

PART D

10 THREATS AND RISKS

10.1 Fire

Australia's landscapes have been shaped for millennia by naturally occurring bushfires, with the endemic vegetation having become adapted to this threat of fire that is often a necessary mechanism for germination (Auld and Ooi, 2008). First Nations communities deeply understood this relationship and historically utilised targeted low-intensity burns to help manage vegetation density and fuel load, while encouraging germination and soil fertility (McKemey *et al.*, 2025).

In recent decades, Australia has seen bushfires of increasing intensity, magnitude and devastation that have impacted human life and infrastructure and destroyed vast swathes of native habitat, killing and displacing countless animals. The fires of 2019-2020 have been burned into social memory as one of the largest, most intense bushfire occurrences, with the effects of the destruction still being evident half a decade later. The 2019-20 fires affected large areas of the NSW Region, including significant parts of the Study Area. The most severely burnt areas of NSW were largely in the South East.

10.1.1 Methodology

10.1.1.1 Fire History

An analysis of Fire Extent Severity Mapping (FESM) data (created by State Government of NSW and NSW DECCW, 2024) was undertaken, including 2019-20 data and other recent data (2016-2024). Post-fire logging of several forests has occurred since the 2019-20 fires and analysis of Forestry Corporation's HFD Harvest History data was undertaken to understand the extent of this. Further, NPWS prescribed burn data was reviewed. It includes State Forest data, though this may not be comprehensive.

10.1.1.2 Post-fire refuges

Additional analysis on the 2019-20 FESM was undertaken to identify areas of vegetation that were either unburnt or subject to low severity burns and are the most important to conserve for fauna refuge.

FESM data severity classes are:

- unburnt
- low severity (burnt understorey, unburnt canopy)
- moderate severity (partial canopy scorch)
- high severity (complete canopy scorch, partial canopy consumption)
- extreme (full canopy consumption)

Unburnt and low-burnt vegetation is important for conservation as these areas are critical fauna refuges in an extensively burnt landscape. State Forests within the Study Area that have more than 50% or 3,500 hectares of combined unburnt and low-burnt vegetation, were identified as important refuges; 3,500 hectares is the median size of State Forests in southern NSW.

10.1.1.3 Literature Review

A review of relevant reports and scientific literature was undertaken to: characterise the fire history of the South East Region; characterise fire in a biodiversity context in Australia; and understand the impacts of recent fires on local biodiversity and conservation. This included a review of the following government reports:

- NSW Wildlife and Conservation Bushfire Recovery Supplement A – Assessing the impact of the bushfires on wildlife and conservation (State of NSW and Department of Planning, Industry and Environment, 2021)
- Review Of CIFOA Mitigation Conditions for Timber Harvesting in Burnt Landscapes - A Report to the NSW Environment Protection Authority (Smith, 2020)
- Coastal IFOA operations post 2019/20 wildfires – Final report (National Resources Commission, 2021)

10.1.2 Limitations

The NSW Forestry Corporation data portal contains limited fire history data and so the NPWS Wildfire and Prescribed Burn data was relied upon for historical fire data within State Forests (pre-2016), which is much more voluminous. However, NPWS prescribed burn data is not necessarily comprehensive for State Forests. The NSW SEED website for the dataset states: *“at times data captured by the Rural Fire Service (RFS) and Forestry Corporation NSW are imported into this GDB also”*.

Our Post-fire Refuge analysis selects 50% of combined unburnt and low burnt areas, and 3,500 hectares to be the benchmarks for important fauna refuge. These are relative values, where 3,500 hectares is about the median size of the South East State Forests. Low burnt and unburnt values were selected as they are identified in the CIFOA Mitigation Report as important for fauna refuge following the 2019-20 fires (Smith, 2020).

10.1.3 Findings

10.1.3.1 Fire History

Bushfire is part of the dynamics of forest ecosystems in Australia. They can occur at any time of the year, but typically between October and March in Southern NSW (Zhang, Lim and Sharples, 2016) and are more frequent in El Niño periods (Bureau of Meteorology, 2014). The fire dynamics in the coastal areas and tableland regions within the Study Area differ. The tablelands have a cool temperate climate where winters have little rainfall and can sometimes experience high fire danger (Snowy Monaro Bush Fire Management Committee, 2009). The Snowy Monaro region has on average 54 bush fires per year, of which 2 on average are considered major fires. High temperatures and low humidity coupled with north-westerly or south-westerly winds are associated with high bushfire risk in the bushfire season (typically October to March).

Coastal areas have temperate climates, with rainfall typically in Summer/Autumn in the Shoalhaven (Shoalhaven Bush Fire Management Committee, 2019) and autumn/early winter in the Jervis Bay area (Shoalhaven Bush Fire Management Committee, 2019; Jervis Bay Territory Fire Management Committee, 2018). Rainfall is less seasonal further south and can be spread through the year (Eurobodalla Bush Fire Management Committee, 2020). The bushfire season can be earlier in the northern coastal areas of the Study Area – the Jervis Bay season typically runs August to November – however, most of the coastal areas are September to March. Early fire seasons can start from dry winters and strong spring winds and prolonged drought conditions can increase fire risk (Bega Valley Bush Fire Management Committee, 2019). On average, there are hundreds of bushfires a year in the region. In addition to the 2019-20 fires, there have been many devastating fires in the region, including Tathra in 2018, Batemans Bay/North Moruya in 1994 and the Bega Valley in 1952.

Bushfires can be started for a range of reasons, but the two most common are lightning strikes (38%) and arson/suspicious causes (18%) (NSW Environment and Heritage, 2024). Other reasons include legal burns (e.g. hazard reduction burns), negligence or accidental ignition, campfires, residential and tip fires and power lines. With the bushfire season lengthening and becoming more severe in Australia, and lightning

strikes also increasing, bushfire impacts are predicted to become greater in future in the Region of NSW (Zylstra, 2018).

Australian flora and fauna species have evolved varying responses to fire regimes. There are both positive and negative effects on biodiversity, as a result of bushfires, and these can vary according to fire severity, time since last fire, species/ecosystems and site conditions/features. Flora species can have dependency on fire for seeding, and most Australian species respond to fire by resprouting or germinating from seed. (NSW Biodiversity Conservation Trust, 2024). Fire severity can affect vegetation succession and different vegetation types can take longer to recover from fire (Hislop *et al.*, 2019).

Intense fires can affect fauna species persistence and impact habitat and recovery of habitat features. For example, hollows may be damaged, leaf litter and vegetative shelter is removed/reduced, foraging resources are limited and vulnerability to predation can increase (Haslem *et al.*, 2010; Banks *et al.*, 2011) (Doherty *et al.*, 2022) (Campbell-Jones *et al.*, 2022). The Southern Greater Glider did not recover in severely burnt areas of the 2019-20 fires in the Greater Blue Mountains, but experienced recovery in less severely burnt areas (Smith and Smith, 2025). Inappropriate fire regimes is a key threat to many fauna species. Unburnt patches, and connectivity between them, are important refuges for fauna following fire. Fauna can also exhibit a positive response to fire. The Eastern Pygmy-possum has a high probability of occupying sites affected by fire (Chew *et al.*, 2024). Predator-prey interactions can change as a result of fire and may benefit either predator or prey, depending on the species behaviour, movements, intra-guild dynamics and fire characteristics (Doherty *et al.*, 2022).

Case Study - the Fires of 2019-2020

The Fires of 2019-2020 burnt between 24 and 33 million hectares of the continent (May, 2021), including 6.2 per cent of NSW – the largest burnt area recorded in a single fire season in eastern Australia (WWF, 2020). Estimates are that up to 3 billion native mammals, birds and reptiles perished or were displaced (WWF, 2020). Over 2.7 million hectares of National Parks and 64% of NSW State Forests were burnt (NSW Natural Resources Commission, 2026).

Our analysis found the 2019-20 fires resulted in 285,649 hectares of State Forest and 361,224 hectares of NPWS Reserves burnt in the Study Area; 285,649 hectares is 78% of the combined land mass of all State Forests of the Region. This value excludes assessment of plantations that do not form part of the Study Area. FESM across the Region and surrounds is mapped in Figure 37. Table 35 shows the areas and proportions of each State Forest in the Study Area that was burnt. The severity of burns varied, with:

- 43% of State Forest land burnt to high or extreme severity
- 20% of State Forest land burnt to moderate severity
- 15% of State Forest land burnt to low severity
- 22% unburnt

This demonstrates the large scale of impact the 2019-20 fires had on the State Forests of the South East Region.

In response to the 2019-20 fires, the 'Wildlife and Threatened Species Bushfire Recovery Expert Panel' was established. The panel identified 810 priority species and ecological communities impacted by the fires and released an initial list of threatened and migratory species which have more than 10% of their known or predicted distribution bushfire-affected areas. The list identified:

- 49 listed threatened species have more than 80% of their modelled likely or known distribution within the fire extent
- 65 listed threatened species have more than 50%, but less than 80%, of their modelled likely or known distribution within the fire extent
- 77 listed threatened species have more than 30%, but less than 50%, of their modelled likely or known distribution within the fire extent
- 136 listed threatened species and 4 listed migratory species have more than 10%, but less than 30%, of their modelled likely or known distribution within the fire extent

The threatened species include 272 plant, 16 mammal, 14 frog, nine bird, seven reptile, four insect, four fish and one spider species. There are also four listed migratory bird species that are not listed as threatened.

