

EAST GIPPSLAND'S

# EMERALD LINK

— MAKE A CONNECTION —





This report has been prepared by Goongerah Environment Centre (GECO), The Wilderness Society and Environment East Gippsland, and is supported by the Victorian National Parks Association and the Australian Conservation Foundation.

We acknowledge the long and ongoing connection of the region's Traditional Owners and their continuing custodianship of the land and waters.

The authors of this report continue to seek dialogue with Traditional Owners regarding their land and water management aspirations.

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FRONT COVER IMAGE: Looking south-west from the Errinundra Plateau across the foothill forests of Mt Ellery. The creeks in the valleys feed the Brodribb River that flows south off the mountains to join to Snowy River near the coast. | Rob Blakers.

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# Introduction

East Gippsland's Emerald Link is an unique natural environment that is too valuable to lose. The Emerald Link is Victoria's stronghold for nature with ancient rainforests, threatened species, unspoilt coastlines and wilderness areas.

East Gippsland is the only place on mainland Australia with continuity of natural ecosystems from alpine to coastal landscapes. From snow-capped mountains to lush warm and cool temperate rainforests, all the way through to Victoria's rugged coasts—these old growth forests are of unparalleled natural beauty and importance.

To stand before this, in all its primordial glory, is to step back in time to experience Victoria's natural and cultural heritage. East Gippsland's forests are a natural monument of interwoven ecosystems.

This report details some of the critically important natural areas within this remarkably biodiverse region. It recognises, values and celebrates an important part of Australia's globally significant heritage. This report presents information on the conservation values, the need for formal protection and the key role these areas can play in shaping the future economic prosperity of the region.



IMAGE: Rare Slender Tree-ferns can be found sheltering in the undisturbed rainforest gullies of the Kuark Forest. | Ed Hill

## OUR VISION

East Gippsland is the most biodiverse forest region in Victoria. It's the only place on mainland Australia where continuous and intact native vegetation links alpine environments to the coast.<sup>1</sup>

Protecting East Gippsland forests in a network of protected areas will create a thriving and intact ecosystem and Victoria's premier wilderness adventure destination.

Our vision is to protect the last unbroken forest wilderness area on mainland Australia which connects alpine forests to the rugged coastline.

With improved management and greater investment, the supreme natural beauty, endemic wildlife, rare rainforests and high-elevation plateaus of East Gippsland's Emerald Link can become a flagship of successful biodiversity conservation and a world-class wilderness tourism destination.

This vision recognises the value of intact nature. It accepts that some dramatic changes in ecosystem function and biodiversity due to climate change are, at this point, unavoidable but can be minimised.

It's a vision that recognises natural resource extractive industries in the region, like logging, have declined.<sup>2,3</sup> Meanwhile, conservation tourism in the region is steadily growing.<sup>4</sup> By protecting these forests, we can deliver a better, more harmonious future that is based on a clean growth economy which is positive and optimistic for all Victorians.

1 East Gippsland Catchment Management Authority, 2013, "East Gippsland Regional Catchment Strategy 2013–2019", <http://www.egcma.com.au/file/file/East%20Gippsland%20Regional%20Catchment%20Strategy%202013-2019.pdf>, Accessed 28 September 2016, p. 13.

2 Schirmer, J., 2013, Socio-economic characteristics of Victoria's forestry industries, 2009-2012.

3 Sainsbury, C., 2013, "Labour market conditions in East Gippsland", Australian Government Department of Employment presentation to Business and Tourism East Gippsland, <http://bteg.com.au/wp-content/uploads/2013/11/Labour-market-conditions-in-East-Gippsland-2013.pdf>, Accessed 15 October 2016.

4 East Gippsland Shire, 2013, "East Gippsland Shire Tourism Snapshot—Calendar Year 2013", [http://www.eastgippsland.vic.gov.au/files/654ca705-bf4a-4c4a-8154-a1cd00f05a63/East\\_Gippsland\\_Shire\\_Tourism\\_Snapshot\\_2013.pdf](http://www.eastgippsland.vic.gov.au/files/654ca705-bf4a-4c4a-8154-a1cd00f05a63/East_Gippsland_Shire_Tourism_Snapshot_2013.pdf), Accessed 16 October 2016.

Our vision is to protect the last unbroken forest wilderness area on mainland Australia which connects alpine forests to the rugged coastline.



MAP 1: EMERALD LINK—EAST GIPPSLAND'S UNBROKEN FOREST WILDERNESS



- Existing parks and reserves
- Unprotected forests
- Private land, non-state forest, or outside region
- Connecting the Emerald Link

# East Gippsland's Sites of Significance

East Gippsland has long been considered of great significance for its biodiversity, rainforest, botanical, zoological and geological sites. It is the only place on mainland Australia with unfragmented natural ecosystems that connect alpine to coastal environments.

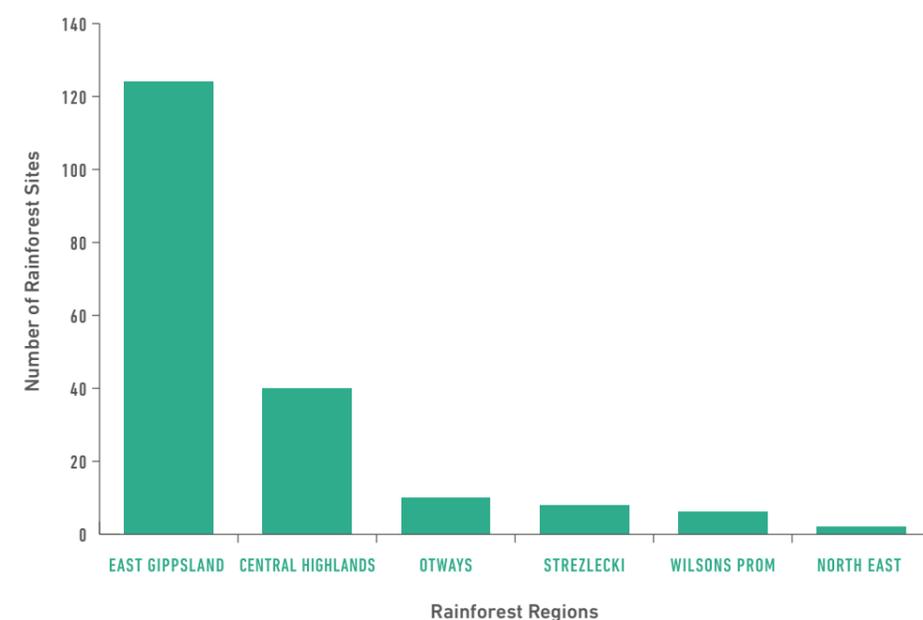
## RAINFOREST SITES OF SIGNIFICANCE

Victoria's rainforests were assessed by government botanists in the 1980s. The most significant stands of rainforest that were known at the time were mapped as 'Sites of Significance'. The 120 identified Sites of Significance include subcatchment areas of eucalyptus forest that surround 'core' rainforest areas. The surrounding eucalyptus forest maintains the moist conditions the rainforest needs. It buffers the rainforest from fire, wind and invasive species.

Logging is currently allowed in Rainforest Sites of Significance and is only restricted in the subcatchments of 'nationally significant' sites. Logging and management burns have destroyed critical forests within Rainforest Sites of Significance, placing vulnerable rainforest areas at great risk.

## DISTRIBUTION OF RAINFOREST SITES OF SIGNIFICANCE ACROSS REGIONS OF VICTORIA

(Data: Peel, B., 1999, *Rainforest and Cool Temperate Mixed Forest of Victoria*, Department of Natural Resources and Environment, Melbourne.)





# Biodiversity and the future of the Emerald Link

East Gippsland occupies just 9% of Victoria, yet is home to approximately one third of the state's threatened species. This makes the region extremely important as a sanctuary for their survival.

**Victoria has 215 ecological vegetation types, 75 of which are found in East Gippsland<sup>7</sup>—that's about 35% of all vegetation types packed into just 9%<sup>8</sup> of the state.<sup>9</sup>**

East Gippsland exceeds Victoria's state-wide averages for species composition and numbers of listed threatened species. East Gippsland's 709 listed threatened species comprise 34% of all listed threatened species in Victoria.<sup>10</sup>

**East Gippsland's staggering diversity is due to the influences of both the southern cool temperate and east coast warm temperate climates, and the region's many varied land formations, aspects, soils and geology. Warm temperate rainforest thrives in the cool wet gullies of East Gippsland's lowland forests. These jungle-like rainforests are comprised of flora that evolved from tropical species which over millennia migrated down the coast from the north. These communities create ecological niches that support many species of animals and plants that are absent from or rare in the rest of the state. For many of these species, East Gippsland is the southern limit of their extent.<sup>12</sup>**

## SITES OF BOTANICAL SIGNIFICANCE<sup>5</sup>

Government scientific experts carried out assessments of East Gippsland's flora communities in the 1980s. Botanists rated areas according to criteria such as presence of rare or restricted species, absence of introduced species, richness of vegetation (number of species), maturity of vegetation and proximity to outside disturbances.

The Errinundra and Nunniong Plateaus are both ranked as major Sites of Significance due to the presence of rare plants, richness of vegetation types, rainforests and old growth forests.

## SITES OF ZOOLOGICAL SIGNIFICANCE

Sites of Zoological Significance were mapped by scientific experts in the early 1980s on behalf of the Victorian Ministry for Conservation. Twenty six Sites of Significance were identified in East Gippsland based on the richness of animal diversity within them.

The Errinundra—Bellbird Creek is one of two sites ranked as a Global Site of Significance. This site encompasses the area to the south of the Errinundra Plateau including the Kuark Forest and the heritage listed catchments of the Arte and Goolengook Rivers.<sup>6</sup>

**The extraordinary quantity of Sites of Significance in East Gippsland makes the region a truly special place. By creating a network of protected areas, we can ensure that this biodiversity is resilient and insulated from the future impacts of climate change.**



IMAGE: The Heritage Listed Arte River in Kuark Forest flows through the Errinundra—Bellbird Ck Site of Global Zoological Significance. The cool waters of Arte are the only place on Earth where the critically endangered East Gippsland Galaxias fish can be found. | Judith Deland

## DIVERSITY OF PLANTS AND ANIMALS IN THE EAST GIPPSLAND REGION

Numbers in brackets are the statewide averages for an area of this size.<sup>11</sup>

PLANTS	ANIMALS
Total Species: 2,341 (2,127)	Total Species: 479 (426)
Native/Alien: 1,896/445 (1,596/532)	Native/Alien: 453/26 (405/21)
Victorian Rare or Threatened: 584 (385)	Victorian Rare or Threatened: 125 (98)
Australian Threatened (EPBC): 33 (28)	Australian Threatened (EPBC) : 34 (19)
Flora and Fauna Guarantee: 68 (46)	Flora and Fauna Guarantee: 79 (57)
Eucalyptus (Myrtaceae): 69 (53)	Mammal: 79 (64)
Acacia (Mimosaceae): 59 (53)	Bird: 327 (292)
Orchid (Orchidaceae): 168 (106)	Reptile: 47 (44)
Pea (Fabaceae): 133 (117)	Amphibian: 26 (18)
Composite (Asteraceae): 236 (255)	Animals
Grass (Poaceae): 239 (255)	Total Species: 479 (426)

The Victorian government has identified East Gippsland as a flagship area for biodiversity conservation.<sup>13,14</sup> Its abundance of rare flora, fauna and habitats make it an ark of biodiversity where species and ecosystems still remain in a relatively healthy condition. The area is a microcosm of how Victoria looked prior to European arrival—a connected puzzle of special places and icons that form an unbroken corridor from the coast to the alpine regions.

**Preservation of these special areas offers a great opportunity to safeguard a future for the region's biodiversity as a beacon of hope in a world where biodiversity loss is spiralling out of control.**

The Victorian government's biodiversity mapping ranks East Gippsland as making a higher contribution to Victoria's biodiversity than any other part of the state.<sup>15</sup> Protecting areas of East Gippsland is the most effective means of achieving biodiversity conservation outcomes. If Victoria's biodiversity is a priority, then delivering this vision of protecting the last unbroken wilderness area on mainland Australia is the solution.

<sup>5</sup> Please see Map 14 for reference.

<sup>6</sup> Morris, K.C. and Mansergh, I.M., 1981, "Sites of Zoological Sites of Significance in East Gippsland", Arthur Rylah Institute for Environmental Research, Ministry for Conservation, Victoria Environmental Studies Division, p. 24-28.

<sup>7</sup> 75 East Gippsland 'EVC' "Map Unit Types" of 215 Victorian 'EVC's' in Victorian Government, "Native Vegetation - Modelled 2005 Ecological Vegetation Classes (with Bioregional Conservation Status)" ( NV2005\_EVCBS) spatial dataset, October 2016.

<sup>8</sup> Victorian Government, "Local Government Area Boundaries - LGA\_Polygon" in "Vicmap Admin"(VICMAP\_ADMIN).

<sup>9</sup> See appendix Map 7 for more information.

<sup>10</sup> Viridans, Flora and Fauna Information Systems, <http://www.viridans.com/LGA/east%20gippsland.html>, Accessed 28 September 2016.

<sup>11</sup> Ibid.

<sup>12</sup> East Gippsland Shire Council, "Our Environment, Biodiversity", [http://www.eastgippsland.vic.gov.au/About\\_Us/Our\\_Environment/Biodiversity](http://www.eastgippsland.vic.gov.au/About_Us/Our_Environment/Biodiversity), Accessed 28 September 2016.

<sup>13</sup> Victorian Government, Department of Land Water and Planning, "Protecting Victoria's Environment—Biodiversity 2036 (Public Consultation Draft) 2015", p. 27.

<sup>14</sup> Victorian Environmental Assessment Council 2017, *Conservation Values of State Forests—Assessment Report*, p.16

<sup>15</sup> Department of Environment Land Water and Planning, Nature Print Interactive Biodiversity Map, <http://www.depi.vic.gov.au/environment-and-wildlife/biodiversity/natureprint>, Accessed 28 September 2016.

## CLIMATE CHANGE

Climate change is dramatically altering the natural balances in our ecosystems through increased fires and altered climatic conditions. The conditions that once maintained ecosystem functions and sensitive habitats are becoming stressed. However, more intact natural ecosystems have greater resilience to outside influences.<sup>16</sup> If entire ecosystems are protected and whole, they have the ability to respond and adapt to stress. As the area becomes fragmented, its capacity to withstand outside pressures diminishes.

Research on how climate change will affect Australia's ecosystems paints a grim picture.<sup>17</sup> Climate change is predicted to impact severely on Australia's forest biodiversity, from the wet tropical bioregion in the north<sup>18</sup> to the montane temperate forests of the south east,<sup>19</sup> ecosystems are predicted to undergo dramatic changes in species composition and distribution. Protecting relatively intact areas like East Gippsland offers hope for our priceless ecosystems that will face many challenges this century.

**In this time of unprecedented change to our climate and the impacts the changes are having on ecosystems, wild and connected places like East Gippsland will not just be a safe haven for species, but will be the cornerstone for helping species survive and evolve.**



IMAGE: Threatened Powerful owl chick | Ákos Lumnitzer



IMAGE: Threatened green and golden bell frog | Bernard Spragg

Recent scientific discoveries have found that species living in wild places have more genetic diversity than species living in more human dominated areas.<sup>20</sup> The best chance we can give nature is to protect entire landscapes and ecosystems from the many impacts that cumulatively threaten its resilience or the ability of an ecosystem to return to its original state after being disturbed.

Damage from climate-induced impacts, such as wildfire, are more serious in ecosystems that have been heavily fragmented or altered by destructive land practices—tree clearing, logging and mining. However, we have an insurance policy to protect the vitality of these forests: protect the best of what remains, restore those which are recovering and then connect these to create large protected forest areas.



IMAGE: Mountain Plum Pines, Errinundra plateau | Ian Sutton

<sup>16</sup> Thompson, I., et al., 2009, "Forest resilience, biodiversity, and climate change", Secretariat of the Convention on Biological Diversity, [http://www.srs.fs.usda.gov/pubs/ja/2009/ja\\_2009\\_thompson\\_002.pdf](http://www.srs.fs.usda.gov/pubs/ja/2009/ja_2009_thompson_002.pdf), p. 7.

<sup>17</sup> Hughes, L., 2003, "Climate change and Australia: trends, projections and impacts." *Austral Ecology*, 28.4, p. 423-443.

<sup>18</sup> Williams, S.E., Bolitho, E.E., and Fox, S., 2003, "Climate change in Australian tropical rainforests: an impending environmental catastrophe." *Proceedings of the Royal Society of London B: Biological Sciences* 270.1527, p. 1.887-1.892.

