyurus maculatus gracilis	spotted-tailed quoll	Endangered	Endangered	Critical
Rhinolophus philippinensis	large-eared horseshoe bat	Endangered	Endangered	High
Murina florium	tube-nosed insectivorous bat	Vulnerable	-	High
Hipposideros diadema reginae	diadem leaf-nosed bat	Near threatened	-	Low
Kerivoula papuensis	golden-tipped bat	Near threatened	-	Medium
Pteropus conspicullatus	spectacled flying-fox	Least concern	Vulnerable	High
Agathis microstachya	bull kauri	Near threatened	-	Endangered
Lemmaphyllum accedens	-	Presumed extinct	Extinct	-
Hodgkinsonia frutescens	-	Least concern	Vulnerable	Low
Marsdenia straminea	-	Vulnerable	-	Medium
Schizomeria whitei	white birch	Near threatened	-	Low
Peripentadenia mearsii	buff quandong	Near threatened	-	Low
Argyrodendron sp. (Boonjie B.P.Hyland RFK2139)	-	Near threatened	-	Low
Haplostichanthus submontanus subsp. *sessiliflorus*	-	Near threatened	-	Low
Pandanus gemmifer	-	Near threatened	-	Low

Table 3: Species listed in international agreements

Scientific name	Common name	Bonn	JAMBA	ROKAMBA	CAMBA
Haliaeetus leucogaster	white-bellied sea-eagle	-	-	-	✓
Acrocephalus australis	Australian reed-warbler	✓	-	-	-

Scientific name	Common name	Bonn	JAMBA	ROKAMBA	CAMBA
Hirundapus caudacutus	white-throated needletail	-	✓	✓	✓
Ardea ibis	cattle egret	-	-	-	✓
Ardea modesta	eastern great egret	-	✓	-	✓
Coracina tenuirostris	cicadabird	-	✓	-	-
Hydroprogne caspia	Caspian tern	-	✓	-	✓
Sterna dougallii	roseate tern	-	✓	-	✓
Merops ornatus	rainbow bee-eater	-	✓	-	-
Monarcha frater	black-winged monarch	✓	-	-	-
Monarcha melanopsis	black-faced monarch	✓	-	-	-
Symposiarchus trivirgatus	spectacled monarch	✓	-	-	-
Rhipidura rufifrons	rufous fantail	✓	-	-	-
Gallinago hardwickii	Latham's snipe	✓	✓	✓	✓

Bonn – Bonn Convention

CAMBA – China–Australia Migratory Bird Agreement

JAMBA – Japan–Australia Migratory Bird Agreement

ROKAMBA – Republic of Korea–Australia Migratory Bird Agreement