The list included many terrestrial species known to occur in the State Forests including:

- Long-footed Potoroo
- Long-nosed Potoroo
- Black-faced Monarch (Migratory)
- Giant Burrowing Frog (*Helioporus australiacus*) (not a focal species, but occurs in the State Forests)
- Southern Greater Glider
- Koala
- Green and Golden Bell Frog (*Litoria aurea*) (not a focal species, but occurs in the State Forests)
- Grey-headed Flying-fox
- Large-eared Pied Bat (*Chalinolobus dwyeri*)
- Regent Honeyeater (not a focal species, but occurs in the State Forests),
- Smoky Mouse
- Southern Brown Bandicoot
- Stuttering Frog (*Mixophyes balbus*) (not a focal species, but occurs in the State Forests)
- Swift Parrot
- White-throated Needletail
- *Acacia constablei*
- *Acacia georgensis* (Bega Wattle) (not a focal species, but occurs in the State Forests)
- *Correa baeuerlenii*
- *Genoplesium vernale*
- *Leionema ralstonii*
- *Pomaderris parrisiae*

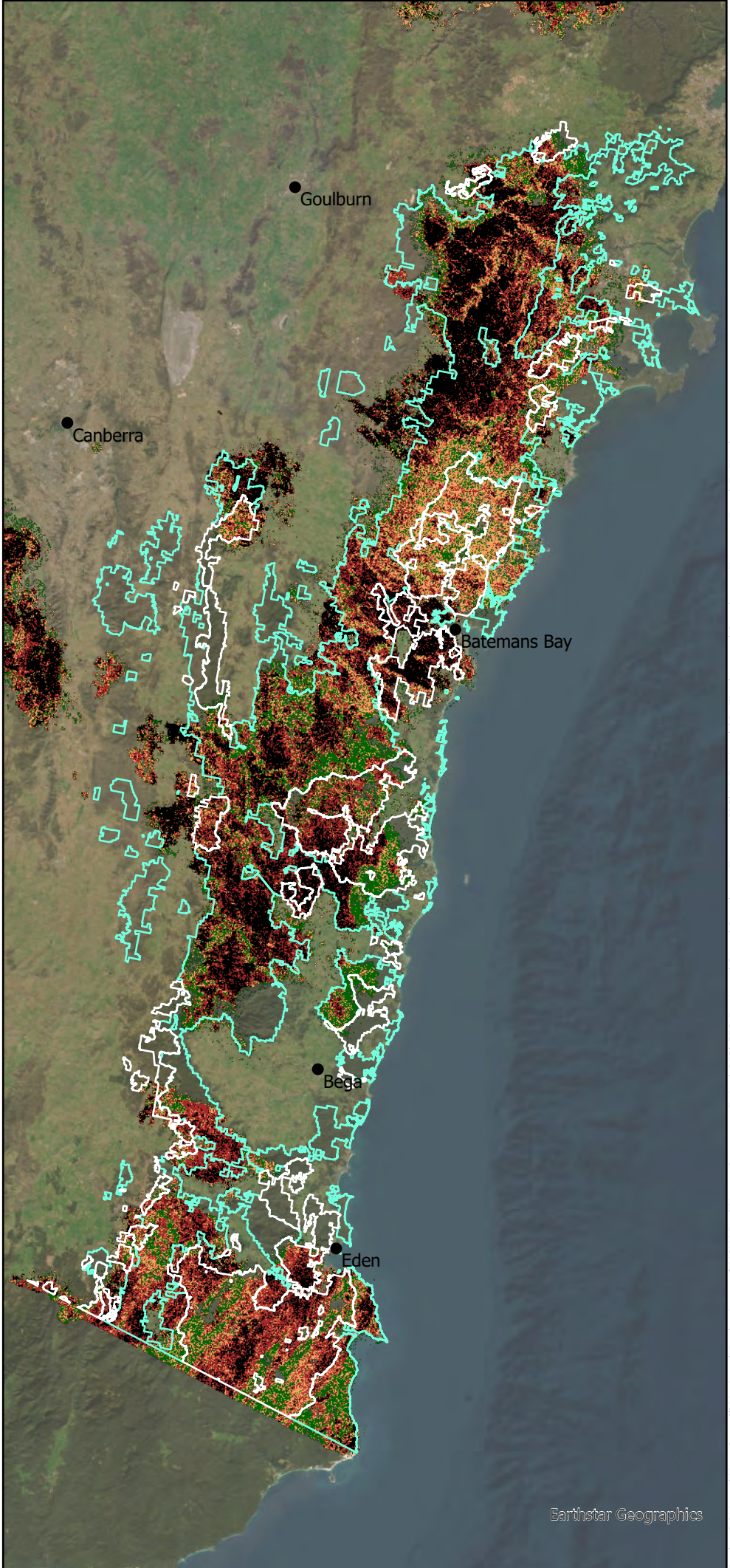
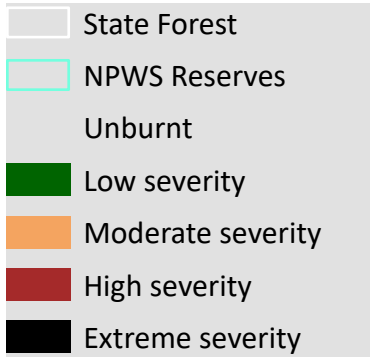
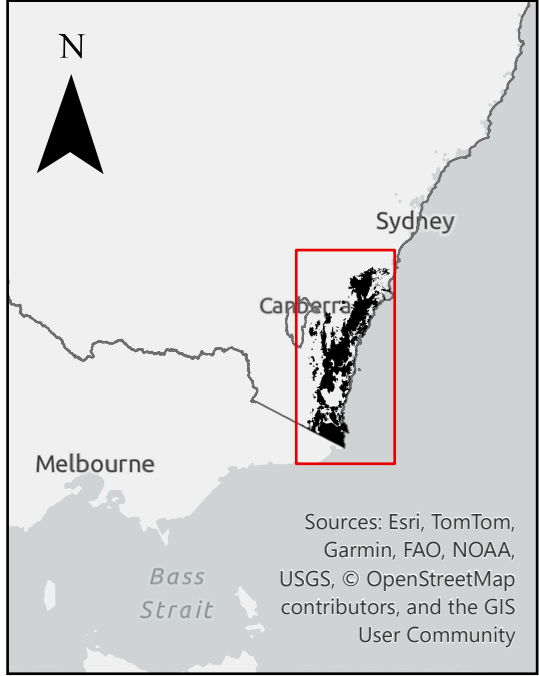
For some species, the impacts to habitat were significant, including *A. constablei* and *G. vernale* where >80% of modelled likely and known distribution of both species were within fire affected areas. In the case of *Correa baeuerlenii*, *A. georgensis*, Stuttering Frog and Long-footed Potoroo, 50 to 79% of modelled likely and known distribution was within fire affected areas. Conservation of habitats of these species is critical for their recovery. Reserve establishment would be a key step towards recovery of these species following the fires on the South East, especially for the focal species that have significant portions of their habitat in the State Forests (Chapter 6.2).

Table 35: Burnt areas and proportions of State Forest areas burnt in the 2019-20 Fires²⁶

State Forest	Burnt area (ha)	Proportion of SF burnt
Badja	7,661	100%
Benandarah	2,237	81%
Bermagui	351	19%
Bodalla	18,033	75%
Bolaro	1,782	100%
Bombala	299	88%
Bondi	5,217	77%
Boyne	6,097	99%
Broadwater	0	0%
Bruces Creek	415	52%
Buckenbowra	5,191	100%
Cathcart	1,669	97%
Clyde	3,324	94%
Coolangubra	1,111	50%
Corunna	0	0%
Currambene	554	33%
Currowan	11,883	100%
Dampier	31,117	92%
East Boyd	19,600	94%
Flat rock	4,443	91%
Glen Allen	276	19%
Glenbog	356	4%
Gnupa	0	0%
Jerrawangala	256	95%
Kioloa	138	79%
McDonald	3,104	84%
Meryla	2,702	62%
Mogo	14,844	96%
Moruya	1,867	46%
Mumbulla	583	9%
Murrah	1,480	35%
Nadgee	20,007	98%
Nalbaugh	2,221	98%
North Brooman	3,141	86%
Nowra	507	98%
Nullica	7,823	43%
Nungatta	835	97%
Shallow Crossing	3,683	96%
Shoalhaven	2	2%
South Brooman	5,220	93%
Tallaganda	7,915	33%
Tanja	0	0%
Tantawangalo	3,310	97%

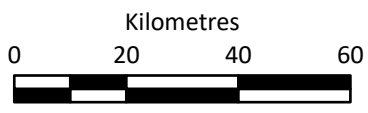
²⁶ Red highlights >50% or >3,500ha burnt

State Forest	Burnt area (ha)	Proportion of SF burnt
Termeil	648	95%
Timbillica	8,308	97%
Tomerong	8	4%
Towamba	745	46%
Wallagaraugh	2,959	96%
Wandella	5,483	100%
Wandera	4,948	95%
Wingello	2,254	93%
Woodburn	11	97%
Yadboro	10,283	96%
Yambulla	42,124	94%
Yerriyong	6,206	94%
Yurammie	417	10%
Total	285,649	78%



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 Fire Extent and Severity Mapping 2019-20 © State Government of NSW and NSW Department of Climate Change, Energy, the Environment and Water 2024, NPWS Reserves © State Government of NSW and NSW Department of Climate Change, Energy, the Environment and Water 2021