<sup>19</sup> Nitschke, C.R., and Hickey, G.M., 2007, "Assessing the vulnerability of Victoria's Central Highlands to climate change." Department of Sustainability and Environment Technical report, Melbourne.

<sup>20</sup> Lawrance, B., 12 October 2016, "The World's vanishing wild places are vital for saving species", *The Conversation*, <https://theconversation.com/the-worlds-vanishing-wild-places-are-vital-for-saving-species-66403>, Accessed 12 October 2016.



## EAST GIPPSLAND'S EMERALD LINK

East Gippsland is full of stunning wild places. In this report, we showcase a few places of outstanding natural importance. Protecting these areas will build the resilience of the forests and maintain the integrity of the connected ecosystems that run from the rugged mountain peaks to the coast.

IMAGE: The Kuark Forest is home to endangered owls, potoroos and gliding possums. | Rob Blakers

## — ERRINUNDR A PLATEAU AND SURROUNDS —

The Errinundra Plateau forms the southern extension of the Monaro Tablelands that stretch south from the Snowy Mountains of New South Wales. While the Monaro Tablelands have been extensively cleared and grazed, Errinundra’s high rainfall zone is cloaked in old growth forests and rainforests.

The Errinundra Plateau is one of the most unique natural environments in Victoria. The wet forests of Errinundra have provided a refuge for species for tens of thousands of years. During the last ice age, plants and animals retreated to and around the Plateau where they remained protected from icy conditions until the continent began to warm. The Plateau’s cold and wet climate has suppressed and resisted bushfires more so than the lowland eucalypt forests. Fire sensitive communities, like rainforest, thrive here because of this.

Errinundra supports some of the largest trees in Victoria and is the state’s stronghold for old growth forest. Five hundred year old eucalyptus trees<sup>21</sup> tower over wet understoreys of ancient tree ferns and rainforest species.

In the areas that have not been disturbed by logging and fire events, the forests remain as they have been for hundreds of years.

**The rainforests of Errinundra are ancient remnants of a forest type that was widespread hundreds of millions of years ago. These ancient relics still retain plants and animals, which were growing on the continent of Gondwana over 100 million years ago.**

Errinundra has been and continues to be a refuge for species, its value is immense as Victoria’s ecosystems adapt to climate change. Species such as the Southern Sassafras (*Atherosperma moschatum*), Soft Tree fern (*Dicksonia antarctica*), Mountain Pepper trees (*Tasmania lanceolata*) and a myriad of primitive mosses and ferns offer a window into Australia’s evolutionary past that has been preserved in this unique environment.

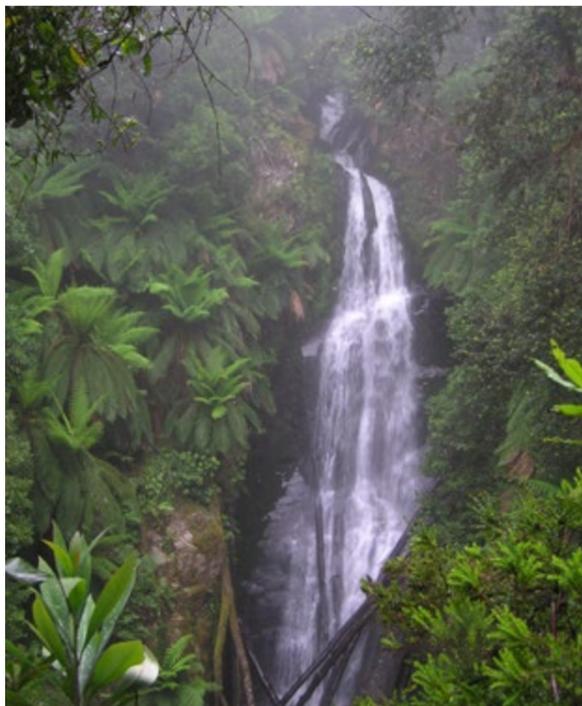


IMAGE: First Creek Falls, Errinundra National Park | Dave Caldwell

Expansion of the Park will also give the largest stand of cool temperate rainforest on mainland Australia the best chance of surviving climate induced wildfire.

The current Park design has little ecological rationale and is insufficient to safeguard the exceptional natural values of the Errinundra National Park—with its many ‘arms’ and ‘cut-outs’ creating disproportionate negative ‘edge effects’ due to logging. This significantly changes forest structure, primarily the forest margin becomes increasingly dry. These ‘edge effects’ are then colonised by dry tolerant species, many of which have adapted to increased fire regimes. This means a greater threat of fire penetrating into forests that are sensitive to it, or where it has been absent for many centuries. Other impacts include increased feral animal and weed invasion.

To facilitate logging many of the most valuable areas of rainforest and wet forest were deliberately excluded from the Park in the 1980s. The design of the Park contains several bottlenecks that prevent movement of native animals and allow industrial logging right to the edges of the Park.

An expanded Errinundra National Park will increase the likelihood of wet forest ecosystems adapting to climate change by buffering ecological communities and stopping damaging disturbances like logging. The protection of this area would result in the preservation of mainland Australia’s only continuous linkage of montane forests to coastal environments.

<sup>21</sup> Donavan, S., 2 April 2009, ‘Felled old growth tree 500 years old’, ABC news AM program, <http://www.abc.net.au/news/2009-04-02/felled-old-growth-tree-500-years-old/1638514>, accessed 3 November 2016.



## — MT ELLERY —

Highly significant stands of old growth forest outside of the Park remain threatened by logging. Wildlife-rich forests such as those at Brown Mountain and Dingo Creek have been partly logged, remain unprotected, and are now threatened by further destruction. On the northern boundary of the Park, directly adjacent to the largest stand of cool temperate rainforest on mainland Australia, logging operations are planned for the East Errinundra National Rainforest Site of Significance.

On the eastern boundary along the Coast Range and Hensleigh Creek areas, extensive clearfell logging continues to impact on some of the most significant stands of old growth forests on mainland Australia. The scale and remoteness of this old growth forest make these areas incredibly rare. In contrast, other mainland old growth forest is isolated and fragmented from land clearing.

**Redrawing the boundaries of the Errinundra National Park based on the actual conservation values of this area will protect some of the most significant old growth forests on mainland Australia and rebuild resilience into the landscape.**

Mt Ellery is the highest mountain in far East Gippsland. Granite monoliths cap the 1,200 metre high summit. The peak of the mountain is protected within Errinundra National Park, however on its flanks and foothills, spectacular old growth forests remain unprotected and threatened by logging. Stunning views can be obtained looking south to Ninety Mile Beach and the Croajingalong Wilderness Coast. To the north and west you can see as far as Mt Kosciuszko and the Australian Alps. Mt Ellery stands in the heart of the Errinundra area. The continuous and intact natural ecosystems running to the coast make it unlike anywhere on mainland Australia.

The higher areas support Alpine Ash forests and rare subalpine plants. Moving down slope, these high altitude communities transition to tall, wet eucalyptus forests—home to some of the largest trees in Australia. Cool temperate rainforests line the creeks and gullies on the upper and middle slopes. Further south, getting closer to the coast, the cool temperate rainforest blends with warm temperate rainforest in an extremely rare 'overlap' assemblage.

**Mt Ellery and surrounds are an integral part of Victoria's conservation estate. They are part of East Gippsland's natural tapestry and without further protections, these rare and distinctive 'crossover' forests would be the missing threads in creating connected ecosystems.**

MAP 2: ERRINUNDRRA NATIONAL PARK & LOGGING

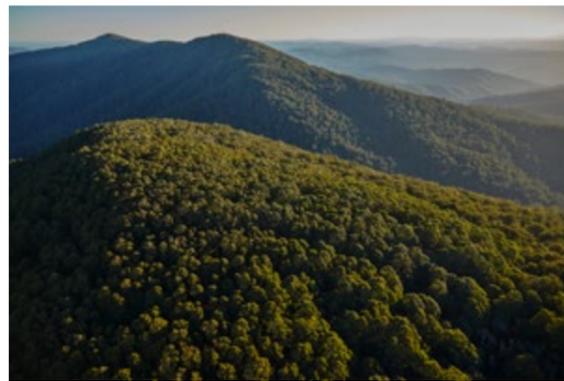
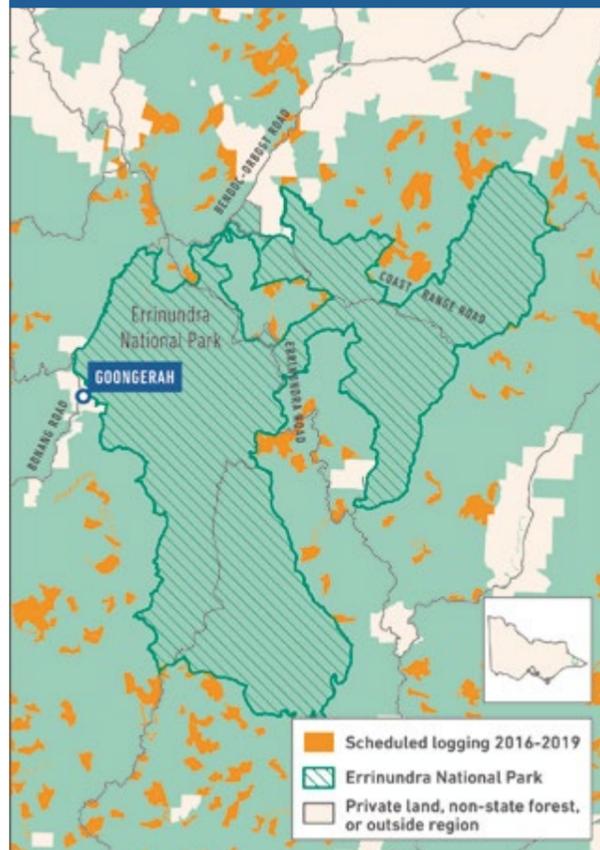


IMAGE: Looking south over Mt. Morris (foreground) towards far East Gippsland's highest peak, Mt. Ellery. | Rob Blakers



## — KUARK FOREST —<sup>22</sup>

The cool temperate rainforests evolved from ancient species that were growing on the supercontinent of Gondwana hundreds of millions of years ago. The warm temperate species evolved from the tropical rainforests of Papua New Guinea and Asia, and migrated over the land bridge that joined Cape York to Papua New Guinea during the last ice age.

These tropical rainforest species slowly migrated down the east coast of Australia and for many of them East Gippsland is the southerly limit of their distribution. Along the altitudinal gradient where these two rainforest types meet, the levels of species richness and beauty are world-class.

The best examples of rare overlap rainforest are in the Kuark Forest, south of the Errinundra Plateau. Mt Kuark stands 900 metres above sea level, cool and warm temperate rainforest grows prolifically on its southern flanks. Some parts of the mountain are reminiscent of Tasmania's cool temperate rainforest, while other places look more like the subtropical jungle pockets of northern New South Wales. From its summit, you can see to the coast, and a view of the beautiful continuity of natural ecosystems that make this region so special.

The Kuark Forest is home to several rare, threatened and endangered species such as the Slender Tree fern (*Cyathea cunninghamii*)—a nationally listed threatened species.

Much of the rare overlap rainforest has not yet been mapped and botanical discoveries are still being made—revealing even richer diversity than previously thought.



IMAGE: The Endangered Orbost Spiny Crayfish. Closely related species that are yet to be named have recently been discovered in the Kuark Forest. | Andrew Lincoln

For example, the Bristly Shield fern (*Lastreopsis hispida*) was not known to occur in East Gippsland until in 2015, a new population was found in the Kuark Forest, 250 kilometres away from the closest known records.<sup>23</sup>

Other rare and threatened plants include Black Fellow's Hemp (*Androcalva rossi*). This species occupies rainforest margins and is known only from a few populations in Victoria in Kuark Forest and Goolengook. Black Fellow's Hemp is a protected species and listed as Vulnerable on the Advisory List of Threatened Plants in Victoria.<sup>24</sup>

The Hybrid Pittosporum (*Pittosporum undulatum subspecies X emmetti*) is a rare hybrid between the cool temperate species Banyalla (*Pittosporum bicolor*) and the warm temperate species Sweet Pittosporum (*Pittosporum undulatum*). The hybrid species only naturally occurs in areas where warm and cool temperate rainforest overlap such as the Kuark Forest. The Hybrid Pittosporum is listed as Vulnerable on the Advisory List of Threatened Plants in Victoria.<sup>25</sup>

Extensive stands of warm temperate rainforest continue into the foothills and lowland forests. The Heritage Listed Arte River runs through these forests and is the only place on Earth home to aquatic species such as the Critically Endangered East Gippsland Galaxias fish (*Galaxias aequipinnis*).

The Orbost Spiny Crayfish (*Euastacus diversus*), a freshwater crayfish, was previously thought to be a single species, but scientists have recently found separate species in different river catchments—many of them are still waiting to be studied and named. A recently discovered and yet to be named new species has been found in the Arte River.

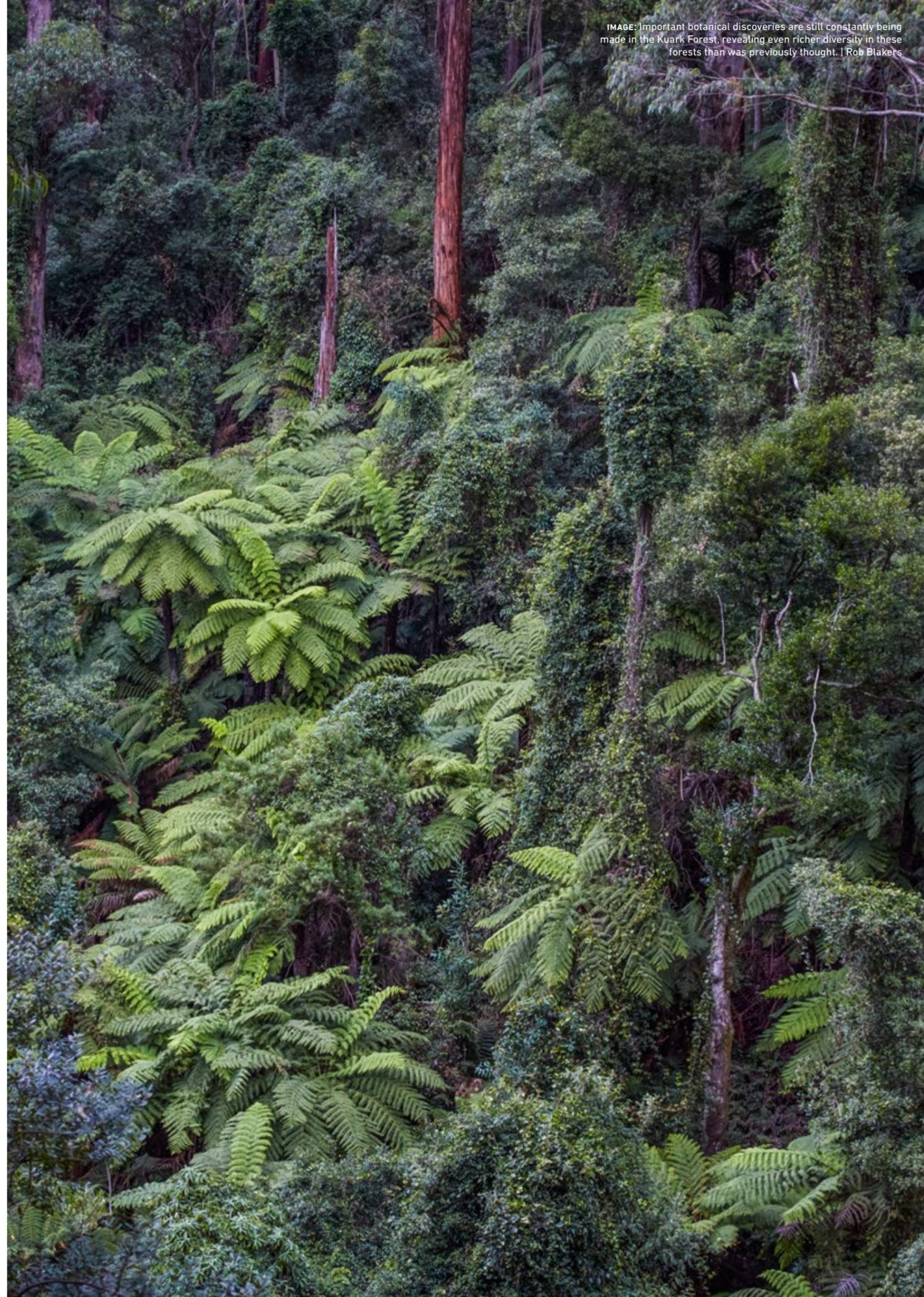
The lowland forests and warm temperate rainforest extend almost all the way to the coast until they are replaced with coastal heath and tea tree swamps, rich in birds and reptiles. These coastal forests form the last link in the continuous chain of intact natural ecosystems found nowhere else on mainland Australia. Logging in these areas is washing sediment into the lowland water catchments, impacting on aquatic species, fragmenting terrestrial habitats and compromising the connectivity and link between alpine and coastal environments.