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Earthstar Geographics

Figure 37: 2019-20 Fires FESM

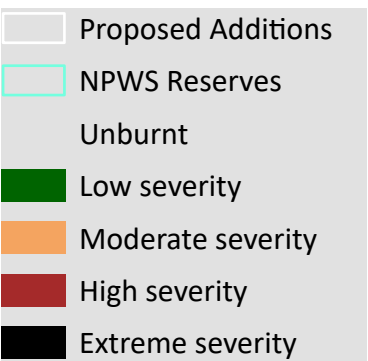
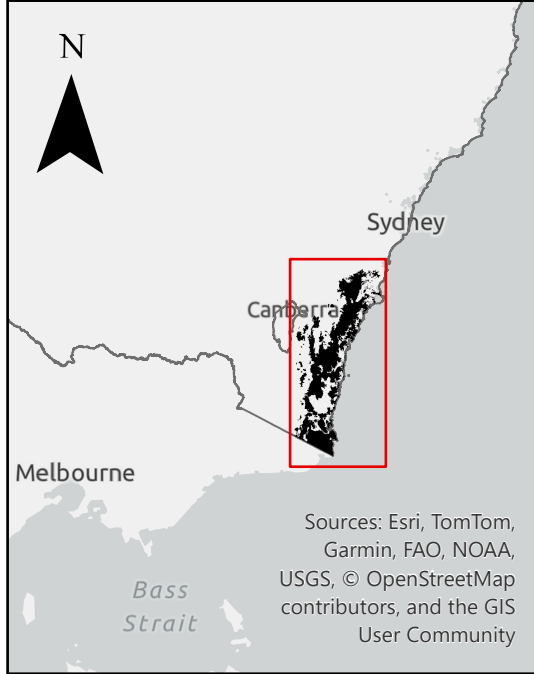
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2016-2024

Outside of the 2019-20 summer, there were very few bushfires in the State Forests. Table 36 shows the State Forests subject to bushfire. Only small areas, generally moderate or low severity, were burnt, as shown in Figure 38.

Table 36: State Forests burnt between 2016-2024 (excluding 2019-20 fires)

State Forest	Summer
Bodalla	2016-17
Buckenbowra	2017-18
Currowan	2017-18
McDonald	2018-19
Mogo	2017-18
Mumbulla	2023-24
Murrah	2023-24
Shallow Crossing	2017-18, 2018-19
Tanja	2017-18
Tomerong	2018-19



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 Fire Extent and Severity Mapping 2019-20 © State Government of NSW and NSW Department of Climate Change, Energy, the Environment and Water 2024, NPWS Reserves © State Government of NSW and NSW Department of Climate Change, Energy, the Environment and Water 2021, State Forests © Forestry Corporation of NSW 2024

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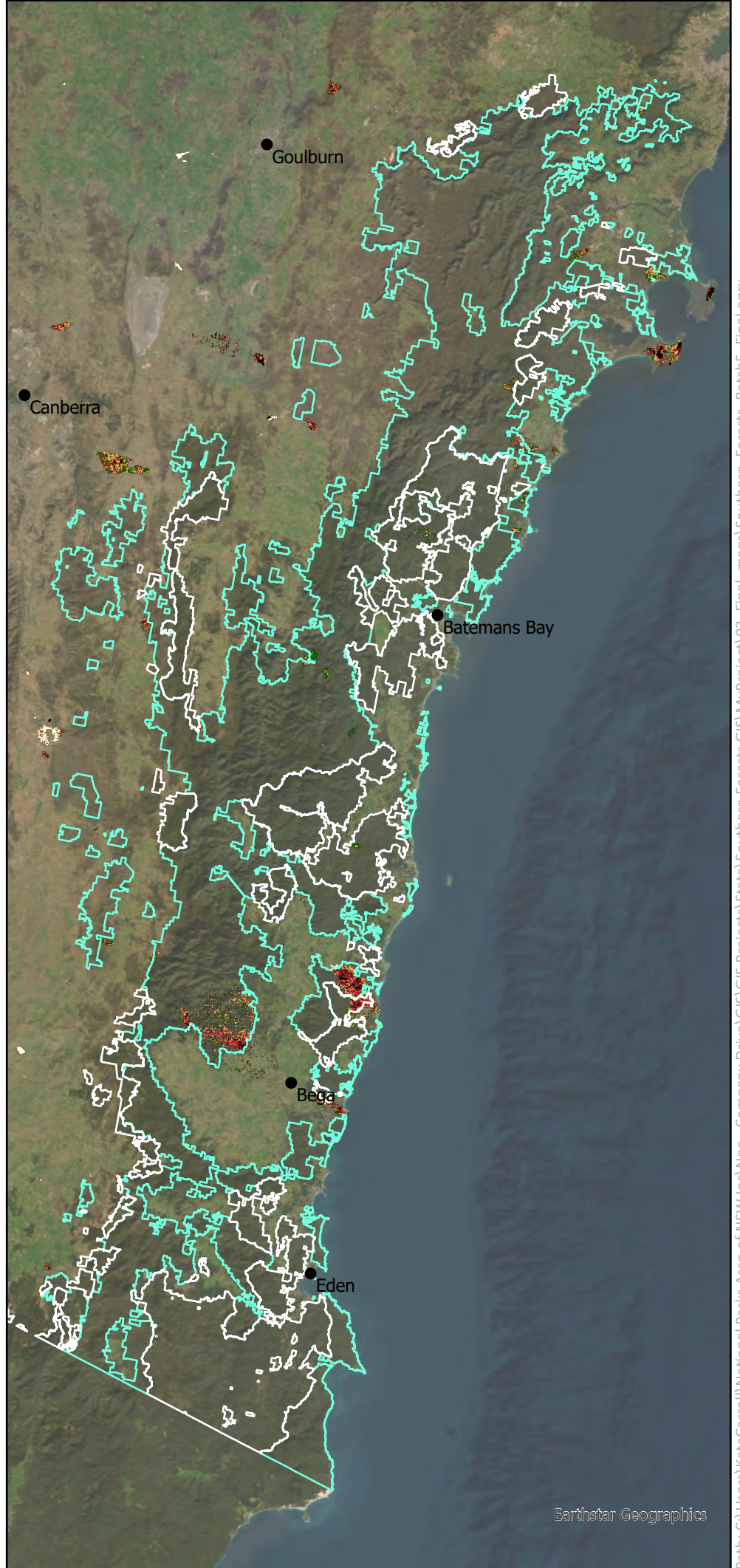
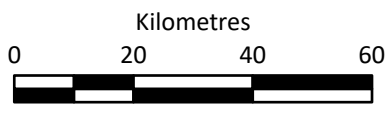


Figure 38: FESM 2016-2024 (excluding 2019-20)

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Prescribed Burns

Figure 39 shows the minimum areas of Prescribed Burns in each of the State Forests of the Study Area characterised by decade since 1950. The cumulative proportion of the total of the area of each State Forest is shown in Figure 40. All forests have been subject to prescribed burns, though there is minimal data for most forests. Some State Forests have had significant areas (>10,000 hectares) burnt, particularly in the 1970s, 1980s and 1990s. Yambulla has had the most historical burning with over 90,000 hectares cumulatively burnt, which is nearly double the whole area of the forest. Dampier, Mogo, Bodalla and Yadboro have also had substantial historical burning with at least 20,000 hectares burnt. The forest has been burnt at least three times over in Wandella and two times over in Yerriyong, Yadboro, Mogo, McDonald and Buckenbowra State Forests. Forestry Corporation is reported to burn about 30,000 hectares of forest every year across NSW public forests (Forestry Corporation, 2016), and figures are therefore likely much higher. Prescribed burning rates may be shown as lower than actual due to a lack of contributed data to the NPWS database. As discussed in Chapter 10.1.2, the comprehensiveness of Prescribed Burn data for State Forests is unknown.

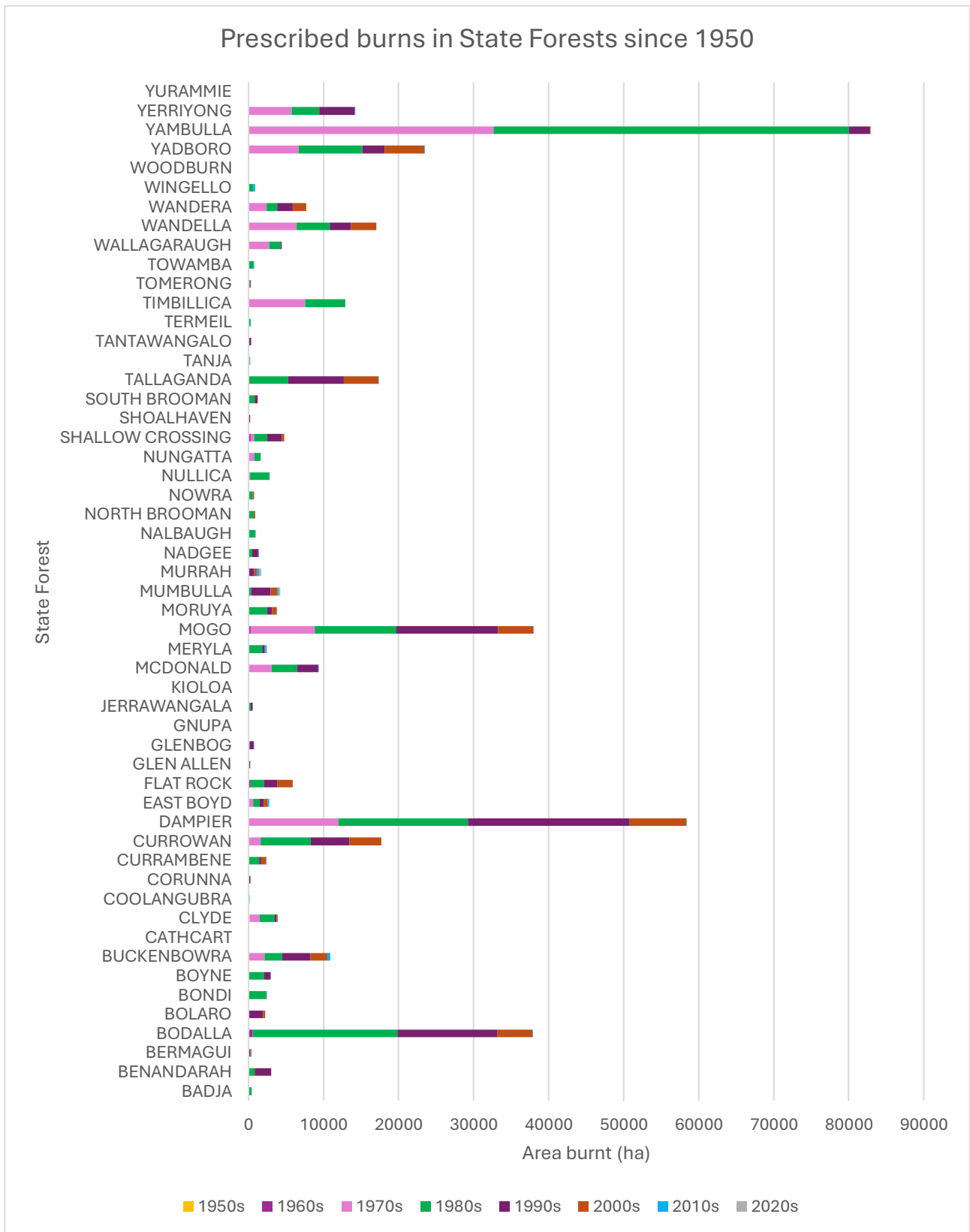


Figure 39: Areas subject to prescribed burns since 1950 in State Forests (State Government of NSW and NSW DCCEEW, 2010)

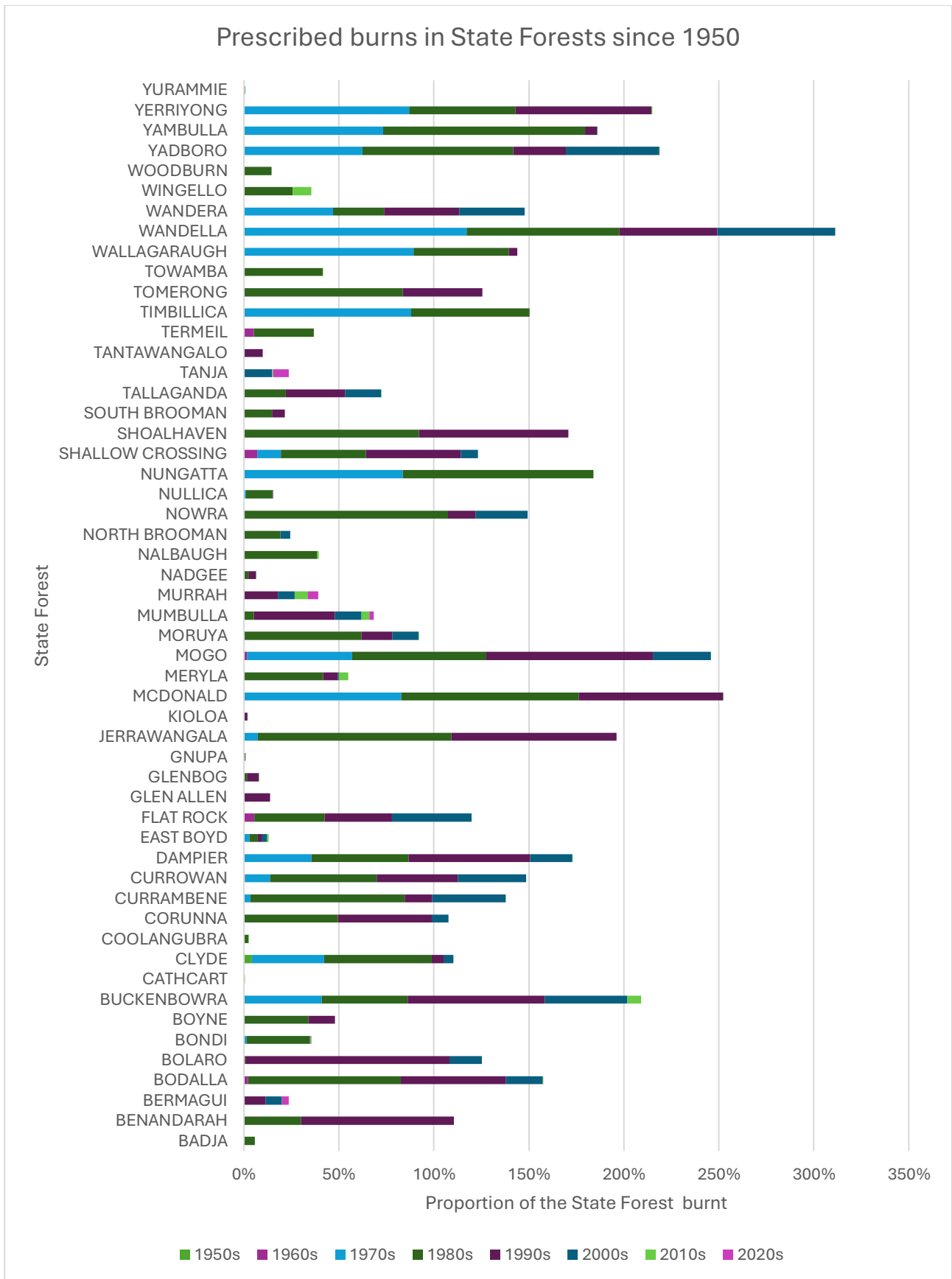


Figure 40: Proportions of the areas of each State Forest subject to prescribed burns since 1950 (State Government of NSW and NSW DCCEEW, 2010)

Post-fire logging

Since the 2019-2020 bushfires, there has been logging in 18 State Forests in the South East (Table 37). All the logged forests were subject to bushfire in 2019-20, in most cases over 90% of the forest was burnt. Logging after bushfires impedes recovery of the forest and is an additional impact on fauna, where resources are already limited. Discontinuation of logging in bushfire affected landscapes is critical for species recovery.

Table 37: State Forests logged since the 2019-20 bushfires

State Forest	Area	Year	Proportion of State Forest burnt in 2019-20 fires
Benandarah	5	2022, 2024	81%
Bolaro	84	2021	100%
Bondi	174	2024	77%
Boyne	67	2023, 2024	99%
Clyde	164	2024	94%
Currowan	414	2021, 2022, 2023, 2024	100%
East Boyd	1,248	2021, 2022, 2023, 2024	94%
Flat Rock	18	2024	91%
Mogo	577	2020, 2021, 2022, 2023	96%
Nadgee	663	2021, 2022, 2023, 2024	98%
Nullica	43	2024	43%
Shallow Crossing	798	2021, 2022, 2023, 2024	96%
South Brooman	169	2020, 2022, 2023	93%
Tallaganda	293	2021, 2022, 2023	33%
Timbillica	475	2021, 2022, 2023, 2024	97%
Wallagaraugh	<1ha	2023, 2024	96%
Wandera	6	2023	95%
Yambulla	1,046	2020, 2021, 2022, 2023, 2024	94%

10.1.3.2 Post-fire refuges

Low and unburnt areas are important for fauna refuge following bushfire. Table 38Table 35 outlines the State Forests within the Study Area with more than 50% or 3,500 hectares of unburnt and low-burnt vegetation following the 2019-20 fires. Twenty-five forests have been identified. These areas are highly important in a severely burnt landscape providing habitat for fauna such as high canopy cover, diverse vegetation structure, sheltering habitat such as hollow logs and tree hollows, vegetative ground cover and leaf litter. Many small State Forests, such as Broadwater, Corunna and Gnupa were unburnt in the 2019-20 fires. Substantial areas of forest remained unburnt or were subject to low-severity burning in larger forests such as Bodalla, Nullica and Tallaganda. Though high proportions of their forest were burnt, large areas remained unburnt or low burnt in Dampier, Yambulla, East Boyd and Nadgee State Forests.

Table 38 also includes the total unburnt and low burnt forest areas of the State Forests. A total of 134,629 hectares of the State Forests was unburnt or low burnt in the 2019-20 fires. This is 37% of the State Forests.

Table 38: Unburnt and low burnt areas of critical refuge to fauna in the State Forests 2019-20

State Forest	Unburnt area (ha)	Low-burnt area (ha)	Proportion of SF unburnt	Proportion of SF low burnt
Bermagui	1,482	272	81%	15%
Bodalla	6,014	7,250	25%	30%
Broadwater	167	0	100%	0%
Bruces Creek	379	287	48%	36%
Coolangubra	1,092	336	50%	15%
Corunna	183	0	100%	0%
Currambene	1,128	238	67%	14%
Dampier	2,647	6,088	8%	18%
East Boyd	1,251	2,268	6%	11%
Glen Allen	1,166	45	81%	3%
Glenbog	8,448	232	96%	3%
Gnupa	1,318	0	100%	0%
Meryla	1,651	860	38%	20%
Moruya	2,188	900	54%	22%
Mumbulla	5,562	523	91%	9%
Murrah	2,743	1,195	65%	28%
Nadgee	461	4,725	2%	23%
Nullica	10,499	684	57%	4%
Shoalhaven	107	1	98%	1%
Tallaganda	15,975	1,889	67%	8%
Tanja	872	0	100%	0%
Tomerong	201	8	96%	4%
Towamba	861	103	54%	6%
Yambulla	2,588	7,666	6%	17%
Yurammie	3,619	182	90%	5%
Total for all State Forests	79,688	54,941	22%	15%