<sup>23</sup> Kinsela, E., 20 July 2016, 'Rare ferns, rainforest species found in Victorian forest earmarked for logging, environment group says', ABC News, <http://www.abc.net.au/news/2015-07-20/rare-ferns-found-in-victorian-forest-earmarked-for-logging/6631870>, Accessed 12 October 2016.

<sup>24</sup> The State of Victoria Department of Environment and Primary Industries, 2014, 'Advisory List of Threatened PLants in Victoria', [http://www.depi.vic.gov.au/\\_data/assets/pdf\\_file/0005/277565/Advisory-List-of-Rare-or-Threatened-Plants-in-Victoria-2014.pdf](http://www.depi.vic.gov.au/_data/assets/pdf_file/0005/277565/Advisory-List-of-Rare-or-Threatened-Plants-in-Victoria-2014.pdf), Accessed 12 October 2016, p. 7.

<sup>25</sup> Ibid, p. 36.

<sup>22</sup> Please see Maps 10, 11 and 12 in Appendix for more information.



## — COOPRACAMBRA TO COAST —<sup>26</sup>

The far eastern region of Victoria is unrivalled in terms of the state's biodiversity. This unique region, east of Cann River and extending to the popular tourist town of Mallacoota, is a biodiversity hotspot full of species found nowhere else in Victoria. It's largely intact condition presents a great opportunity to safeguard a future for the multitude of species found here and increase their resilience to the impacts of climate change.

**From grass tree plains, woodlands and coastal heath to tall, wet forests and rainforests, this region supports a greater number of vegetation communities than any other region of comparable size in Victoria.**

The area is sparsely populated—less than 1% of the region is private land—and is high value wilderness area with a plethora of largely intact landscape ecosystems.

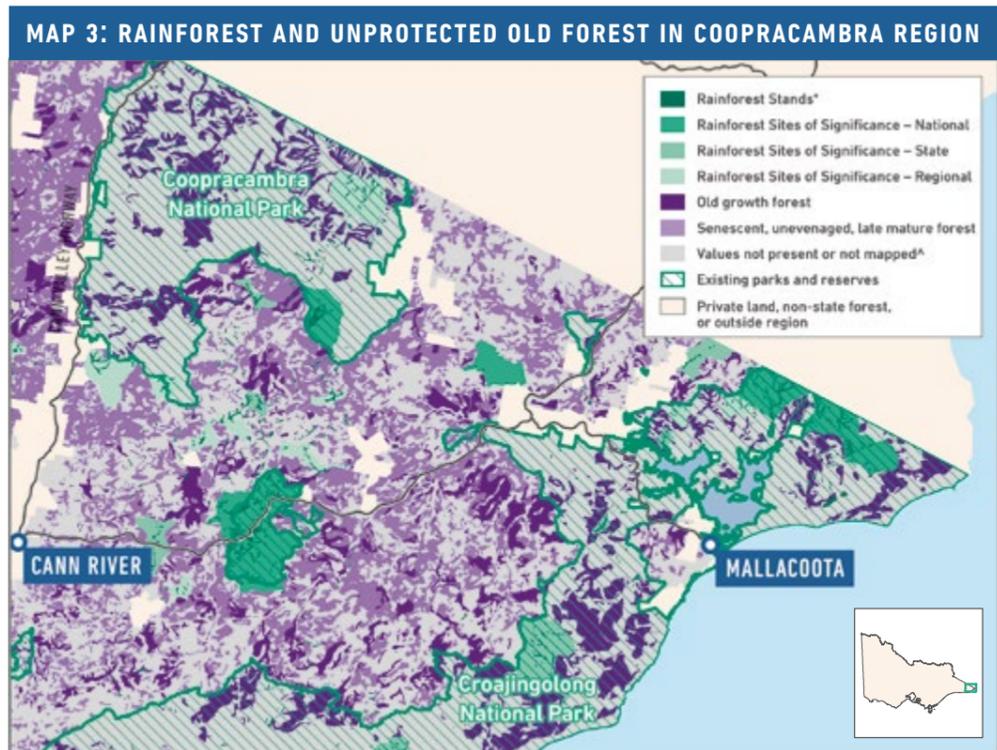
These diverse ecosystems are home to many species eliminated or threatened elsewhere in Victoria. The forests of the far east also support an astonishingly large number of endemic plant species; for many other plant species, the region is the southerly limit of their natural distribution.

With 29 species of eucalypts found in the area, the region is one of the most diverse in the country.

The region's Rainforest Sites of Significance boast 29 species of ferns and 16 species of vines. Plant species that are threatened or rare throughout Victoria are still relatively common in the area. Some examples of the rare flora include Blue-leaf Stringybark (*Eucalyptus agglomerata*), Paperbark Teatree (*Leptospermum trinervium*), Pale Currant Bush (*Leptomeria drupacea*), Whiteroot (*Lobelia purpurescens*), Woolly Wattle (*Acacia lanigera* var. *gracilipes*), Orange-blossom Orchid (*Sarchochilus falcatus*), Swamp Violet (*Viola calyana*) and Bolwarra (*Eupomatia laurina*).

Despite the outstanding natural values of this region, very little is protected in secure reserves. Coopracambra National Park occupies just 44,000 hectares in the north-east of the region—to put that in perspective Gariwerd, or the Grampians National Park, is 167,219 hectares, and Kakadu is 683,000 hectares. Continued logging around the boundaries of Coopracambra National Park is fragmenting the connectivity of natural ecosystems that extend south to the coast. This fragmentation restricts movement of species and negatively impacts the resilience of ecosystems to be able to deal with threatening processes such as fire and climate change.

**By linking Coopracambra National Park to the coast, a biodiversity corridor would be created for species to move through, thereby preserving the continuity of intact landscapes and the integrity of ecosystem services.**



<sup>26</sup> Please see Maps 12 and 13 in Appendix for more information.



IMAGE: Coopracambra is a biodiversity hotspot full of plant species found nowhere else in Victoria. | Judith Deland

## — NUNNIONG PLATEAU —<sup>27</sup>

The Nunniong Plateau is a high plain of about 1,500 metre elevation and is the remnant of an ancient land surface that once extended over a much wider area.

The Plateau consists of a spectacular series of subalpine grasslands and heathlands interspersed with Snow Gum woodlands, alpine Sphagnum Bogs, cool temperate rainforest and stands of Alpine Ash and has been recognised for its high aesthetic value.<sup>28</sup>

The alpine Sphagnum Bogs—made up of hundreds of moss species—of Nunniong are listed as an endangered community under the Federal *Environment Protection and Biodiversity Conservation Act*,<sup>29</sup> their conservation is essential for protecting vital inland water resources.<sup>30</sup> This rare, alpine wetland is drying up due to logging in its headwaters. Other threats to this endangered ecosystem include hard-hoofed cattle grazing and feral animals. Clearfell logging of forests surrounding the alpine bog areas is drying out the catchment and reducing the availability of permanent water that the sphagnum ecosystems require to thrive.

<sup>27</sup> Please see Map 14 in Appendix for more information.

<sup>28</sup> Joint Commonwealth and Victorian Regional Forest Agreement (RFA) Steering Committee, 2000, National Estate Identification and Assessment in the Gippsland Region of Victoria.

<sup>29</sup> Australian Government Department of Environment and Energy, *Environment Protection and Biodiversity Conservation Act List of Threatened Ecological Communities*, <http://www.environment.gov.au/cgi-bin/sprat/public/public-lookupcommunities.pl>, Accessed 3 October 2016.

<sup>30</sup> Australian Government Department of Environment and Energy, 'Alpine Sphagnum Bogs and Associated Fens: A nationally threatened ecological community', *Environment Protection and Biodiversity Conservation Act 1999*, Policy Statement 3.16, p. 4.

IMAGE: Cool temperate rainforest, Nunniong Plateau | Judith Deland

Cool temperate rainforest of the Plateau has survived for thousands of years in wet and sheltered situations offering protection from fire. The Nunniong Plateau forms the easterly limit of the Victorian distribution of Myrtle Beech (*Nothofagus cunninghamii*), the dominant rainforest tree in Tasmania's rainforests. Ancestors of the majestic Myrtle Beech trees were widespread across the supercontinent of Gondwana. Closely related species that evolved from similar ancestors of those found in Victoria grow in the rainforests of New Zealand and mountains of Patagonian Chile. Fossilised pollen of *Nothofagus* species has been found as far south as Antarctica. The primordial ancient beech forests offer a unique insight into a forest type that covered huge swathes of the Southern Hemisphere over 100 million years ago.

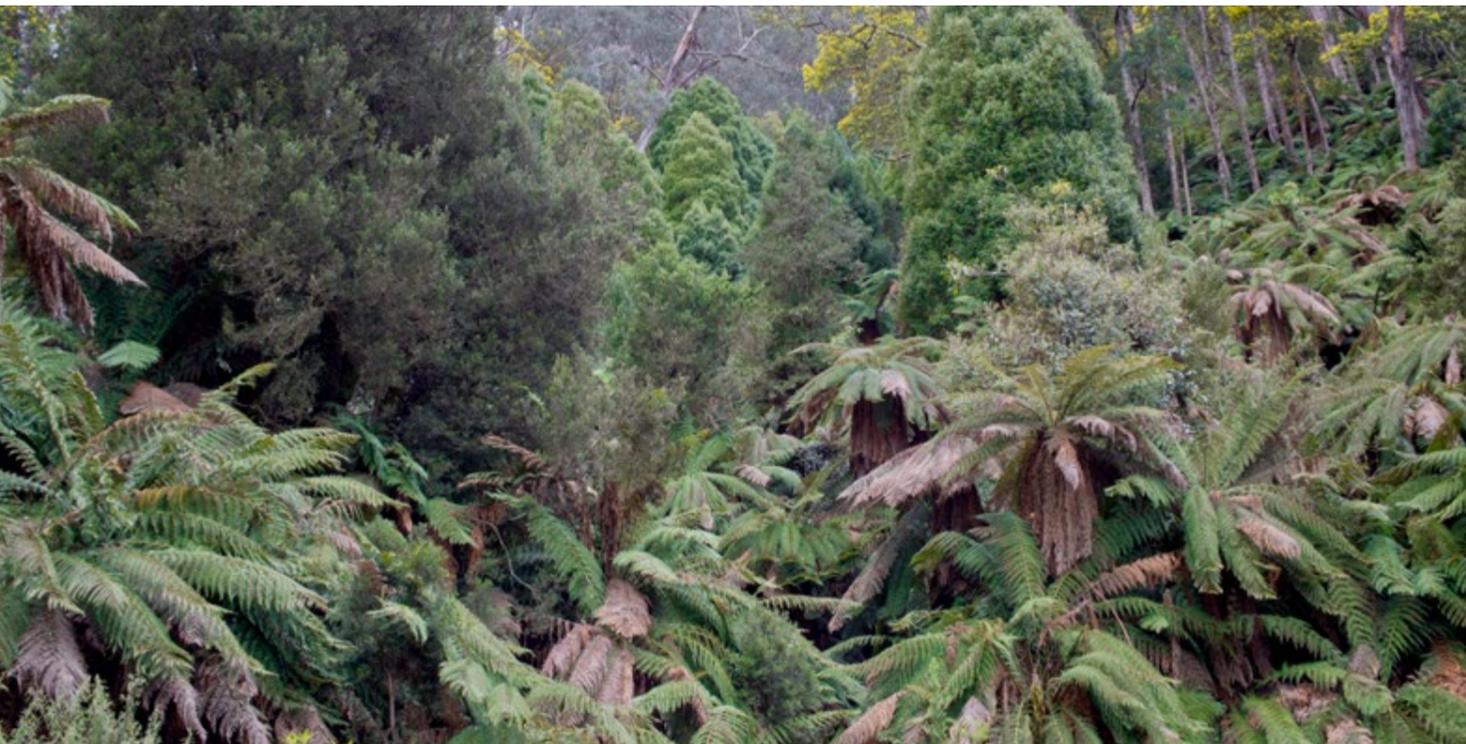
The picturesque nature of the Plateau attracts visitors and the historic "Moscow Villa" hut area is a popular 4WD destination.

The Timbarra River flows across the Nunniong Plateau and then descends through the spectacular and isolated Timbarra River Gorge—a Site of Geological and Geomorphological Significance.

Although logging operations have occurred on the Plateau detracting from the visitor experience and natural values in some areas—there remains scope to protect and restore this unique place for current and future generations to enjoy.



IMAGE: Snow gum woodlands, Nunniong Plateau | Judith Deland





# Threats

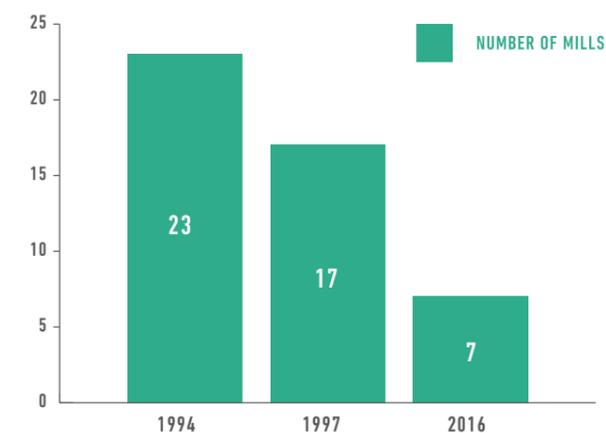
Since the rise of the export woodchipping industry in the late 1970s, East Gippsland's forests have been subject to industrial clearfell logging practices. Logging over this period has dramatically altered the landscape and hastened the decline of threatened species and biodiversity.

Export woodchipping led to over logging of valuable timber resources. The industry was centred around a high-volume and low-value product—woodchips exported to the Asian market. From the late 1990s into the mid-2000s, up to 90% of the timber coming out of East Gippsland logging coupes was woodchipped and exported.<sup>31</sup>

As woodchip exports skyrocketed, sawmilling has declined. In the mid 1990s, 23 sawmills were operating in East Gippsland,<sup>32</sup> and by 1997-98 there were 17.<sup>33</sup> Today, just seven sawmills remain in operation. Between 1996 and 2006 employment in East Gippsland's logging industry declined by 23% percent.<sup>34</sup>

## SAW MILLS IN EAST GIPPSLAND 1994-2016

(Data: Victorian Department of Agriculture Resource and Economics Report 1999, Commonwealth and Victorian Regional Forest Agreement 1998, Weekly Times 19/2/16)



Consumers increasingly demand paper products carrying reputable certification labels, such as Forest Stewardship

Council (FSC). An FSC certificate is widely regarded as the global sustainability benchmark for wood, timber and paper products that no large-scale Australian native forest processor has been able to achieve.<sup>35</sup>

Victorian state government logging agency, VicForests, has failed to obtain FSC certification for its logging operations in East Gippsland twice. The auditor cited major non-conformities with the FSC standards in relation to the logging of old growth forests and threatened species habitat.<sup>36</sup>

The lack of a viable market for wood logged from East Gippsland, coupled with overharvesting of a valuable resource and inability to obtain reputable certification labels for its products, has resulted in the East Gippsland logging industry becoming heavily reliant on government subsidies to keep it afloat.

Leaked documents from VicForests in 2015 revealed a staggering \$5.5 million annual loss on its East Gippsland operations.<sup>37</sup> A brief prepared by Victoria's Department of Treasury and Finance concluded that logging in East Gippsland is not commercially viable and is cross subsidised by controversial logging operations in the Central Highlands of Victoria, home to the State's Critically Endangered faunal emblem, the Leadbeater's Possum.

A separate internal VicForests document, produced in response to the Treasury briefing, proposes further government subsidies for logging in East Gippsland, so they can continue as a 'Community Service Obligation'.<sup>38</sup>

Some logs are exported to China, whole and unprocessed.<sup>39</sup>

31 Ajanai, J., 5 October 2016, 'The untold story of the role of government in the rise and fall of Gunns', The Conversation, <http://theconversation.com/the-untold-story-of-the-role-of-government-in-the-rise-and-fall-of-gunns-9972>, Accessed 2 November 2016.

32 Department of Agriculture, "East Gippsland Victoria: Resource and Economics Report", [http://www.agriculture.gov.au/SiteCollectionDocuments/rfa/regions/vic-east-gippsland/word-docs/Resource\\_and\\_Economics\\_Report.pdf](http://www.agriculture.gov.au/SiteCollectionDocuments/rfa/regions/vic-east-gippsland/word-docs/Resource_and_Economics_Report.pdf), Accessed 15 October 2016, p. 41.

33 Commonwealth and Victorian Regional Forest Agreement (RFA) Steering Committee, 1999, "Gippsland Comprehensive Regional Assessment Report", [http://www.agriculture.gov.au/SiteCollectionDocuments/rfa/regions/vic-gippsland/regional-assessment/vic\\_gippsra.pdf](http://www.agriculture.gov.au/SiteCollectionDocuments/rfa/regions/vic-gippsland/regional-assessment/vic_gippsra.pdf), p. 44.

34 Schirmer, J., Dunn, C., Victoria's Forestry Industries, Fenner School of Environment and Society, The Australian National University, Canberra 2 Cooperative Research Centre for Forestry, Hobart. Report prepared for the Victorian Department of Primary Industries.

35 Frasier, J., 'Green buyers confront wood industry can of worms', Living Now, <http://livingnow.com.au/green-buyers-confront-wood-industry-can-of-worms/>, Accessed 31 October 2016.

36 Denholm, M., 8 July 2014, 'VicForests FSC certification bid eyes end to old-growth logging in East Gippsland', The Australian, <http://www.theaustralian.com.au/national-affairs/vicforests-fsc-certification-bid-eyes-end-to-old-growth-logging-in-east-gippsland/news-story/be54e2d2779da95557dfe1c8fecf60a>, Accessed 15 October 2016.

37 Arup, T., 28 May 2015, 'Logging in East Gippsland losing up to \$5.5 million a year', The Age, <http://www.theage.com.au/victoria/logging-in-east-gippsland-losing-up-to-55-million-a-year-20150527-ghb0ao.html>, Accessed 15 October 2016.

38 Ibid.

39 Gordon, J., 23 July 2015, 'Victorian timber bound for China under secret Andrews Government rescue plan', The Age, <http://www.theage.com.au/victoria/victorian-timber-bound-for-china-under-secret-andrews-government-rescue-plan-20150712-gian0v.html>, Accessed 15 October 2016.

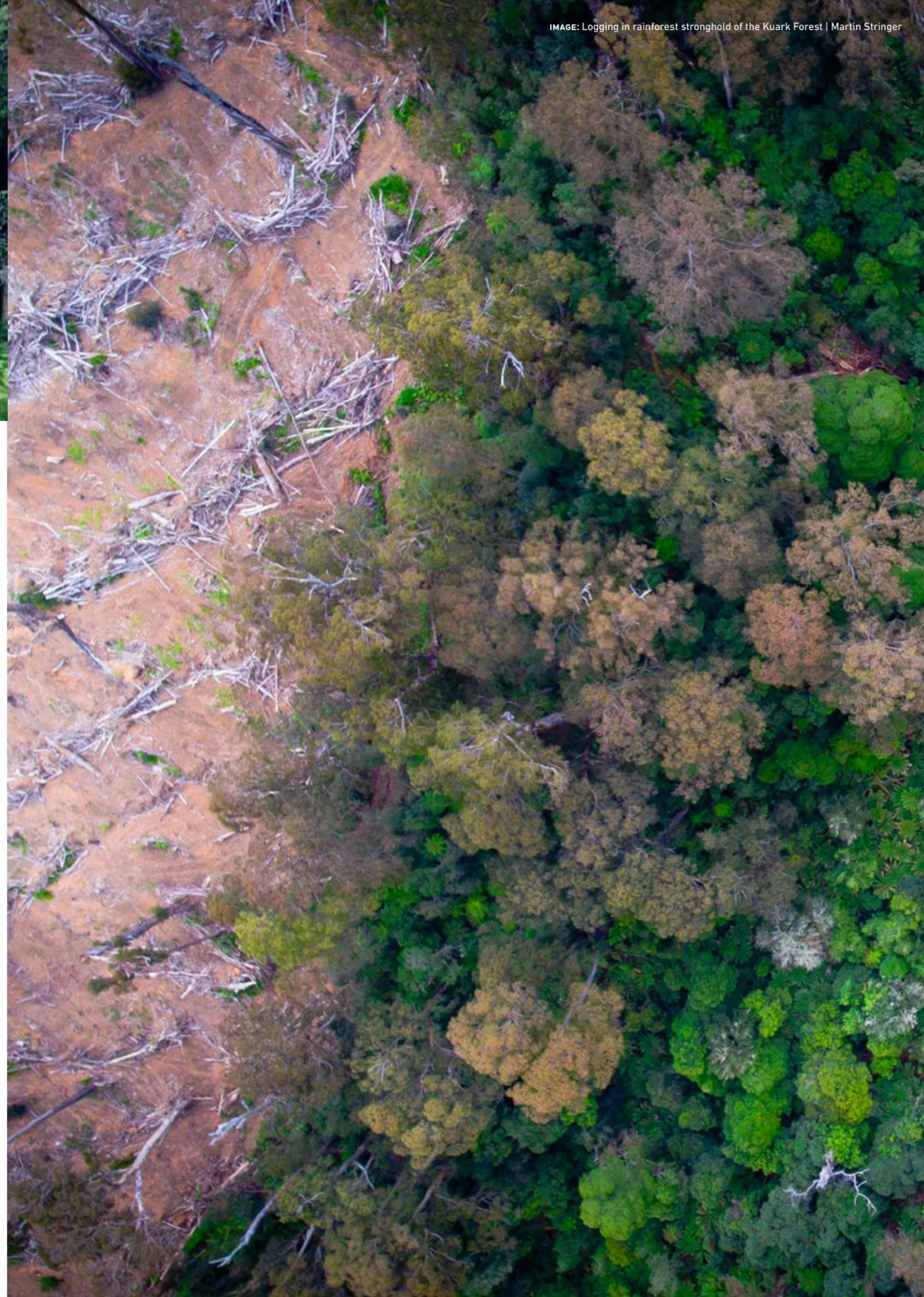


IMAGE: Logging in East Gippsland is still occurring in old growth forests and threatened species habitat. | Sarah Day

VicForests is also proposing establishing a native forest biomass industry, where so called 'residual timber' that would have previously been woodchipped would be burnt in forest furnaces to generate electricity. Under changes to the Renewable Energy Target (RET), made under the Abbott Government, the burning of native forest is an allowable source of renewable energy and eligible for renewable energy certificates (subsidies).<sup>40</sup> Burning native forests for electricity is neither sustainable or renewable. Logging depletes forest carbon stocks and releases at least 1.5 times more carbon emissions than burning coal and 3.4 times the emissions of a combined cycle natural gas plant.<sup>41</sup> The allowance of credits for burning forests reduces and displaces investment in genuine renewable energy such as solar and wind.

In contrast, protecting Australia's native forests would reduce emissions by tens of millions of tonnes of carbon per year. The Climate Commission's 2011 report *The Critical Decade* recognises the need to protect native forests immediately as a key climate change mitigation strategy.<sup>42</sup>

**Logging East Gippsland's world-class forests doesn't make economic or environmental sense. We have the opportunity to create a conservation tourism hotspot that is based on the incredible natural values of the area.**

In June 2016, an economic report by PricewaterhouseCoopers delivered a scathing assessment of VicForests finances and concluded the logging agency was not 'generating an appropriate return' to meet its stated objectives. The report found every native forestry job requires \$5,041,000 worth of investment in machinery, equipment and infrastructure such as roads—about 12 times more than the average for other industries.<sup>43</sup>

The systemic poor financial performance of VicForests and the steady decline in the logging industry make a clear and convincing argument for the diversification of East Gippsland's economy. Left standing, East Gippsland's forests are worth so much more to the region's economy. Current policy settings are seeing these valuable assets destroyed at a loss to the taxpayer. If unprofitable logging continues and investment in conservation tourism and economic diversification are not considered, it will be to the detriment of the future economic prosperity of the region.

Our vision is one where the East Gippsland economy transitions to one that relies on the forests remaining intact and connecting the region's priceless ecosystems. Creating a strong conservation economy that utilises opportunities in tourism, carbon markets and land management programs.

<sup>40</sup> Borschmann, G., 29 May 2015, 'Timber company to benefit as RET deal creates market for unsaleable timber, says VicForests analysis', ABC news, <http://www.abc.net.au/news/2015-05-28/ret-reinstates-wood-waste-as-renewable-energy-source/6503166>, Accessed 15 October 2016.

<sup>41</sup> Booth, M.S., 2014, 'Trees, Trash and Toxins, How Biomass Energy Has Become the New Coal', Partnership for Policy Integrity, <http://www.pfpi.net/wp-content/uploads/2014/04/PFPI-Biomass-is-the-New-Coal-April-2-2014.pdf>, Accessed 27 October 2016, p.16.

<sup>42</sup> Hughes, L., McMichael, T., 2011, 'The Critical Decade, Climate Change and Health', Climate Commission Secretariat, Department of Climate Change and Energy Efficiency, Commonwealth of Australia, p. 6.

<sup>43</sup> Gordon, J., 27 June 2016, 'Is Victoria's native forestry industry worth it at \$5 million a job?', The Age, <http://www.theage.com.au/victoria/is-victorias-native-forestry-industry-worth-it-at-5-million-a-job-20160623-gpqcu.html>, Accessed 19 October 2016.

## MAKE A CONNECTION TO VICTORIA'S PREMIER WILDERNESS DESTINATION

Ecosystem services are now recognised as extremely valuable for humans and nature alike as they provide a wide range of benefits. Forests provide clean air, fresh water, habitat for wildlife, and safely store carbon.<sup>44</sup> These services provide practical and economic benefits to households, to agriculture and to the recreation industry.<sup>45</sup>

<sup>44</sup> The Economics of Ecosystems and Biodiversity, Ecosystem Services, <http://www.teebweb.org/resources/ecosystem-services/>, Accessed 28 October 2016.

<sup>45</sup> UN Department of Economic and Social Affairs, Statistics Division, System of Environmental-Economic Accounting (SEEA), <http://unstats.un.org/unsd/envaccounting/seea.asp>, Accessed 28 October 2016.

IMAGE: Walkers connecting with the ancient tree ferns in the Kuark Forest | Rob Blakers



### PRINCIPLES FOR COMBINING TOURISM AND CONSERVATION—STRIKING THE BALANCE

The following principles should guide the consideration and development of tourism infrastructure. Often service-based business generates more jobs with less impact than large scale infrastructure. Importantly, all these opportunities require careful planning and oversight.

- Transparency and public accountability are essential for establishment of commercial activities in and around areas with high natural and cultural values.
- Public access for recreational and tourism use and enjoyment should be consistent with conservation objectives. Thoughtful and thorough planning supports this.
- Tourism must be carefully balanced with protection of natural and cultural values, and interpretation and community education are essential components of ensuring compatibility of use with conservation objectives.
- Developments are best located on private land or nearby townships. Infrastructure developments should be consistent with cultural and natural heritage values, and developments that threaten natural or cultural values, including by cumulative impact, ought not be permitted.
- Private investment is encouraged adjacent to or nearby areas of high conservation value, and responsibility for management of visitors and tourists to areas of high natural and cultural value should be retained by relevant government agencies.

### — CONSERVATION TOURISM AND OTHER ECONOMIC OPPORTUNITIES —

Protecting nature not only has positive benefits for maintaining and enhancing valuable ecosystem services such as clean water, carbon sequestration and biodiversity conservation but also immense economic benefits.

The tourism sector in Victoria is worth \$21.7 billion to the state's economy.<sup>46</sup> Conservation tourism relies on experiences directly related to natural attractions. National parks and reserves are essential for conservation tourism as they protect natural attractions that are valuable tourism assets. Conservation tourism contributes \$2.6 billion to Gross State Product and employs 41,200 people, accounting for about a quarter of the total number employed in the entire tourism sector.<sup>47</sup> An expanded reserve system that protects the forests detailed in this report would bring great economic benefits to communities in East Gippsland by providing conservation tourism business opportunities. In fact, already a quarter of tourists who visit East Gippsland fall into the 'Inspired by nature' segment from Tourism Gippsland.<sup>48</sup>

**In East Gippsland alone in 2013–14, the tourism industry contributed more than \$1 billion to the region's economy, employing more than 12,000 people—that's 12.2% of the region's employment.**<sup>49</sup>

Of overnight visitors, nearly 20% camped or stayed in caravan parks, with 19% of these visitors partaking in bushwalking and 19% visiting state or national parks.<sup>50</sup> Destination Gippsland's vision is that "tourism will be valued throughout Gippsland for its significant contribution to the region's economic, social, environmental and cultural sustainability. This will be achieved by the combined efforts of the sector to deliver outstanding visitor experiences."<sup>51</sup> With nearly one in five tourists visiting a state or national park or bushwalking, increasing conservation tourism opportunities in this region can only help it to meet its vision of significantly contributing economically and environmentally.

Conservation tourism is a growth industry both globally and across the country, and the majestic forests of East Gippsland are an untapped resource for the tourism

<sup>46</sup> Victorian Government Department of Economic Development, "Jobs, Transport and Resources, Tourism Industry Resources", <http://www.tourism.vic.gov.au/tourism-industry/value-of-victoria-s-tourism-industry.html>, Accessed 14 October 2016.

<sup>47</sup> Parks Victoria, 2010, "Sustainable Tourism Discussion Paper, Greater Alpine National Parks", [http://parkweb.vic.gov.au/\\_\\_\\_data/assets/pdf\\_file/0008/534095/Sustainable20Tourism1.pdf](http://parkweb.vic.gov.au/___data/assets/pdf_file/0008/534095/Sustainable20Tourism1.pdf), p. 5.

<sup>48</sup> Destination Gippsland, Gippsland Tourism: Strategic Direction 2013–2018.

<sup>49</sup> Ibid.

<sup>50</sup> Ibid, p 3.

<sup>51</sup> Tourism Victoria, Destination Gippsland, Gippsland Tourism: Strategic Direction 2013–2018.

industry. A walk from the cerulean sea up to the snow-capped mountains is a great opportunity to showcase and protect Victoria's stunning wilderness and create new jobs. The Overland Track in Tasmania is an excellent example of how this would work; in 2013–2014 the walk brought 8,000 people to the area for a one-of-a-kind wilderness experience.<sup>52</sup> Furthermore, the 'value of direct and indirect tourism expenditure from the track for 2012–2013 [was] \$16.36 million and [it's] estimated the business supports the equivalent of 85 full-time jobs.'<sup>53</sup>

East Gippsland's remarkable forests are an untapped tourism opportunity, but tourism isn't the only economic benefit of protecting these beautiful places.

**The tall, wet forests of south-eastern Australia have been identified as the most carbon dense forests on Earth.**<sup>54</sup>

There is huge potential to generate income for the state of Victoria through carbon credits from avoided logging. Stopping logging in the Central Highlands' tall, wet forests alone would save 3.2 million tonnes of carbon emissions and earn the Victorian government up to \$30 million a year if included under the Federal government's Emissions Reduction Fund.<sup>55</sup> The giants of East Gippsland are likely to store very similar high levels of carbon and cover a much larger area than the Central Highlands—their economic value as carbon stores is likely to be just as big. If a methodology was developed to establish a set of rules, the Victorian government could bid cuts to logging into the fund and earn money from avoided emissions.

Opportunities exist within this framework to provide new avenues of secure employment and safe jobs for East Gippsland locals, particularly in the face of uncertainty and changes to the traditional industries such as dairying, and the decline of native forestry. Funds from avoided emissions could be channelled into new initiatives to transition locals into employment based around management of our forest environment, such as carbon stock assessments, feral and invasive species management, fire mitigation services, and infrastructure establishment and maintenance. Provision of new options for employment are quintessential and much needed for the Victorian government to create a resilient and diverse economy for East Gippsland, rather than one based on subsidised and unsustainable extractive industries.

<sup>52</sup> Tasmania Parks and Wildlife Service, "Report 2013–2014: Overland Track", <http://www.parks.tas.gov.au/file.aspx?id=37728>, Accessed 30 September 2016, p. 3.

<sup>53</sup> Ibid.

<sup>54</sup> Keith, H., Mackey, B.G., and Lindenmayer, D.B., 2009, "Re-evaluation of forest biomass carbon stocks and lessons from the world's most carbon-dense forests." Proceedings of the National Academy of Sciences 106.28 (2009): 11635–11640.

<sup>55</sup> Arup, T., 20 January 2015, 'Highlands Logging Halted Would Earn Victoria 30m a Year in Emissions Reductions: Report', The Age, <http://www.theage.com.au/victoria/highlands-logging-halt-would-earn-victoria-30m-a-year-in-emissions-reductions-report-20150120-12ua1z.html>, Accessed 2 July 2016.