10.1.4 Conclusion

Analysis of FESM data shows significant areas of State Forest were impacted by the 2019-20 bushfires. These are the most substantial and widespread fires in recent history, compared with other, relatively small bushfires since 2016. The 2019-20 fires also impacted NPWS Reserves. Research on the 2019-20 fires found that protected areas ameliorate bushfire impacts on biodiversity, more so than public forests (Driscoll *et al.*, 2024). Researchers are calling on expanding the protected area network to create bushfire resilience (Peter de Kruijff, 2024). There have been significant impacts on focal flora and fauna species that occur in the State Forests. Mammals were found to be the most negatively impacted taxa from the 2019-20 fires (Driscoll *et al.*, 2024). Significant areas of habitat of the Long-footed Potoroo, a rare, Critically Endangered species, were impacted by the fires. This species is found in Bondi and Yambulla State Forests, both of which have been subject to post-fire logging. Post-fire logging under normal CIFOA conditions is predicted to impact Yellow-bellied Glider and Southern Greater Glider such that they would take 20-120 years to recover from the 2019-20 fires (Smith, 2020). For Koalas, recovery is up to 45 years. Post-fire logging is known to significantly impact biodiversity recovery (Lindenmayer, Bowd and Gibbons, 2022). Additional pressure from logging could compound impacts on these and other species still recovering from the fires. Further, logging is known to increase the risk and severity of wildfire (Lindenmayer *et al.*, 2022; Lindenmayer and Zylstra, 2024). Conversion of these forests to NPWS Reserves would ensure protection from disturbances such as logging, and conserve important habitats for fire-affected fauna, of particular importance for threatened mammal species. Further, it is critical to protect the unburnt and low burnt refuges in the landscape, especially as ecological carrying capacity has declined since the 2019-20 fires (NSW EPA, 2025).

10.2 Mining

One of the most important distinguishing features between the different categories of public native forest is that mineral exploration and mining is prohibited in protected areas (with limited exceptions for existing exploration licences in State Conservation Areas) but permitted in State Forests. The result is that the environmental condition of State Forests is not just threatened by forestry activities, but by the potential for large scale mining operations. There are several sites across NSW where mining operations have inflicted severe damage to State Forests, including from gas extraction in the Pilliga.

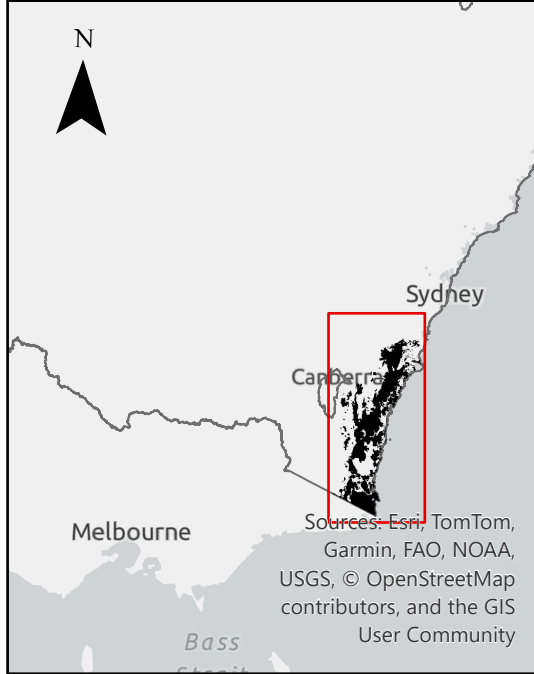
Mining titles, exploration licences and mining title applications in the Region are mapped in Figure 41. There are no major operating mines in the Study Area. The closest is Marulan Limestone Quarry, operated by Blue Circle, 1 kilometre west of Morton National Park and 8 kilometres southwest of Wingello State Forest. There are no current mining titles in the State Forests, however, four lie within 5 kilometres. These are gold, silver, and clay mines that are relatively small (less than 50 hectares in size) and not visible on Figure 41. There are 17 exploration licences and 13 mining title applications (for exploration) in the State Forests. The areas they cover, per State Forest, are listed in Table 39. There are 86,790 hectares of current exploration mining titles in State Forests and 29,650 hectares of exploration applications, totalling 116,440 hectares. These include large areas of exploration titles in the far south coast in East Boyd, Nadgee, Timbillica and Yambulla, also in Mogo State Forest. Exploration applications cover large areas of Dampier State Forest, also Glenbog, Mogo and Tantawangalo State Forests.

A Forest Permit and Ministerial consent are usually required to conduct exploration activities. Additional approval is needed for exploration activities that are moderate/high intensity. Forest permits and approval from NSW Resources is required for mining operations. Mining has well-documented environmental impacts including biodiversity loss, habitat degradation, fragmentation and pollution (Siqueira-Gay, Sonter and Sánchez, 2020; Nakade and Dhadse, 2024). There is potential for future mining or exploration activities in State Forests of the Region that could impact biodiversity.

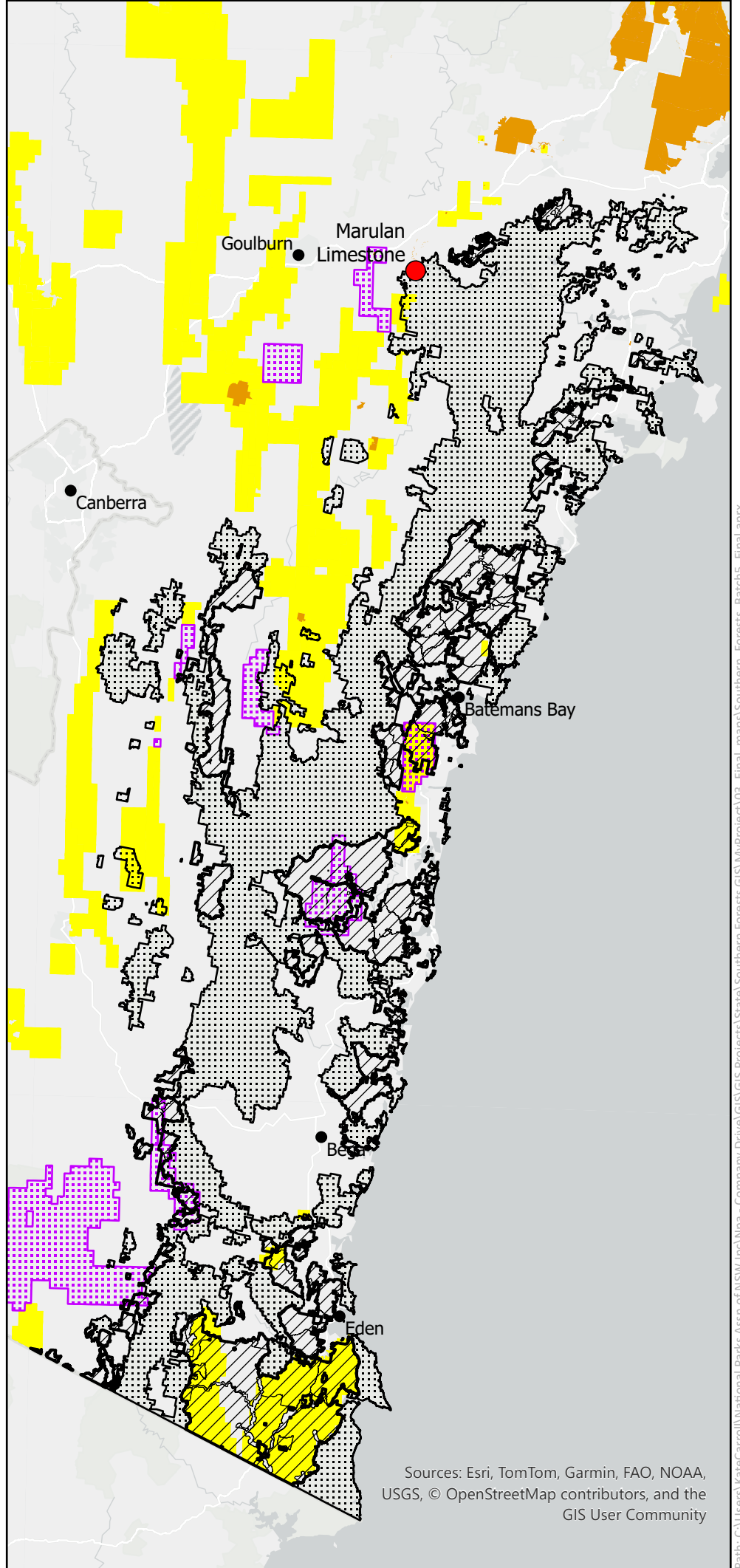
In contrast, mining and mineral exploration are expressly prohibited in National Parks, Nature Reserves and Regional Parks. Exploration and underground mining are permitted in limited circumstances in State Conservation Areas. The State Conservation Area category is designed as a 'transitional' class of protected area that provides most of the same protections as a National Park while mineral rights are being extinguished. State Conservation Areas are subject to 5-yearly reviews to determine whether each reserve is ready to transition to National Park or Nature Reserve status.