— CONSERVATION TOURISM OPPORTUNITY: SEA TO SUMMIT FOREST TRAIL —

Protecting the continuity of natural ecosystems, between the alpine areas to the north and the East Gippsland coast to the south, would bring great tourism opportunities to the region. Being the only place on mainland Australia with continuous native vegetation and intact natural ecosystems from alpine to coastal environments is a major drawcard for people craving wilderness and nature-based experiences. It also makes the region attractive for conservation tourism investors and businesses.

**There is a great opportunity for a multi-day hiking trail to be established in the region that would travel through the connected mountain to coastal environments. The proposed Sea to Summit Forest Trail would create a network of walking tracks that link the coastal town of Bemm River to the summit of Mt Ellery, the highest mountain in far East Gippsland.**

The town of Bemm River (population 287) would receive great benefits from the establishment of a multi-day walk, such as business opportunities and the jobs created in accommodation facilities, restaurants and tourist transfer businesses.

The proposed route makes use of several existing roads and tracks that would allow walkers easy access to get on or off the track without completing the entire route. The track could be walked as a loop that takes in the iconic rainforest stronghold of Goolengook, reaches the summit of Mt Ellery as a side trip and returns to the coast via Kuark Forest. Alternatively, the route could be walked one way from the summit of Mt Ellery down to the coast with walkers choosing whether to descend through the Goolengook valley or through the Kuark Forest.

Commencing at the wild coastline near the town of Bemm River, the walk winds through lowland foothills forest and warm temperate rainforest as it heads north following the Bemm River.

After crossing the Princes Highway the walk begins to climb into the foothills where a loop commences. Walkers can choose the westerly route through the Kuark Forest or continue north into Goolengook, both routes passing through old growth, wet forest and temperate rainforest.

Routing the trail through the Kuark Forest and the rainforest areas of the Arte River, would make good campsites easy to establish, especially in the Arte River Flora Reserve with its rare 'overlap' rainforest. Existing roads in the area would easily provide vehicle access so walkers would leave or join and have an opportunity to re-supply.

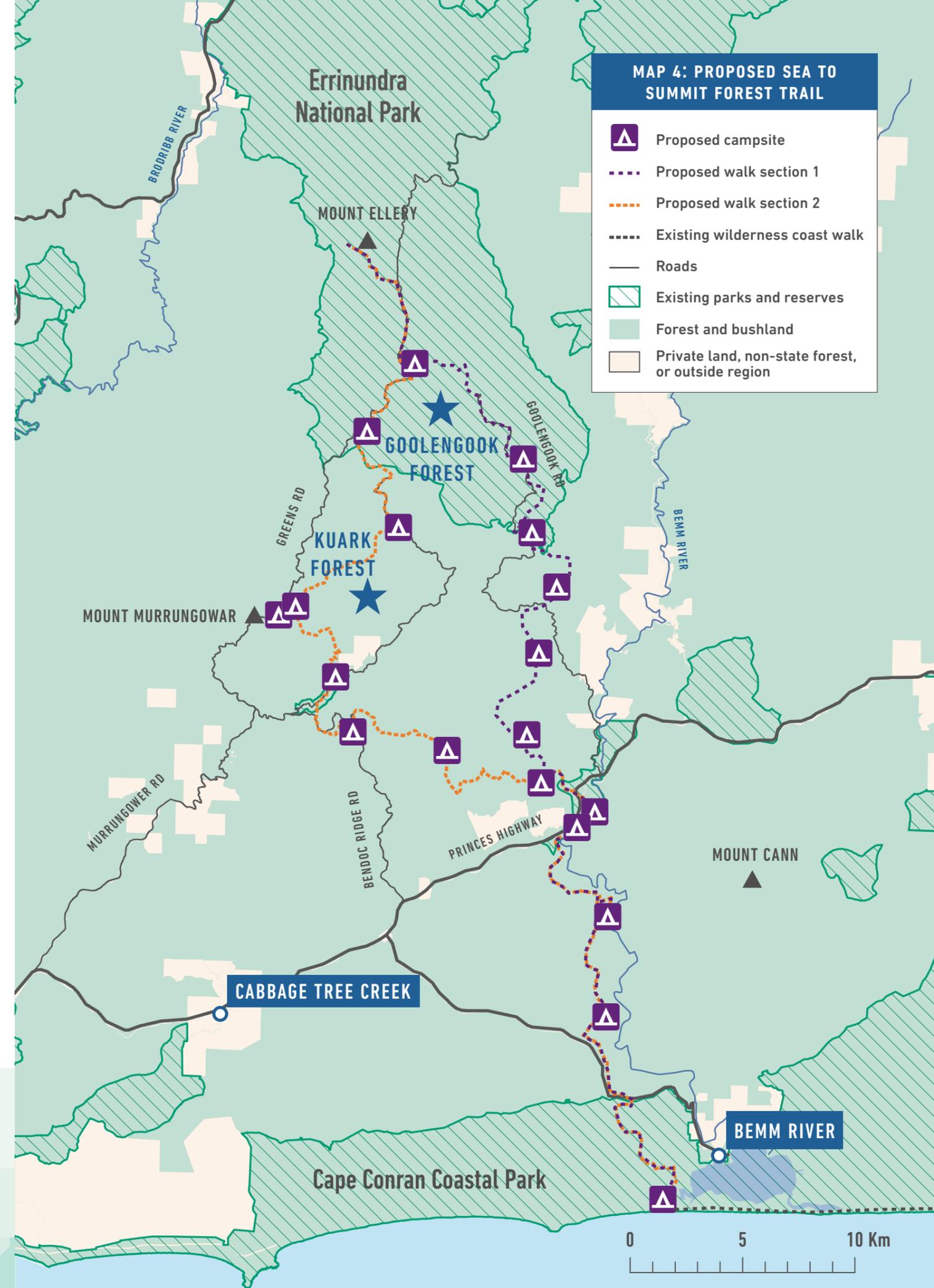
The Goolengook route takes in the site of Victoria's longest running forest protest. After a 20 year campaign to protect this iconic area, in 2009 Goolengook was added to Errinundra National Park.

Goolengook is Victoria's quintessential old growth forest and is nationally significant. It contains rare rainforest and plants such as the Slender Tree fern and habitat for endangered wildlife.

The Kuark Forest and Goolengook tracks converge on Greens Road where walkers could make a final side trip from the already established Ellery Camp to the summit of Mt Ellery.

The section of Greens Road that goes through the existing Errinundra National Park would easily be converted into a world-class hiking trail, with campsites, lookouts, side trip tracks and rangers huts along the way. The road is currently closed to vehicle traffic and would be the perfect base to establish a multi-day walk.

**A walk of this size would put the region on the map and attract international and domestic tourists, seeking a true forest wilderness experience in unique environments found nowhere else on Earth.**





## — ERRINUNDRA —

The tourism potential for the Errinundra area is huge, linking into existing tourism destinations on the coast such as Lakes Entrance and the popular coastal drive from Sydney to Melbourne. An extensive network of existing roads that have historically been used for logging would easily be transformed into a world-class car touring route, with walking tracks, campsites, interpretive signage and points of interest along the way.

Overnight hikes through spectacular ancient forests would easily be established. Short sections of walking track through the forest would intersect with existing roads that are currently closed to vehicle traffic. Incorporating existing roads into a walking track design would allow for easy maintenance of tracks, increased safety and easy access for walkers to join multi-day walks at any point they choose.

The provision of basic huts or 'soft shelters' would greatly assist the encouragement of visitors to the area and would be constructed in locations accessible by both walkers and car tourers.

**In 2014, 51% of Victorian domestic overnight nature-based visitors went bushwalking.<sup>56</sup> The popularity of these activities provides great opportunities for the development of tourism infrastructure and activities in East Gippsland's forests.**

There is also strong potential for adventure tourism initiatives to be established in the area. Activities such as mountain bike trails and cycle tours, walks to waterfalls, canopy walkways and tree climbing tours and cross country skiing and snowshoeing in winter on the Errinundra Plateau are a few potential attractions.

Wildlife tourism in Australia is growing in popularity, particularly for international visitors.<sup>57</sup> The Errinundra Plateau is well known as a refuge for arboreal mammals such as Greater Gliders (*Petauroides volans*), Yellow-bellied Gliders (*Petaurus australis*), Mountain Brushtail Possums (*Trichosurus cunninghami*) and large forest owls. It is well suited for nocturnal fauna tours.

The community groups Goongerah Environment Centre and Environment East Gippsland have been running ecology camps for members of the public for decades. These camps have attracted thousands of visitors to the region who have delighted in the opportunity to view unique Australian fauna face-to-face on spotlighting tours.

**The Errinundra Plateau is remote, and that is a selling point for people seeking this type of nature-based experience. The East Gippsland Economic Development Strategy 2014–2018 identified key ideas for economic development, including breaking barriers through targeted development that uses distance as a positive image for tourism (e.g. 'miles away from care').<sup>58</sup> As the modern way of life becomes more and more disconnected from the natural world, people are craving connections to untouched wilderness areas in remote locations and the Errinundra Plateau can offer them exactly that.**

Establishing a network of walking tracks ranging in length from half-day to three to four days would allow visitors with a range of ages and abilities to experience these ancient forests. Utilising the existing roads to get on and off the network of walking tracks would allow visitors with varying interests and abilities to explore the area.



IMAGE: Yellow-bellied Glider | David Cook

<sup>56</sup> Tourism Victoria, Nature-based Tourism Market Profile Year Ending June 2014.

<sup>57</sup> Fredline, E., Faulkner, B., 2001, "International market analysis of wildlife tourism", CRC for Sustainable Tourism.

<sup>58</sup> Growing East Gippsland, "East Gippsland Shire Economic Development Strategy 2014-2018 Full Report", [www.eastgippsland.vic.gov.au/files/.../Economic\\_Development\\_Strategy\\_PDF.pdf](http://www.eastgippsland.vic.gov.au/files/.../Economic_Development_Strategy_PDF.pdf), p. 7.

## — COOPRACAMBRA TO COAST TOURISM OPPORTUNITIES —

Tourism is the largest industry in this region. The popular tourism areas of Mallacoota and Thurra River would benefit greatly from new protected areas throughout the region that would provide visitors with more destinations to visit and stay and alleviate overcrowding and associated visitor impacts at popular camping areas in Croajingalong National Park.

Mallacoota is the conservation tourism capital of East Gippsland. By expanding the reserve system to encompass the forested areas to the north-west of Mallacoota and linking Coopracambra National Park to the coast—would enable more people to visit and enjoy the region.

Opportunities exist to develop walking tracks up the Genoa River from Mallacoota through Wangarabell to the Monaro Highway and looping back down along the Cann River Valley to the Cann River township. A multi-day walk such as this would pass through the many distinct vegetation types, allowing walkers to connect and learn about the rich biodiversity in this region.

Recreational fishing in the area is a popular tourism activity and attracts many people each year—12% of the overnight tourists who visit Gippsland partook in fishing in 2013-2014.<sup>59</sup> Protection of the river catchments of the Wingan, Mueller, Thurra, Genoa and Cann Rivers in their entirety, would ensure these largely intact and biodiversity catchments are maintained.

There are great opportunities for water-based tourism activities, such as boat and canoe tours in the wild rivers of the region. Protection of their catchments in new reserves will create opportunities for local communities to develop tourism initiatives such as tours and accommodation services.

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<sup>59</sup> Tourism Victoria, Nature-based Tourism Market Profile Year Ending June 2014.

IMAGE: East Gippsland's wilderness coast | Amelia Young



# Conclusion

East Gippsland's ecological diversity, scenic beauty and wilderness values are one of Victoria's greatest natural assets. The unique continuity of these priceless ecosystems is possibly the most outstanding natural feature in the state.



No other state on the mainland boasts snow-capped mountains with continuous forest environments running down their flanks to the foothills and onto the sea. The natural environment in many parts of Australia has been so dramatically altered it bears little resemblance to its natural condition. The opposite is true for East Gippsland where the wild landscape is still preserved with enough intact environments to form the connective corridors that are so vital for biodiversity conservation.

This report details valuable forest areas in East Gippsland that remain unprotected and vulnerable to logging. These areas of high biodiversity present a unique opportunity to preserve large continuous tracts of high conservation value forests for threatened species' habitat, ecosystem services, and future generations.

In the modern world, magnificent unfragmented forest landscapes are increasingly rare. The preservation of such a unique and highly valuable natural region would ensure such a special place can be treasured for future generations.

The Emerald Link will recognise and protect the outstanding natural and cultural values of the unique forests of East Gippsland.

Adequate, reliable and long-term funding is vital for the effective care and management of these wild forest places. Creating the Emerald Link will provide economic benefits and opportunities for region. Significant investment in managing land and forests for conservation tourism, for biodiversity and for ecosystem services will attract business investment and grow employment opportunities.

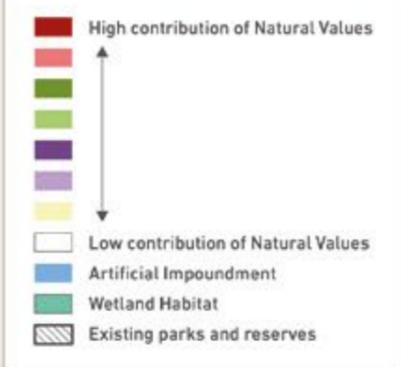
East Gippsland's Emerald Link with its chain of interconnected flora and fauna, will make Victoria one of the premier wilderness destinations in Australia—on par with Tasmania's untouched wilderness. It's right here in Victoria, but without appropriate management of the threats to this special region we stand to lose not only the spectacularly beautiful and diverse natural environments, but a great opportunity to showcase to the world what is truly one of Australia's most remarkable wilderness areas.