Table 39: Mining licences and applications in the State Forests

State Forest	Area (Ha)	Mining Title
Bodalla	1,286	Application
Bombala	198	Application
Bondi	98	Exploration
Boyne	558	Exploration
Bruces Creek	793	Exploration
Cathcart	1,542	Application
Coolangubra	372	Application
Dampier	12,843	Application
East Boyd	20,672	Exploration
Glen Allen	10	Application
Glenbog	2,458	Application
Gnupa	1,061	Exploration
Mogo	6,523	Application
	6,516	Exploration
Moruya	3,317	Exploration
Nadgee	18,935	Exploration
Nalbaugh	971	Application
Nullica	457	Exploration
Nungatta	758	Exploration
Tallaganda	67	Application
	4	Exploration
Tantawangalo	3,378	Application
Timbillica	7,305	Exploration
Towamba	19	Exploration
Wallagaraugh	344	Exploration
Wandella	2	Application
Wandera	<0.1	Application
	<0.1	Exploration
Yambulla	25,450	Exploration
Yurammie	503	Exploration



- Major Operating Mine
- State Forest
- NPWS Reserves
- Mining Title Application
- Exploration Licence
- Mining Licence



State Forest © Forestry Corporation of NSW 2024
 NPWS Reserves © State Government of NSW and NSW Department of Climate Change, Energy, the Environment and Water 2021, Mining titles and licences in the South Coast region © Department of Primary Industries and Regional Development 2024

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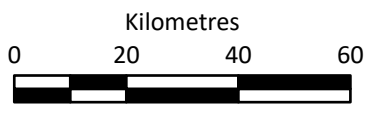


Figure 41: Mining titles and licences in the Region

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10.3 Climate change

Climate change is affecting terrestrial biodiversity through increasing frequency and severity of bushfire, and increased flood and drought risks. Additionally, species' life cycles, e.g. earlier flowering, and changes in migration and movements of fauna, are occurring, and geographic ranges of species are changing. Impacts are variable across species, however, extinction rates are predicted to increase at scale, qualifying as the sixth mass extinction (Bellard *et al.*, 2012).

To assist biodiversity adaptation to climate change, the NSW government recommends we need (NSW Government - Adapt NSW, 2026):

- resilient ecosystems, to reduce the stress caused by other human activities such as pollution and land clearing
- interventions for priority species
- identification and protection of places of climate refugia where species are likely to persist
- habitat connectivity to allow species movement
- climate-ready revegetation – planting climate-ready species in revegetation programs
- community involvement in conservation science-based tools for land management such as the Restore and Renew webtool and NSW Niche Finder

The addition of State Forests to the NRS would address several of the recommendations above. As discussed in earlier chapters, conserving the State Forests would create more connectivity and protect identified climate refugia for fauna. Additionally, protected areas are more resilient to climate impacts, for example, protected areas burnt at a lower severity than other areas in the 2019-20 fires (Driscoll *et al.*, 2024). Creating a larger network of protected areas in the Region would provide opportunities for conservation programs and regeneration opportunities, which would create resilience, and also have positive impacts on carbon storage from restoring ecological communities and avoided harvesting. Old growth forests store more carbon than younger forests (Harmon, Ferrell and Franklin, 1990) – so allowing forests to age will result in more carbon sequestration. The areas of State Forests are landscape-scale, which is what scientists are recommending is needed for more effective climate mitigation, rather than gradually accumulating small areas into the protected area network (Mackey *et al.*, 2008).

10.4 Invasive species

A range of feral fauna species occur in the State Forests, including cats, foxes, wild dogs, pigs, rabbits and deer. Additionally, weeds are present in the State Forests with logging, as a disturbance mechanism, increasing the spread of weeds (Hobbs, 1991; Duggin and Gentle, 1998; Blakers, 2021). Forestry Corporation invest relatively small amounts of resources in feral animal and weed control, compared with NPWS (Invasive Species Council, 2025). The conversion of our public native forests to the NPWS Estate will ensure increased resources and expertise are dedicated towards managing invasive flora and fauna and improving the resilience and ecosystem values of the forests.

10.5 Access and recreation

Most NSW native forests are open to public visitation and for a range of recreational activities. The rare exceptions are NPWS and Forestry Corporation operational sites, areas closed for logging operations, Aboriginal Places of special cultural sensitivity and fauna rewilding enclosures.

The principle that applies to both NPWS Reserves and State Forests is that recreational activities that involve no or minimal environmental impact, and no or minimal risk of injury to the participant or other

park user, are generally permissible. Activities that involve a higher potential for environment damage or injury are either prohibited or subject to some form of licencing or regulation.

Recreational activities in the Region's forests vary from activities with little or no environmental impact, such as car-based touring, sightseeing, bushwalking, camping, bird watching and water sports, to potentially higher impact activities such as off-road vehicle use, horse riding, mountain biking, dog walking, fossicking, firewood collection and shooting.

Recreational activities in State Forests tend to be either allowed in all State Forests (e.g. vehicle use, horse riding) or regulated by permits (e.g. fossicking and shooting). A more complex approach applies to NPWS Reserves, where the appropriateness of particular activities is assessed during the development of reserve Plans of Management. This allows for a more nuanced determination of whether specific activities can be conducted, without adverse environmental impact, in different locations within the broader forest estate. For example, while dog walking is not permitted in most NPWS reserves because of the potential impacts on native fauna, it can be permitted in defined zones within Regional Parks.

There is no question that access and recreation has an impact on the ecological condition and integrity of the forests. Roads, tracks and trails all act to fragment the connectivity of habitat, facilitate the spread of weeds and pests and provide access for rubbish dumping, arson, timber cutting and other illegal activities. The current regulatory environment seeks to balance these adverse impacts with the equally undeniable benefits that derive from public access and appreciation of the forests. The positive benefits of access and recreation are discussed in Chapter 13.2 below.

10.6 Forestry impacts

Industrial logging reduces resilience and biodiversity, and the capacity of forests to provide ecosystem services. Evidence from peer-reviewed science shows that logging undermines the persistence of hollow-bearing trees, alters forest successional dynamics, spreads invasive species, fragments connectivity, impacts soil and hydrology, elevates bushfire risks, and drives carbon emissions.

The following chapters outline various environmental and biodiversity impacts of logging.

10.6.1 Habitat loss, species mortality and fragmentation

Logging results in direct mortality and delayed mortality of fauna inhabiting the area logged (Tyndale-Biscoe and Smith, 1969). Impacts are particularly pronounced from the industrial logging methods used in NSW State Forests. The NSW forestry industry is pushing many species further towards extinction with 150 threatened species impacted by logging in NSW (Ward, Lindenmayer and Watson, 2024). Biodiversity is facing severe declines in Australia, including habitat loss, invasive species, climatic changes and altered fire regimes and hydrology (Legge *et al.*, 2023). In 2023, 66,498 hectares of native vegetation was cleared, of which 49% was woody vegetation (State Government of NSW and NSW DCCEEW, 2025). Forestry accounted for the loss of 16% of woody vegetation. Native vegetation clearing has accelerated since new biodiversity laws came into effect in 2017 in NSW. Industrial logging is one of many cumulative impacts on biodiversity, contributing to the "death by a thousand cuts". The permanent protection of all public forests would alleviate pressures from logging, assisting in the conservation of threatened species and other fauna in the Region, where increases in land clearing and the 2019-20 fires have compounded recent species losses.

Habitat connectivity across the landscape is critical for many species, particularly for ensuring genetic diversity and population health, allowing wildlife to disperse and providing resilience to climate change. Loss of connectivity and habitat fragmentation leads to species loss (Fischer and Lindenmayer, 2007).

Logging fragments a forest by removing large expanses of habitat in the logging coupe and clearing roads and tracks for access to logging compartments. It can result in reduced forest cover through selective logging or complete removal of the canopy in clearfelling operations. Both outcomes affect species movements and occupation of habitat.

Logging affects different species differently and can be known to have a positive or neutral effect on some species and a negative impact on others. For example, small mammals in Mumbulla State Forest (in our Study Area), responded to logging variably, with negative impacts on Bush Rats (*Rattus fuscipes*) and no notable impacts on Brown Antechinus (*Antechinus stuartii*) (Lunney, Cullis and Eby, 1987). Some reptile and amphibian species have higher abundances in logged forests, or are not effected (Goldingay, Daly and Lemckert, 1996; Kavanagh and Webb, 1998). Possums and Gliders are particularly negatively effected by logging (Lunney, 1987; Kavanagh and Webb, 1998).

10.6.2 Loss of old growth and hollow-bearing trees

Hollow-bearing trees are a key habitat feature of Australian forests, supporting at least 174 species in NSW including mammals, birds, reptiles, frogs and invertebrates (NSW DCCEE, 2025b). Some species such as cockatoos and large forest owls, require large hollows which are typically in larger, older trees (Gibbons *et al.*, 2000). Research shows that industrial logging reduces the density of hollow-bearing trees and interrupts the process of hollow formation (Gibbons and Lindenmayer, 1997; Lindenmayer *et al.*, 2014). Logged forests are often left with regrowth stands dominated by young trees, eliminating critical habitat for hollow-dependent fauna.

10.6.3 Altered habitat and succession patterns

Natural succession patterns of vegetation growth are altered by logging, even more so than bushfire (Lindenmayer and McCarthy, 2002). Vegetation structure and habitat complexity are altered by logging, through species removal, disturbance to the understorey and alteration of competition dynamics (Au *et al.*, 2019). Logging opens the land to colonisation by weeds. This can result in a reduction in species diversity and ecosystem resilience as tree species compete with weeds in post-logging growth succession stages (Cazzolla Gatti, 2018). Repeated logging of an area can alter forest structure even more substantially (Lindenmayer and Laurance, 2012). Logging degrades forests where food, shelter and breeding habitat losses severely impact fauna (Ward *et al.*, 2024). Habitat alteration from reduced structural complexity and degradation compromise long-term ecological resilience and flora and fauna diversity of forest ecosystems.

10.6.4 Soil and water

Hydrological changes occur from logging, including impacts on water yield which can reduce catchment water volumes (Taylor *et al.*, 2019). Old growth forest yields more water than logged forests because there is less forest evapotranspiration in older forests (Vertessy, Watson and O'Sullivan, 2001). Erosion and sedimentation increases, impacting water quality of nearby waterways and catchments (Brooks and Spencer, 1997; Croke and Hairsine, 2006). Erosion issues are exacerbated on sloping lands. Logging also disturbs soils, whereby the machinery compacts soil, and trees are uprooted, exposing soils and impacting soil nutrients and microbe composition (Rab, 2004; Bowd *et al.*, 2019). The soil disturbance also results in a release of carbon stores (Bowd *et al.*, 2019).

10.6.5 Elevated bushfire risk

There is a range of evidence to support that logging increases high severity bushfire risk. Logged forests burnt at higher severities than intact forests in the 2019-20 fires (Lindenmayer *et al.*, 2022). High severity bushfire risk is due to drier soils and vegetation, remaining debris creating a fuel load, increase in wind

velocities and close proximity of regenerating trees, which increases the spread of flames through the canopy (Lindenmayer, 2024).

10.6.6 Climate and emissions impacts

Forests are carbon stores critical for climate mitigation. Logging releases stored carbon through tree removal and soil disturbance (as discussed above). Old growth forests store more carbon than logged forests, also when accounting for stored carbon in wood products generated from the logging (Keith *et al.*, 2014). Logging removes a carbon sink, where potential continued uptake of carbon is lost. Native forest logging is contributing to carbon emissions and worsening climate change.

10.6.7 Industrial and historical logging in South East Region

Historical logging used axes, saws and bullock teams, removed fewer trees per hectare than current methods and left the soil relatively undisturbed with the forest structure largely intact. Motorised trucks replaced bullock teams in the 1930s (The South Coast History Society Inc., 2026), and powered chainsaws were employed for tree cutting (SFM, 2026). This continued up to the 1960s when heavier machinery was employed, and in the 1980s and 1990s when modern mechanical harvesters were introduced (Lu *et al.*, 2018). Modern mechanical harvesters remove hectares per day and uproot trees, massively disturbing soil and leaving it vulnerable to erosion and runoff. There is high compaction in some areas, and the forest structure is damaged. Extensive road networks are created to allow access for harvesters and haulage trucks. The shift in efficiency has increased the extent and significance of ecological and other environmental impacts.

Harvest history data from Forestry Corporation is mapped in Figure 42 and Figure 43. The data has known limitations which Forestry Corporation advise are:

- The harvesting and data should be considered as indicative, only due to the highly variable nature of historical mapping
- The harvesting data is incomplete; an absence of these data does not mean that the forest is old growth
- Historical data (pre-2010) is unreliable and may be incomplete
- Historical data has been collected at a range of spatial resolutions (e.g. 1:250k) and is only reliable at that scale
- In some cases, harvesting data is assigned to whole compartments and does not reflect the actual extent
- The data provided is a reasonable representation at the landscape scale (1:100,000 or greater)

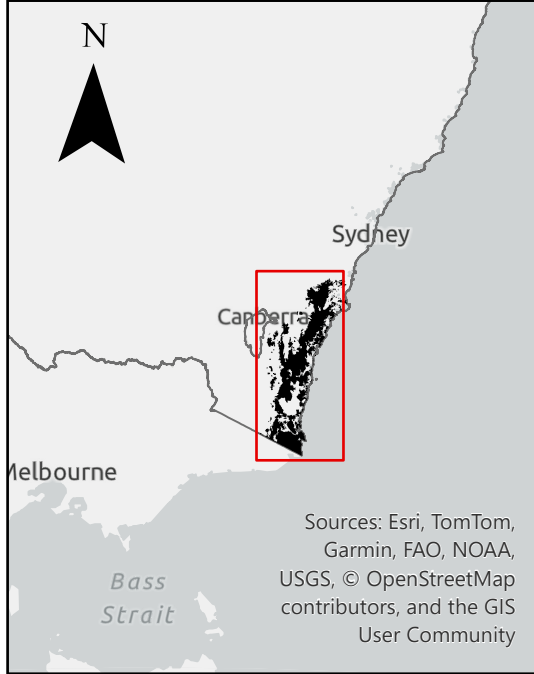
These limitations make the following observations indicative only.

An overlay of harvested areas is shown in Figure 42 to create a heatmap, where darker areas are more repeatedly logged. The most frequently logged areas shown are in the upper Clyde (Boyne, Flat Rock, North Brooman, South Brooman and Termeil) and scattered forests further south including Bermagui, Moruya, Glenbog, East Boyd and Nadgee. The most extensive logging shown (in area/coverage) has occurred in the far south coast and the lower tablelands in forests such as Yambulla, East Boyd, Timbillica, Glenbog and Coolangubra, also North Brooman, South Brooman and Boyne State Forests.

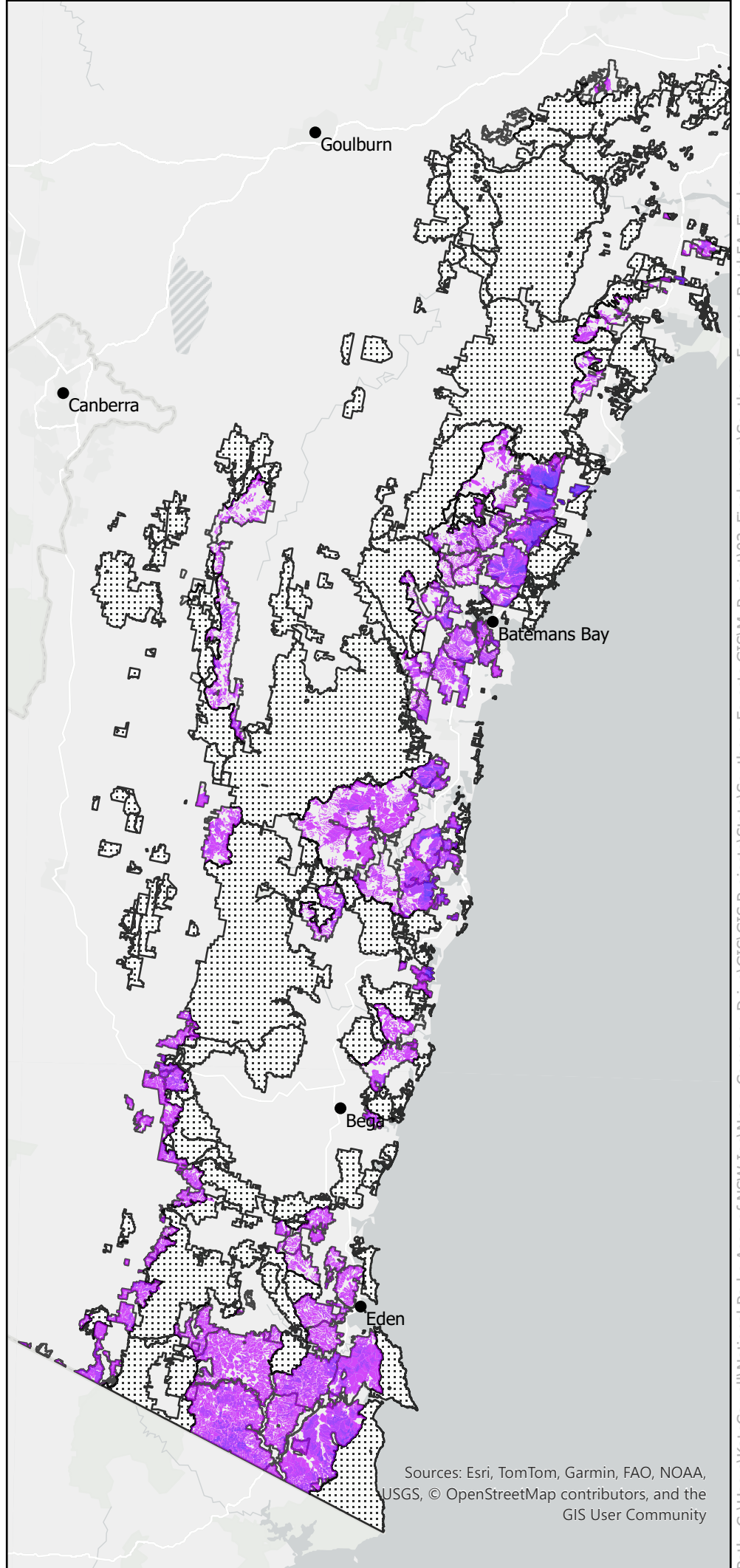
Time scales of harvest history are shown in Figure 42, spanning from 1936 when the earliest data was recorded, and is shown for approximate 15-year periods in each map. The earliest logging of the Region shown is in Clyde, Termeil, Flat Rock and North Brooman State Forests in 1936-1937. However, the forest

estate was established well before (around 1840s) with the first logging operations of the south coast known to have occurred in areas like Batemans Bay (The South Coast History Society Inc., 2026).

The period of most intensive logging shown is 1978-1993, which follows a large expansion of the State Forest estate in the far south coast and the establishment of the Eden Chipmill in the 1960s (Carron, 1985). Whole compartments are mapped which may be exacerbating the perceived intensity of logging. The more recent and reliable data (2010-2024) shows recent logging is concentrated in the far south and coastal forests of the Clyde catchment. Harvest history data demonstrates there has been repeated logging in most forests, with most of that logging occurring since the late 1970s.