# Appendix

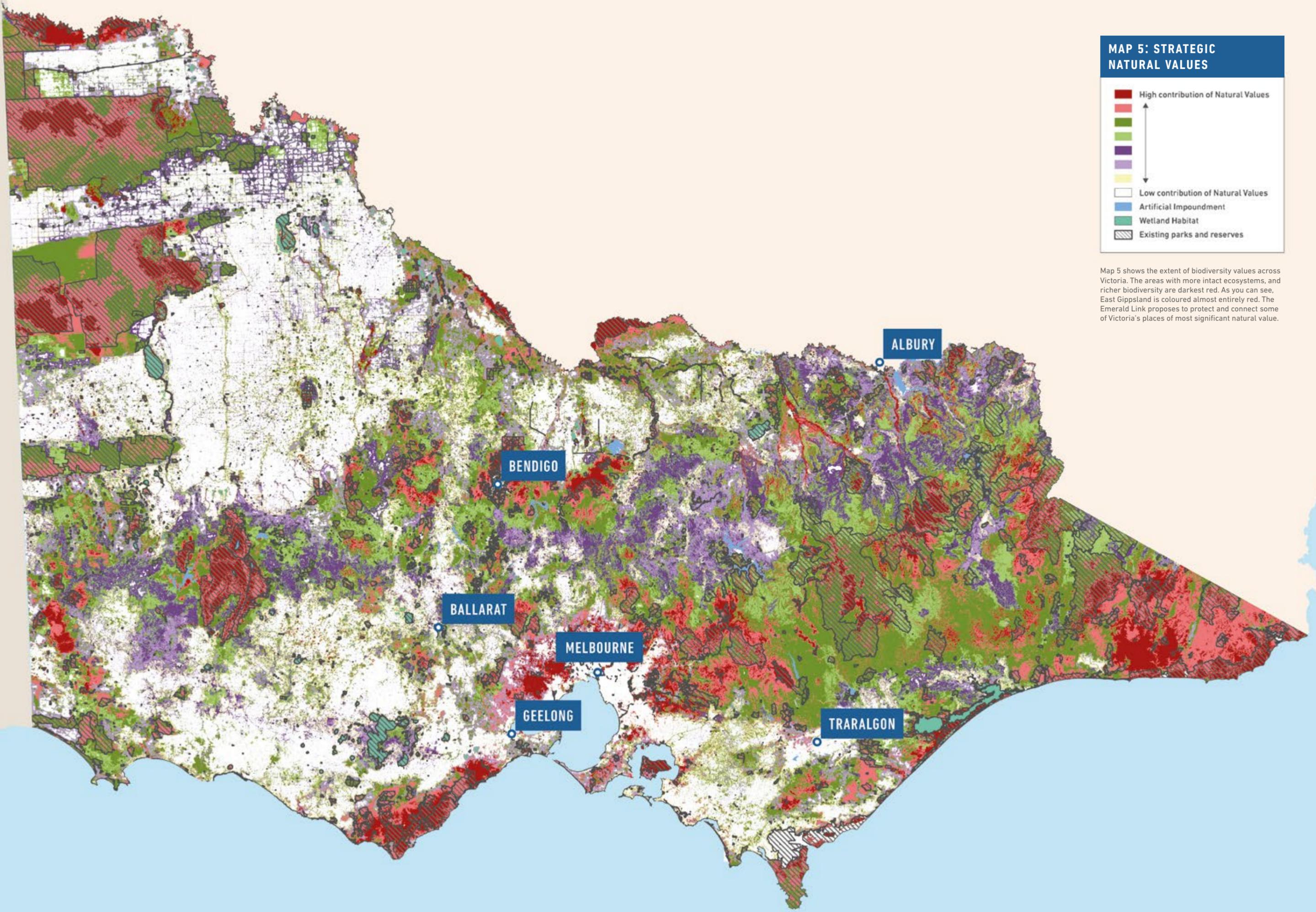


IMAGE: Errinundra Plateau: winter wonderland. | Ed Hill

### MAP 5: STRATEGIC NATURAL VALUES



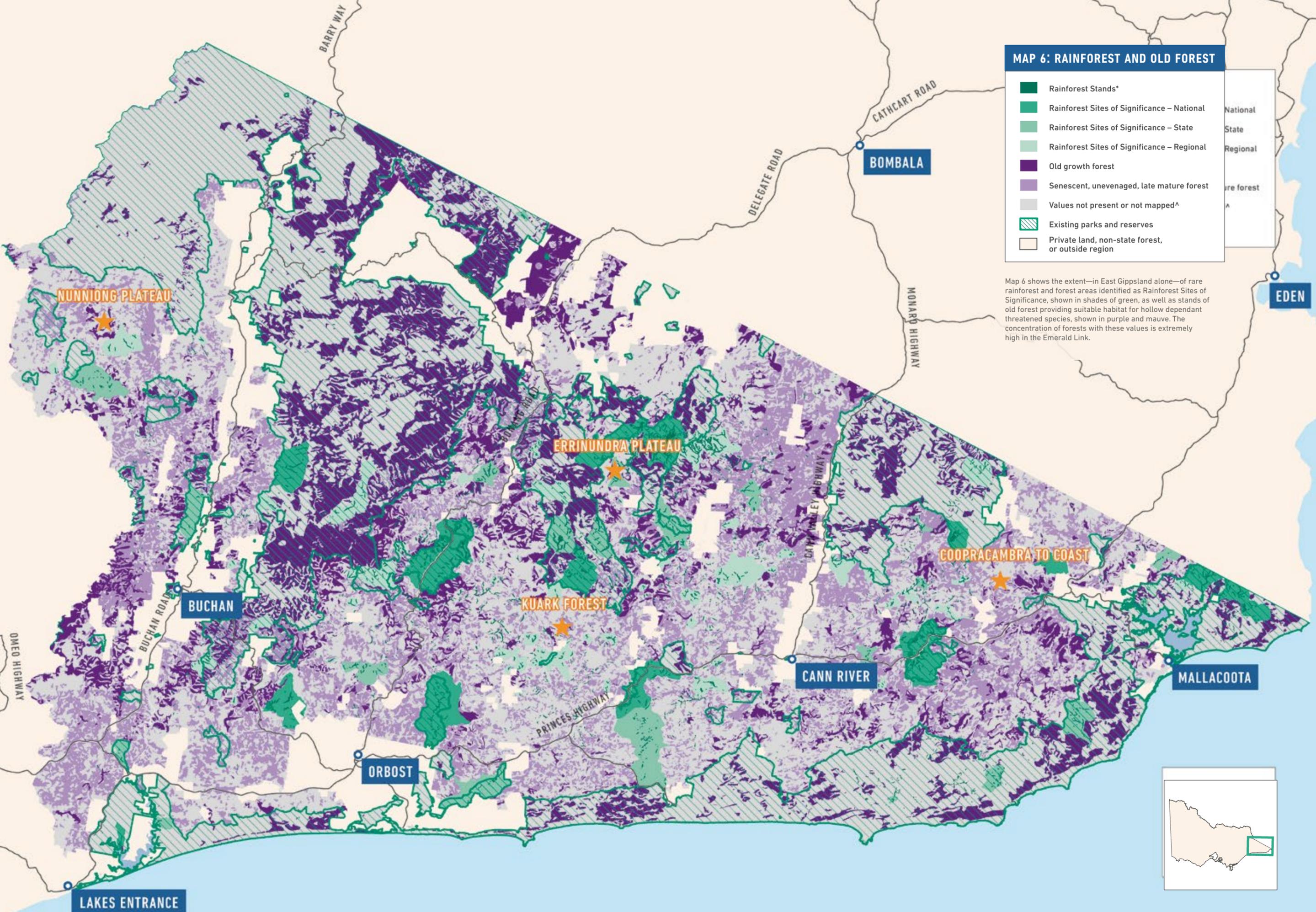
Map 5 shows the extent of biodiversity values across Victoria. The areas with more intact ecosystems, and richer biodiversity are darkest red. As you can see, East Gippsland is coloured almost entirely red. The Emerald Link proposes to protect and connect some of Victoria's places of most significant natural value.

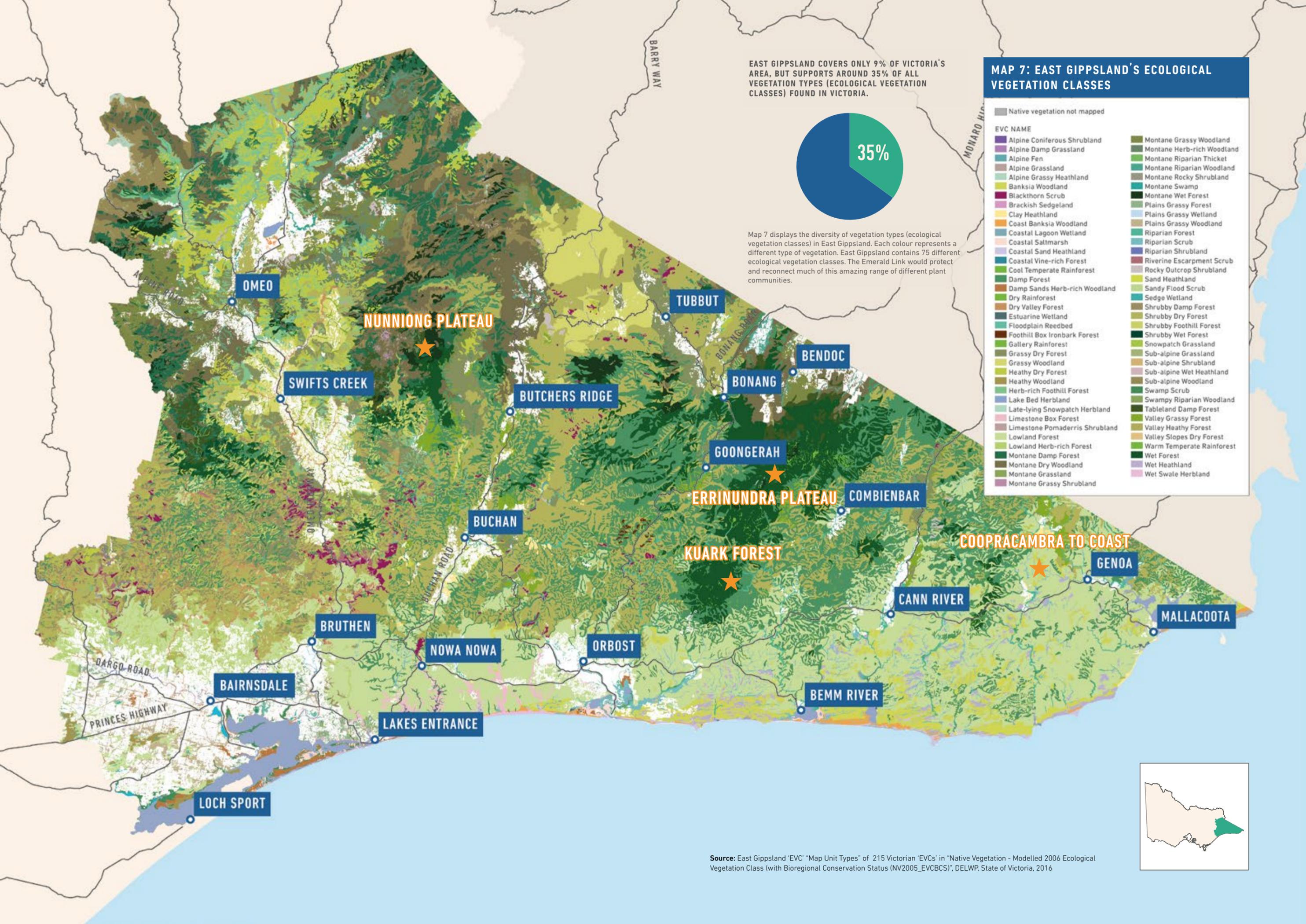


**MAP 6: RAINFOREST AND OLD FOREST**

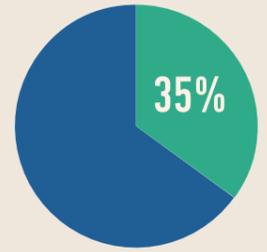
	Rainforest Stands*
	Rainforest Sites of Significance – National
	Rainforest Sites of Significance – State
	Rainforest Sites of Significance – Regional
	Old growth forest
	Senescent, unevenaged, late mature forest
	Values not present or not mapped^
	Existing parks and reserves
	Private land, non-state forest, or outside region

Map 6 shows the extent—in East Gippsland alone—of rare rainforest and forest areas identified as Rainforest Sites of Significance, shown in shades of green, as well as stands of old forest providing suitable habitat for hollow dependant threatened species, shown in purple and mauve. The concentration of forests with these values is extremely high in the Emerald Link.





EAST GIPPSLAND COVERS ONLY 9% OF VICTORIA'S AREA, BUT SUPPORTS AROUND 35% OF ALL VEGETATION TYPES (ECOLOGICAL VEGETATION CLASSES) FOUND IN VICTORIA.



Map 7 displays the diversity of vegetation types (ecological vegetation classes) in East Gippsland. Each colour represents a different type of vegetation. East Gippsland contains 75 different ecological vegetation classes. The Emerald Link would protect and reconnect much of this amazing range of different plant communities.

### MAP 7: EAST GIPPSLAND'S ECOLOGICAL VEGETATION CLASSES

- Native vegetation not mapped
- EVC NAME**
- Alpine Coniferous Shrubland
- Alpine Damp Grassland
- Alpine Fen
- Alpine Grassland
- Alpine Grassy Heathland
- Banksia Woodland
- Blackthorn Scrub
- Brackish Sedgeland
- Clay Heathland
- Coast Banksia Woodland
- Coastal Lagoon Wetland
- Coastal Saltmarsh
- Coastal Sand Heathland
- Coastal Vine-rich Forest
- Cool Temperate Rainforest
- Damp Forest
- Damp Sands Herb-rich Woodland
- Dry Rainforest
- Dry Valley Forest
- Estuarine Wetland
- Floodplain Reedbed
- Foothill Box Ironbark Forest
- Gallery Rainforest
- Grassy Dry Forest
- Grassy Woodland
- Heathy Dry Forest
- Heathy Woodland
- Herb-rich Foothill Forest
- Lake Bed Herbland
- Late-lying Snowpatch Herbland
- Limestone Box Forest
- Limestone Pomaderris Shrubland
- Lowland Forest
- Lowland Herb-rich Forest
- Montane Damp Forest
- Montane Dry Woodland
- Montane Grassland
- Montane Grassy Shrubland
- Montane Grassy Woodland
- Montane Herb-rich Woodland
- Montane Riparian Thicket
- Montane Riparian Woodland
- Montane Rocky Shrubland
- Montane Swamp
- Montane Wet Forest
- Plains Grassy Forest
- Plains Grassy Wetland
- Plains Grassy Woodland
- Riparian Forest
- Riparian Scrub
- Riparian Shrubland
- Riverine Escarpment Scrub
- Rocky Outcrop Shrubland
- Sand Heathland
- Sandy Flood Scrub
- Sedge Wetland
- Shrubby Damp Forest
- Shrubby Dry Forest
- Shrubby Foothill Forest
- Shrubby Wet Forest
- Snowpatch Grassland
- Sub-alpine Grassland
- Sub-alpine Shrubland
- Sub-alpine Wet Heathland
- Sub-alpine Woodland
- Swamp Scrub
- Swampy Riparian Woodland
- Tableland Damp Forest
- Valley Grassy Forest
- Valley Heathy Forest
- Valley Slopes Dry Forest
- Warm Temperate Rainforest
- Wet Forest
- Wet Heathland
- Wet Swale Herbland

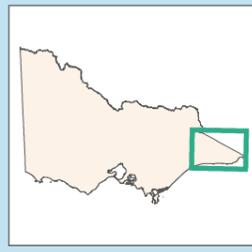
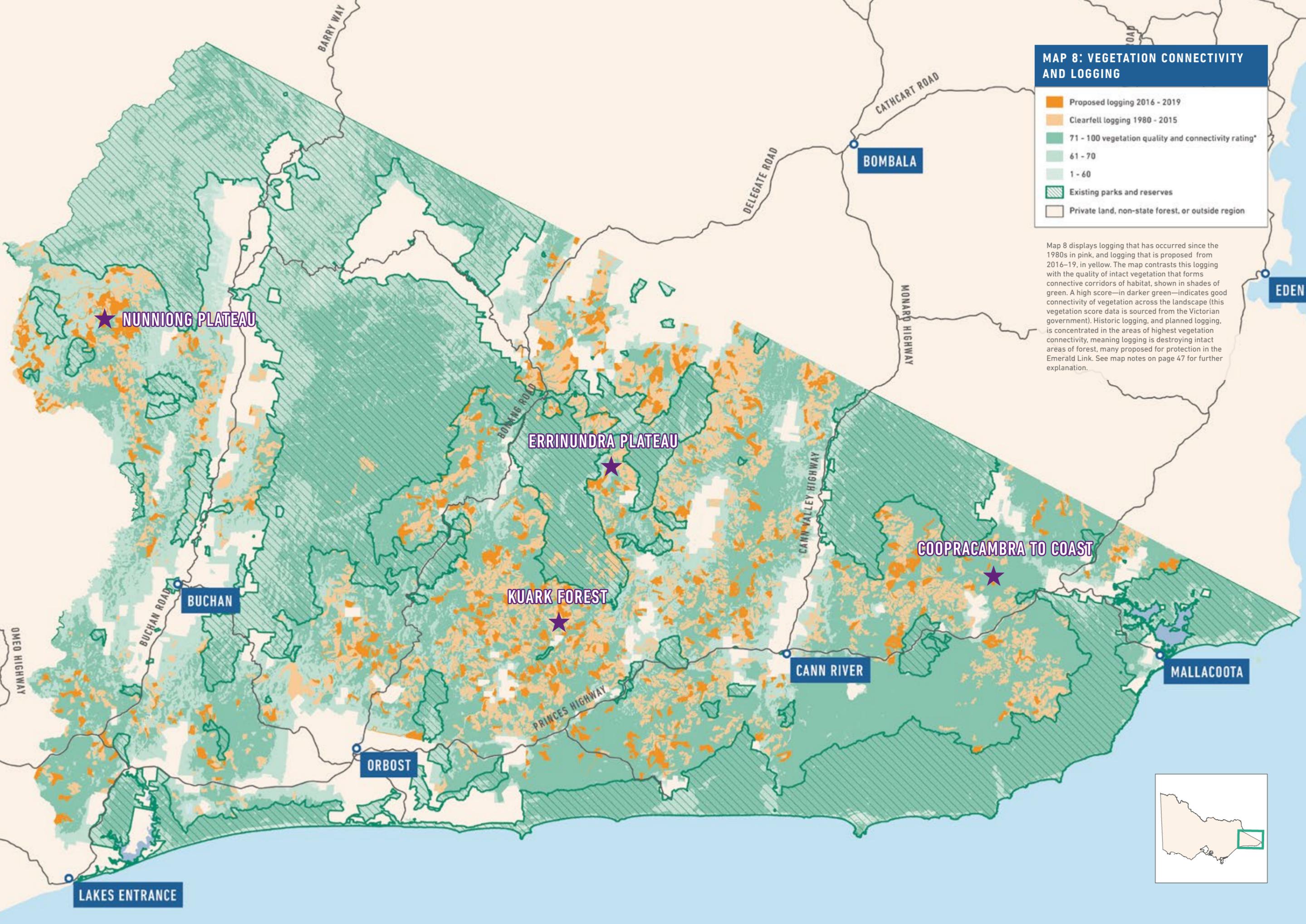
Source: East Gippsland 'EVC' 'Map Unit Types' of 215 Victorian 'EVCs' in 'Native Vegetation - Modelled 2006 Ecological Vegetation Class (with Bioregional Conservation Status (NV2005\_EVCBCS)', DELWP, State of Victoria, 2016



### MAP 8: VEGETATION CONNECTIVITY AND LOGGING

- Proposed logging 2016 - 2019
- Clearfell logging 1980 - 2015
- 71 - 100 vegetation quality and connectivity rating\*
- 61 - 70
- 1 - 60
- Existing parks and reserves
- Private land, non-state forest, or outside region

Map 8 displays logging that has occurred since the 1980s in pink, and logging that is proposed from 2016–19, in yellow. The map contrasts this logging with the quality of intact vegetation that forms connective corridors of habitat, shown in shades of green. A high score—in darker green—indicates good connectivity of vegetation across the landscape (this vegetation score data is sourced from the Victorian government). Historic logging, and planned logging, is concentrated in the areas of highest vegetation connectivity, meaning logging is destroying intact areas of forest, many proposed for protection in the Emerald Link. See map notes on page 47 for further explanation.



EDEN

BOMBALA

ERRINUNDRA PLATEAU

COOPRACAMBRA TO COAST

KUARK FOREST

BUCHAN

CANN RIVER

MALLACOTA

ORBOST

LAKES ENTRANCE

OMEO HIGHWAY

BUCHAN ROAD

BARRY WAY

BOHNING ROAD

PRINCES HIGHWAY

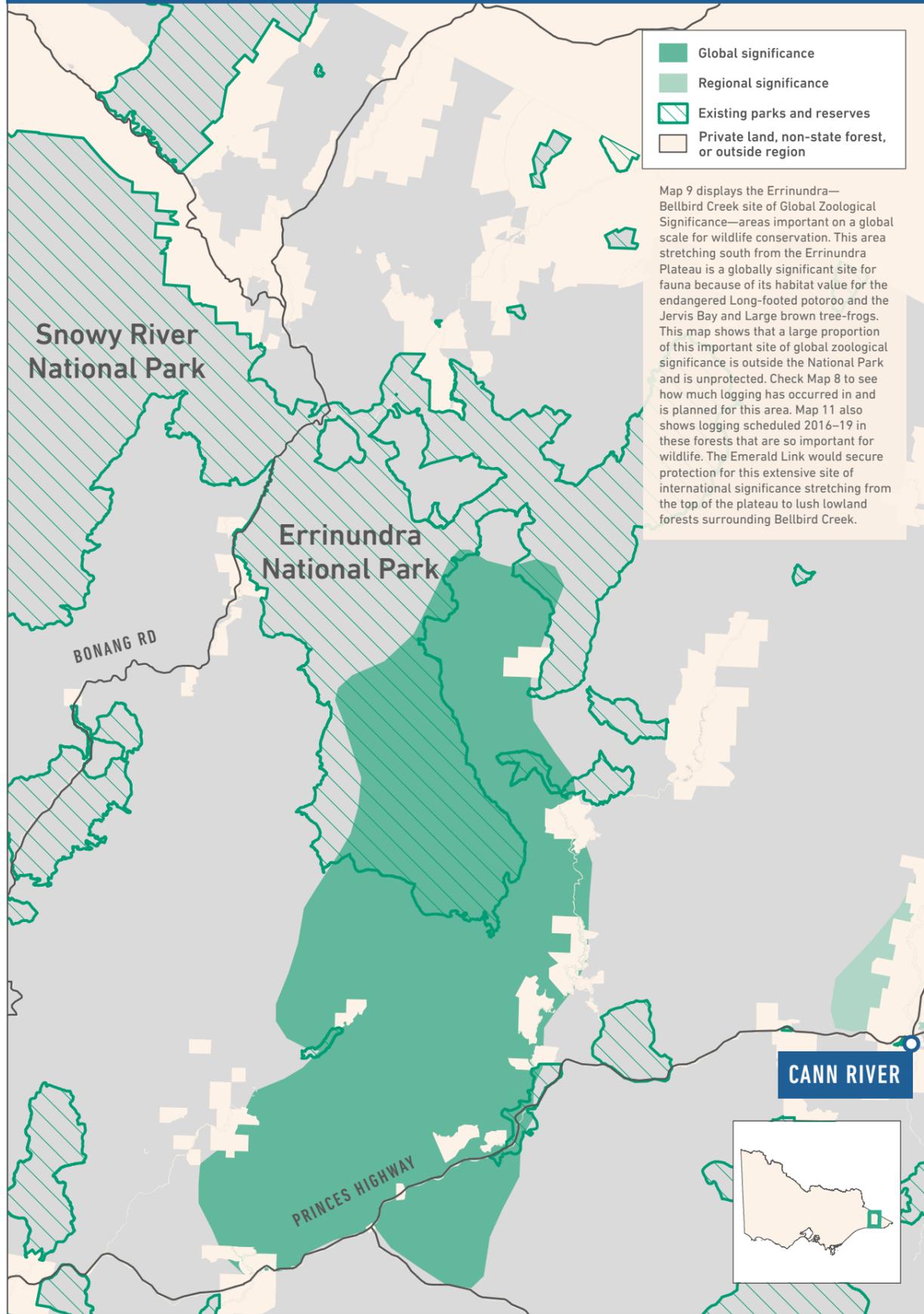
DELEGATE ROAD

CANN VALLEY HIGHWAY

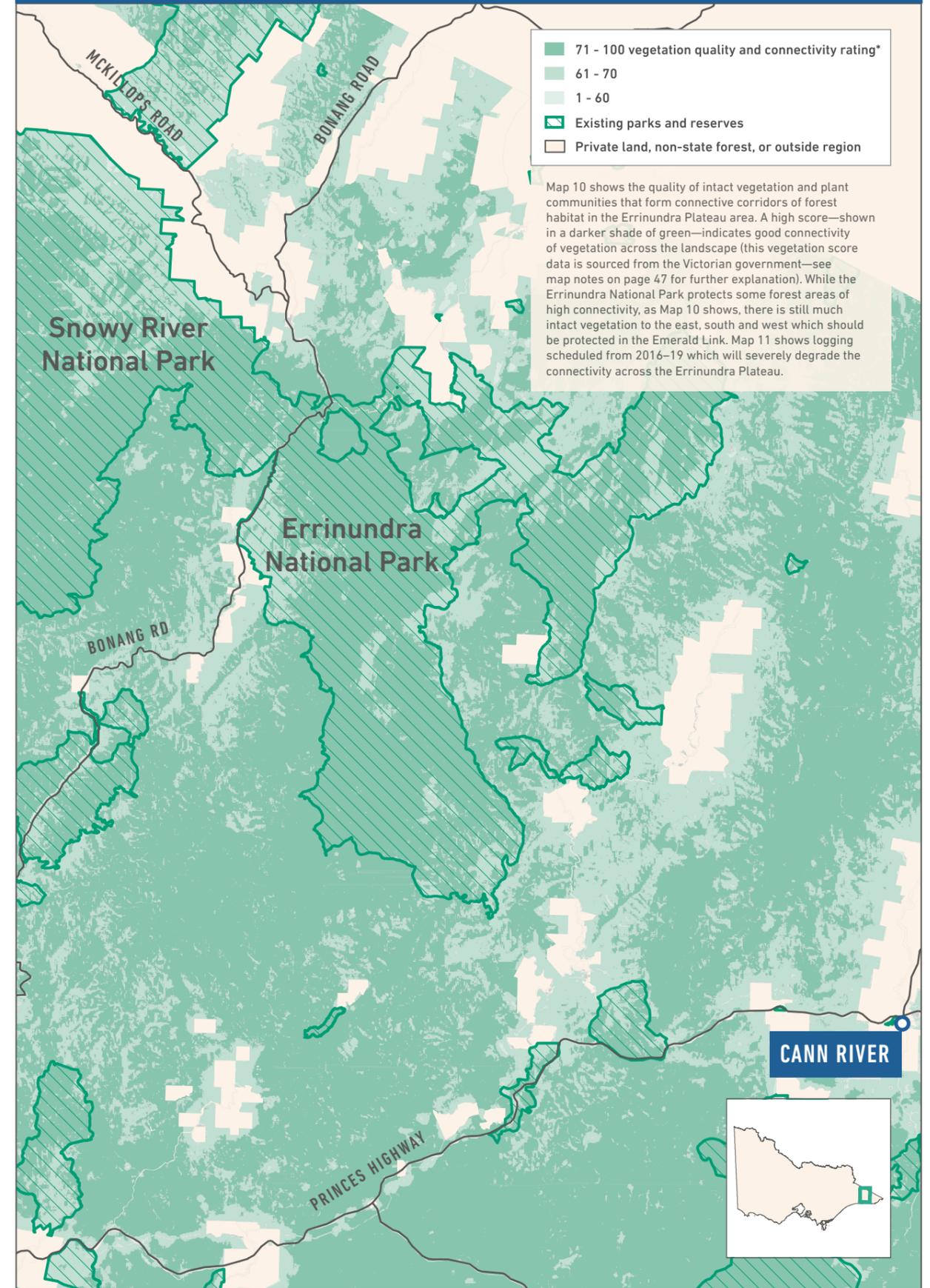
CATHCART ROAD

MONARO HIGHWAY

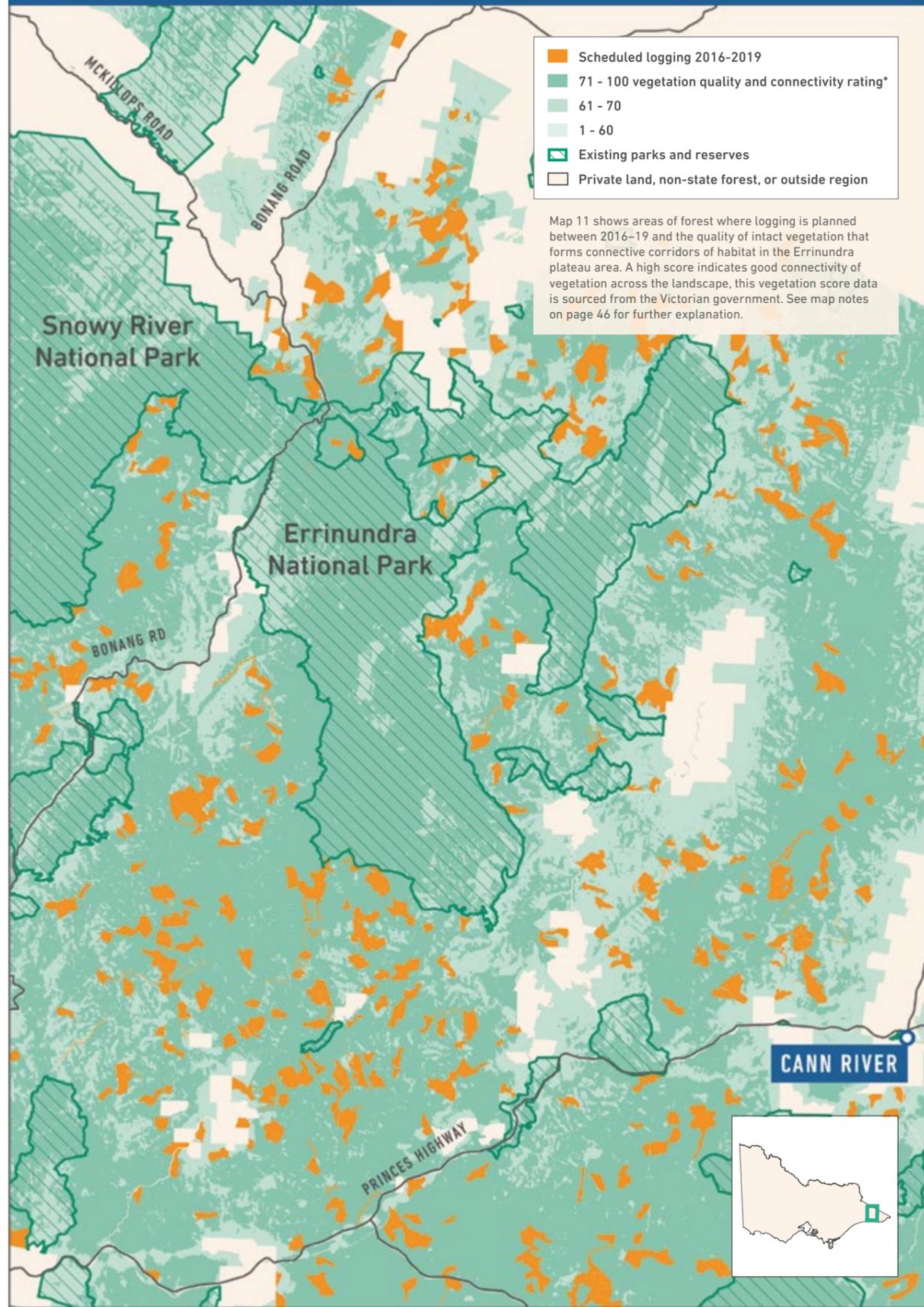
**MAP 9: ERRINUNDRA PLATEAU'S ZOOLOGICAL SITES OF SIGNIFICANCE**



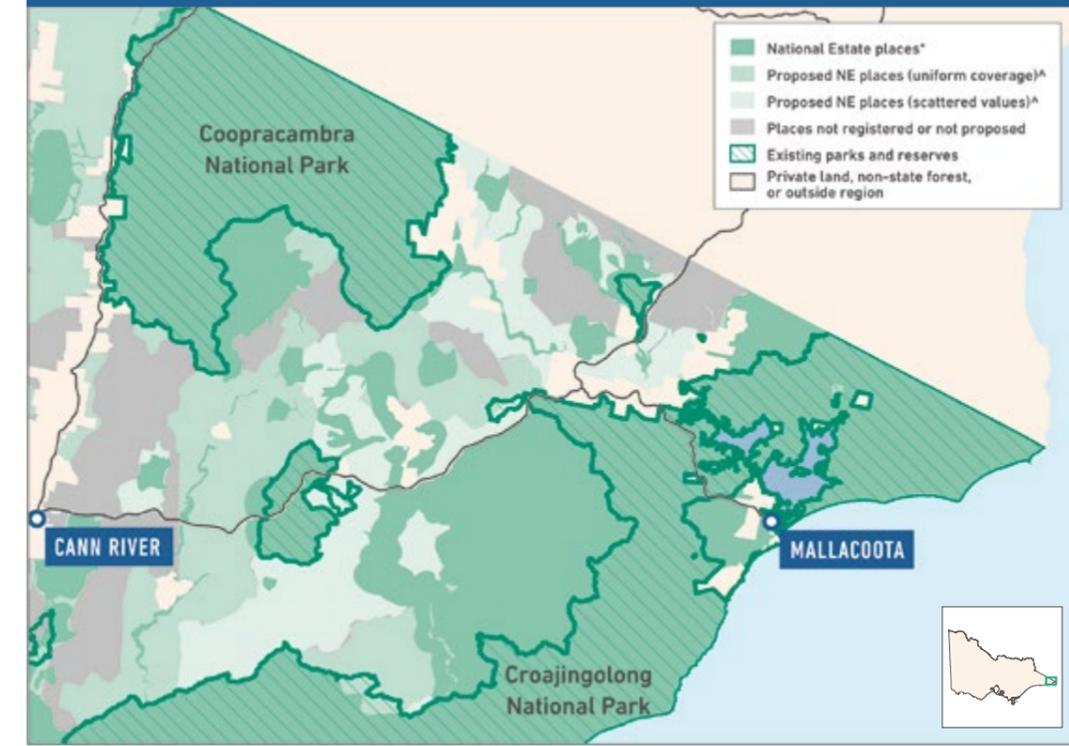
**MAP 10: ERRINUNDRA PLATEAU'S VEGETATION CONNECTIVITY**



**MAP 11: VEGETATION CONNECTIVITY AND SCHEDULED LOGGING ON THE ERRINUNDRA PLATEAU**

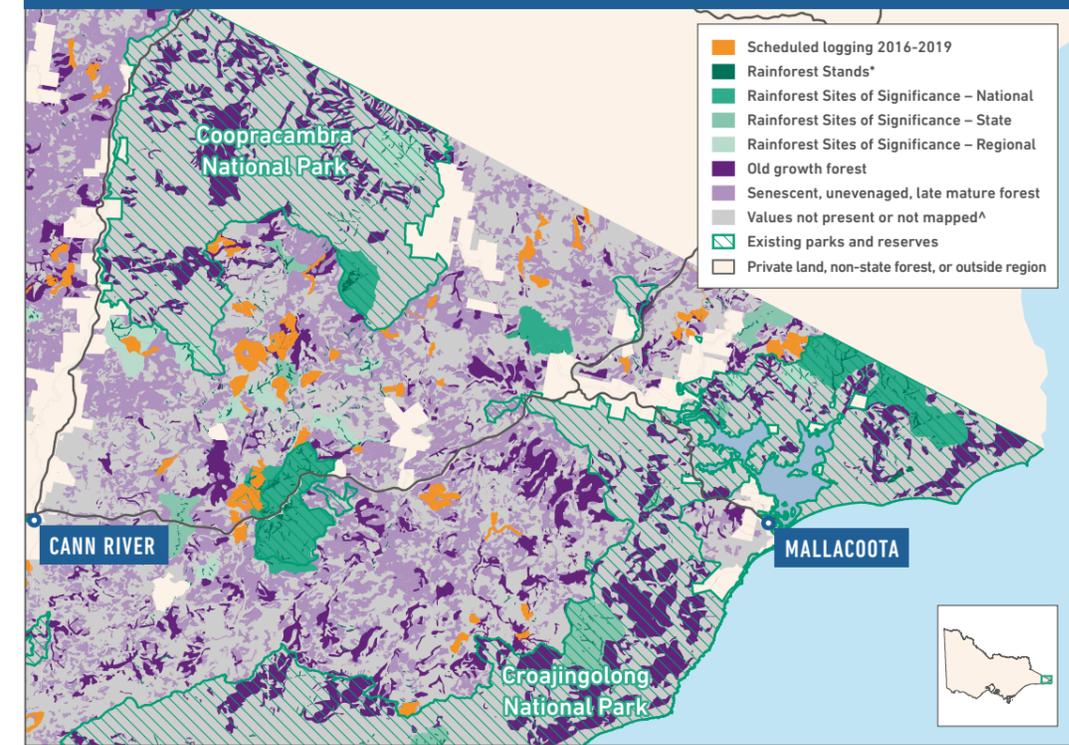


**MAP 12: NATIONAL ESTATE OF COOPRACAMBRA TO COAST**



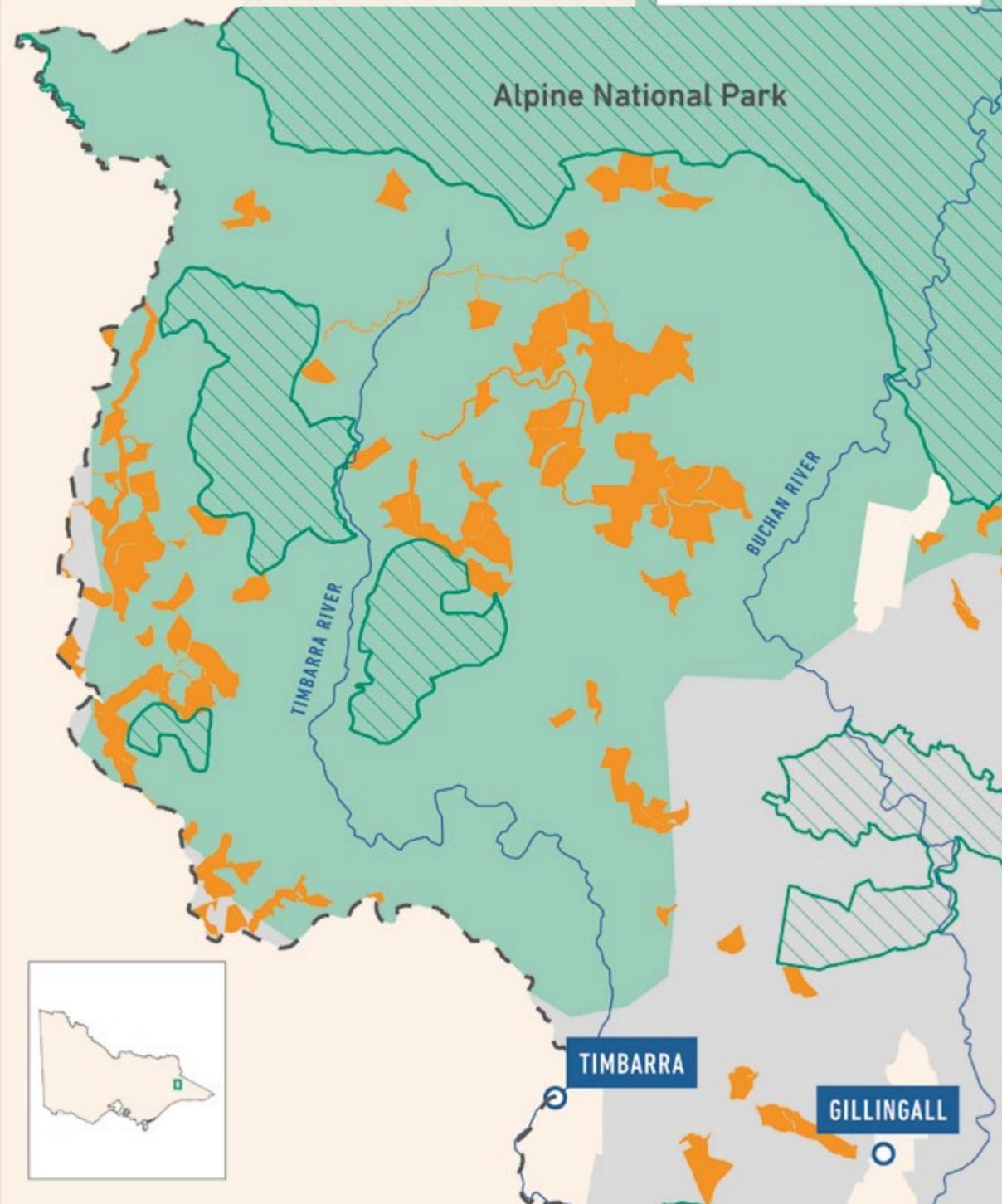
Map 12 shows areas in the far east near Coopracambra that were designated as National Estate in the 1980s by the Australian Heritage Commission, which described the National Estate as "places that have aesthetic, historic, scientific or social significance or other special value for future generations as well as for the present generation." You can see huge swathes of National Estate forest north of the Croajingolong National Park that remain threatened by logging and are targeted in logging schedules. Map 13 compares scheduled logging with rainforest and old forest—see especially the logging scheduled next to the Rainforest Site of Significance just east of Cann River, and logging scheduled adjacent to old growth forest and rainforest near the NSW border.

**MAP 13: RAINFOREST, OLD FOREST AND SCHEDULED LOGGING FROM COOPRACAMBRA TO COAST**



## MAP 14: NUNNING PLATEAU'S BOTANICAL SITES OF SIGNIFICANCE

Map 14 shows the Nunning Plateau Major Site of Botanical Significance. The Nunning area has been identified as being a majorly significant site for rare plants and vegetation communities. Nunning is home to tall ash forests interspersed with alpine grasslands, sphagnum bogs and rare cool temperate rainforest shelters in the gullies. The Nunning Plateau is the most easterly limit of the distribution of the cool temperate rainforest tree and Gondwana relic Myrtle Beech (*Nothofagus cunninghamii*). The red shapes scattered throughout the rich botanical site are proposed logging areas that are threatening the rich diversity of plant life in this precious area.



## MAP NOTES

### MAPS 3, 6 AND 13

\* Rainforest stands as identified by Ecological Vegetation Class mapping.  
 ^ Ground truthing may detect forest values in unmapped areas. No data available inside existing parks and reserves for senescent, unevenaged or late mature relative age.

### MAP 8

\* DELWP assessment combining modelled data for vegetation site condition, patch size and shape, and landscape connectivity and proximity.

### MAP 9

Base data for Zoological Sites of Significance delineation sourced from Morris KC & Mansergh IM (1981) Sites of Zoological Significance in East Gippsland. Arthur Rylah Institute for Environmental Research, Ministry for Conservation, Victoria.

### MAP 12

\* Includes Indigenous, Natural and Historic places on the register of the National Estate. The register was closed in 2007 and is no longer a statutory list, however register information remains relevant to statutory decisions on protection.

^ Places proposed in the 1996 Comprehensive Regional Assessment did not complete statutory processes before closing of the register.

Base data for Proposed National Estate place delineation sourced from Comprehensive Regional Assessment East Gippsland: National Estate Report (1996) Joint Commonwealth and Victorian Regional Forest Agreement (RFA) Steering Committee.

### MAP 14

Base data for Botanical Sites of Significance delineation sourced from: Forbes SJ, Gullan PK, Walsh NG (1981) Sites of Botanical Significance in East Gippsland. Prepared by The National Herbarium, Victoria for The Environmental Studies Division, Ministry for Conservation, Victoria.

### Map acknowledgements

These products incorporate data 1999-2016 (C) The State of Victoria, Department of Environment, Land Water and Planning (or former departments), (C) The State of Victoria, Department of Economic Development, Jobs, Transport and Resources (or former departments), (C) VicForests, (C) Commonwealth of Australia (Geoscience Australia) (C) Commonwealth of Australia, Heritage Division of the Australian Government Department of the Environment and Energy and/or licensed for re-use under the Creative Commons Attribution 4.0 International Licence (or former Australian or international Creative Commons licences).

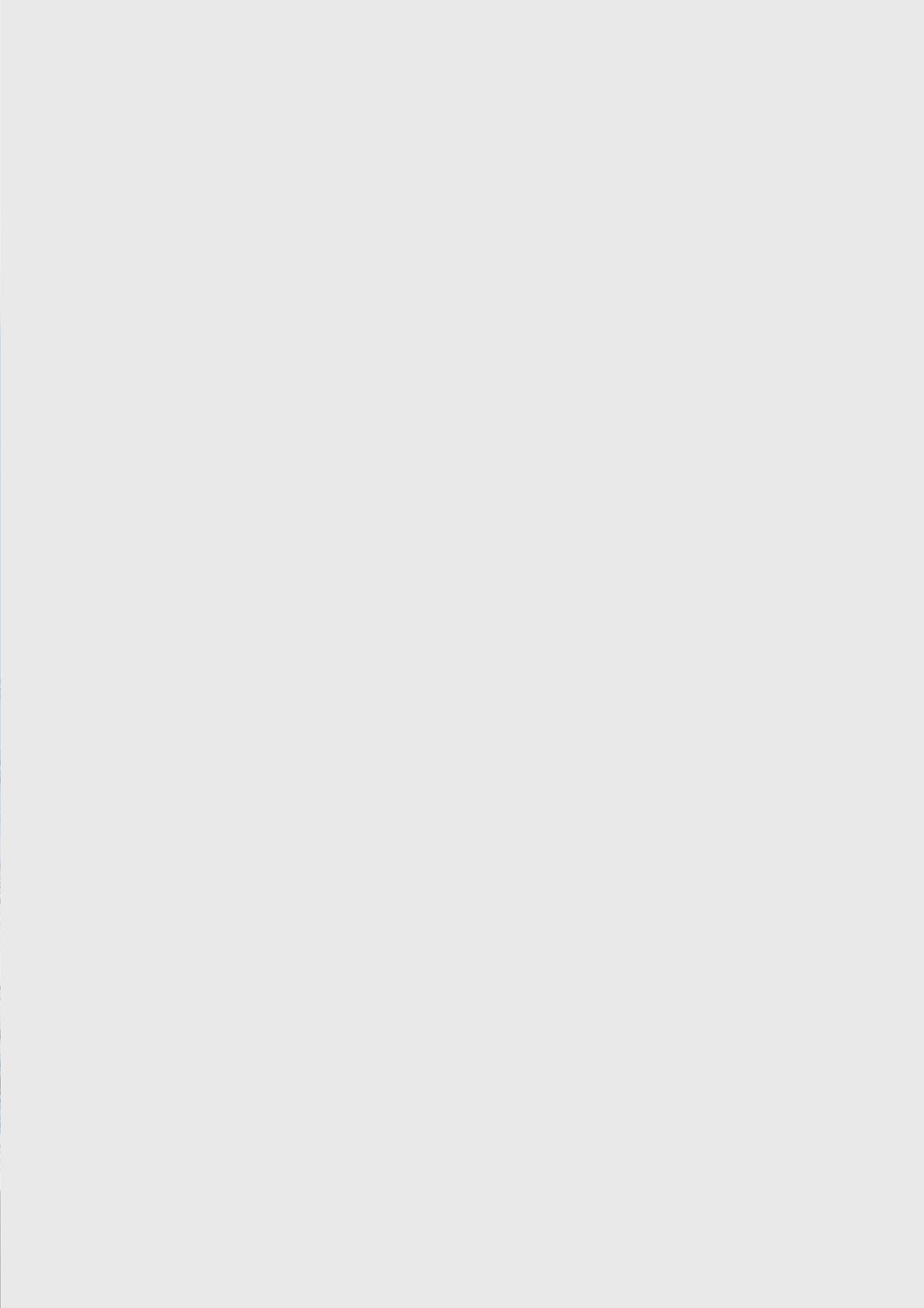
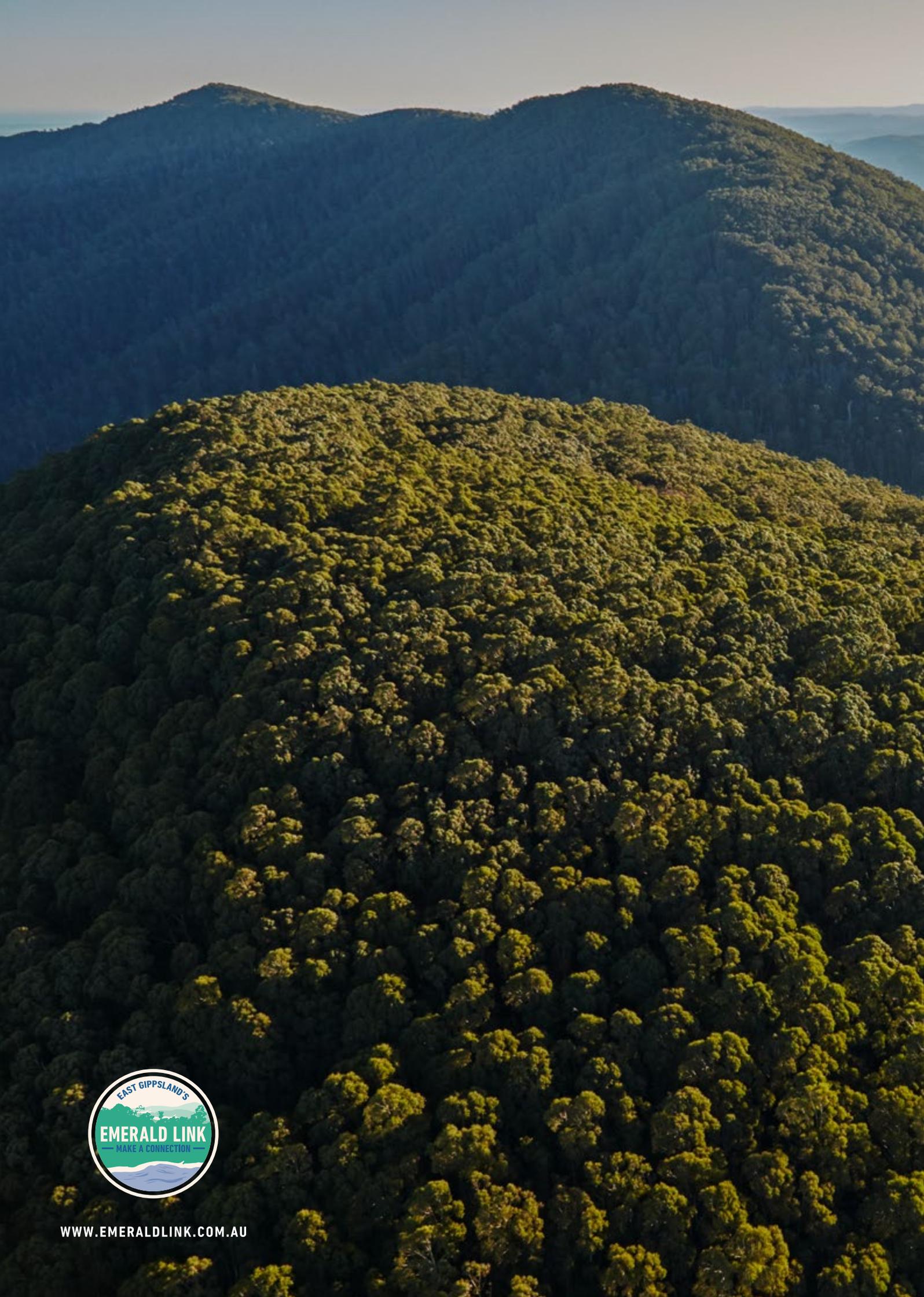


IMAGE: Errinundra plateau old growth forest scheduled for logging | Dave Caldwell



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