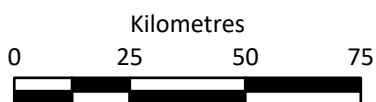
- Harvest History
- State Forest
- NPWS Reserves



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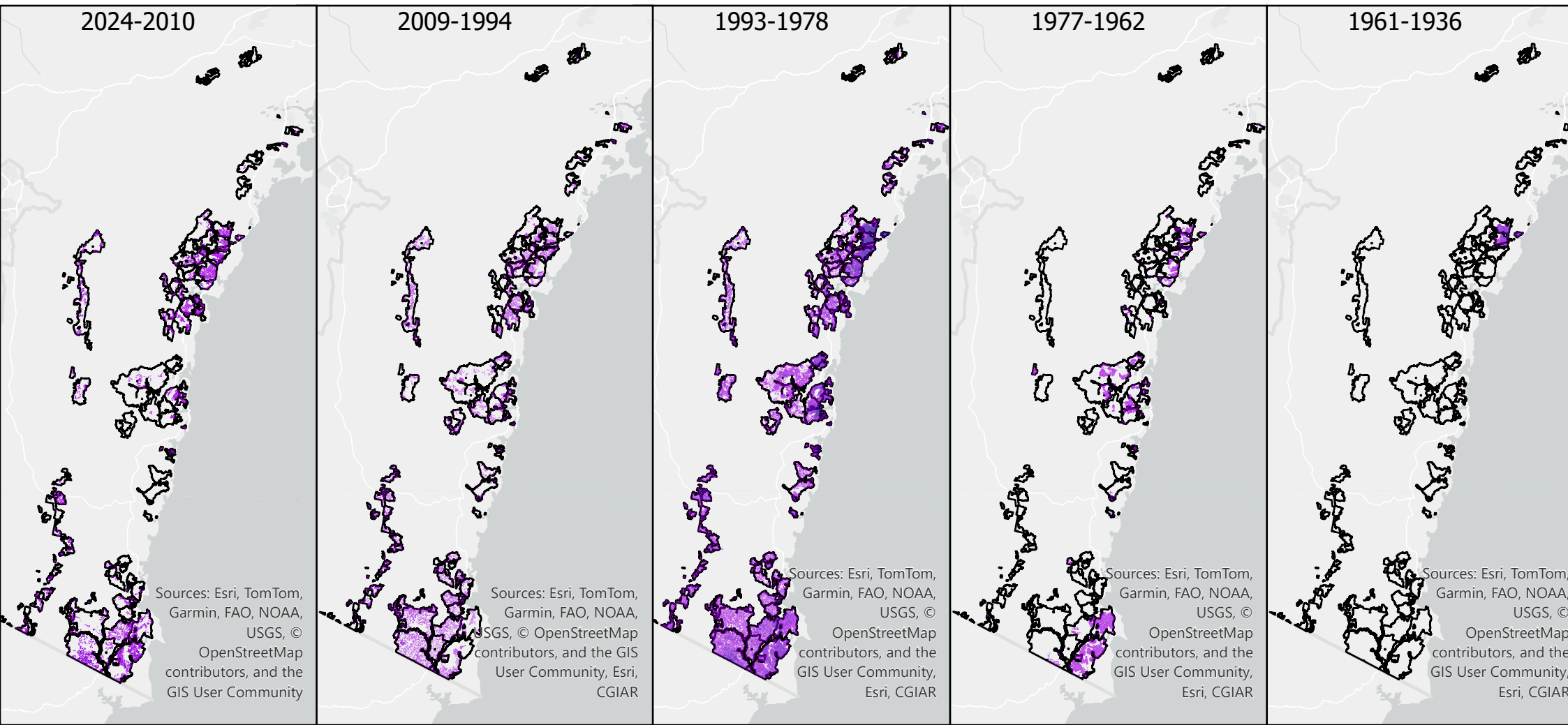
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Figure 42: Logging history of the Region heatmap

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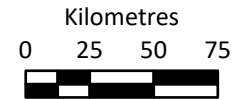
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-  State Forest
-  Harvest History



State Forest © Forestry Corporation of NSW 2024, Harvest History © Forestry Corporation of NSW 2023

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Figure 43: Logging history of the Region - timescales

11 POST-LOGGING RESILIENCE AND RECOVERY

Despite the impacts of logging, research shows logged forests retain high residual value for biodiversity (Lindenmayer and Laurance, 2012) and we have demonstrated the range of important biodiversity values present in the southern forests of NSW in the chapters above. Regeneration of key ecological values is possible upon ceasing logging, particularly with adequate resources dedicated towards science-based restoration programs. The intensity of prior disturbance, including if there was historical fire, and whether the forest was selectively logged or clearcut, will affect species richness in the recovering forest, as will the frequency of repeated historical logging (Blair *et al.*, 2016; Bowd *et al.*, 2019). A study in Sweden showed that after 88 years since protection was implemented, forests had increased tree species richness and old growth attributes were restored (Franzén *et al.*, 2026). The land was historically selectively logged, grazed and subject to low-intensity slash and burn and was not subject to active restoration management. In tropical Australia, forests subject to selective logging recovered their tree species abundance to pre-logging levels within 46 years (Hu *et al.*, 2018). For more intensively logged areas, recovery will take longer. In south-eastern Australia, some eucalypt forests have failed to regenerate after logging and would need active restoration management to assist their recovery (Taylor, Evans and Lindenmayer, 2025). From a carbon perspective, active restoration of forests can result in carbon recovery 50% faster than those left to naturally regenerate (Philipson *et al.*, 2020). Allowing trees to regenerate post-logging will increase their carbon storage potential as old growth forests store more carbon than younger forests (Philipson *et al.*, 2020).

Preventing further degradation is essential for protecting biodiversity in the Region and providing opportunities for species and ecosystem recovery. A Victorian study showed that ending native forest logging in that state directly benefited 34 threatened species (Ashman *et al.*, 2025). The cessation of logging would similarly benefit many species in NSW.

With ever-increasing pressure on biodiversity, conserving degraded lands is critical for the future of biodiversity. There is little biodiversity remaining without some form of human disturbance and we need to focus on protecting the highest values within those remnants and areas which will bring landscape-scale changes and ensure habitat connectivity. The addition of State Forests to the NRS would meet all of these requirements. Under NPWS management, targeted restoration and protection from future logging, the southern forests would recover, landscape connectivity and resilience would improve, and biodiversity values would be restored over time.

PART E

12 INDIGENOUS CULTURE AND HERITAGE

12.1 First Nations communities, their forests and this report

The forests and waters of the Region are Aboriginal land; they always were and always will be. NPA supports First Nations custodianship through practical partnerships and formal legal recognition. Legal rights and involvement in land management across the forests may take many forms, including native title rights, Indigenous Land Use Agreements, declaration of Indigenous protected areas, and statutory joint management arrangements under the NPW Act.

Determining which of these mechanisms, whether individually or in combination, are most appropriate for the Southern Forests is primarily a matter for discussion between the NSW Government and First Nations communities. The engagement and negotiation processes applied in 2024 in relation to the Great Koala National Park provide an appropriate model for resolving these matters.

First Nations communities have deep and enduring connections to the forests. These living connections are grounded in a history spanning millennia in the forests and waters of the Region and continue today in the many ways that contemporary generations express their care for Country.

It would not be appropriate for this report to attempt to “summarise” those cultural and personal connections by distilling ethnographic observations or offering a history of the Aboriginal communities of the South East. Their history, stories and the significance of their sites and landscapes should only be articulated by First Nations communities themselves.

NPA’s contribution to the discussion about the role of First Nations communities in defining the future uses and management of the Region’s forests is therefore limited to reaffirming our acknowledgement that these forests are Aboriginal lands, and to expressing our strong view that First Nations communities must be afforded the opportunity to be deeply involved in all aspects of future planning and day-to-day management.

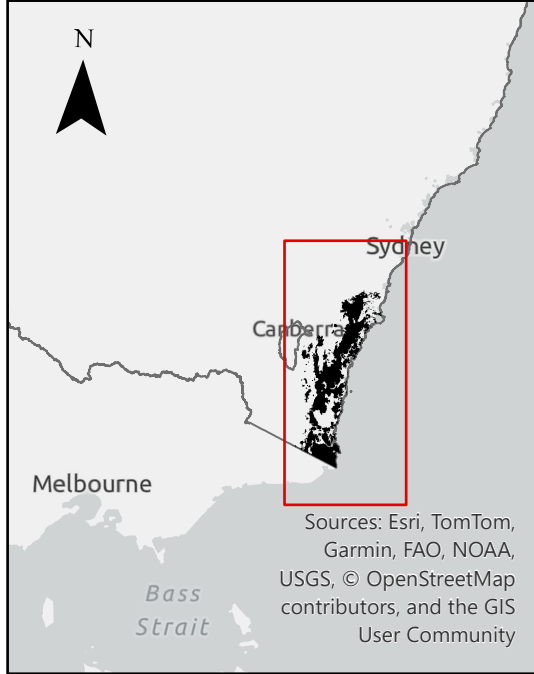
It is important to note that First Nations communities are already involved in managing significant areas within the Region. Biamanga National Park and Gulaga National Park, which together comprise more than 21,000 hectares, are jointly managed by the Yuin people and the NSW National Parks and Wildlife Service, under two Boards of Management established pursuant to Part 4A of the NPW Act.

There are also two declared Aboriginal Places in the Region; Ten Pelicans Aboriginal Place in Bodalla State Forest, and Biamanga Aboriginal Place in Mumbulla State Forest. Aboriginal Places are managed in close consultation with First Nations communities. The dedication of the two Aboriginal Places under the NPW Act ensured their protection within the State Forests.

Representatives of the Yuin Nation have also sought broader legal recognition of their native title rights across the Region through an application under the Commonwealth *Native Title Act 1993*. The claim, formally registered in 2018 under the name “South Coast People,” covers approximately 1.4 million hectares. The precise nature and extent of any native title rights will only be determined if and when the Court recognises the claim.

The location of the Native Title claim is shown in Figure 44.

NPA understands that there are numerous ongoing claims under the NSW *Aboriginal Land Rights Act 1983* within the Region. These claims are lodged by Local Aboriginal Land Councils (see Chapter 12.2) and seek the transfer of certain Crown lands. Where granted, the land becomes freehold and therefore falls outside the scope of this report, which is confined to publicly owned native forest.

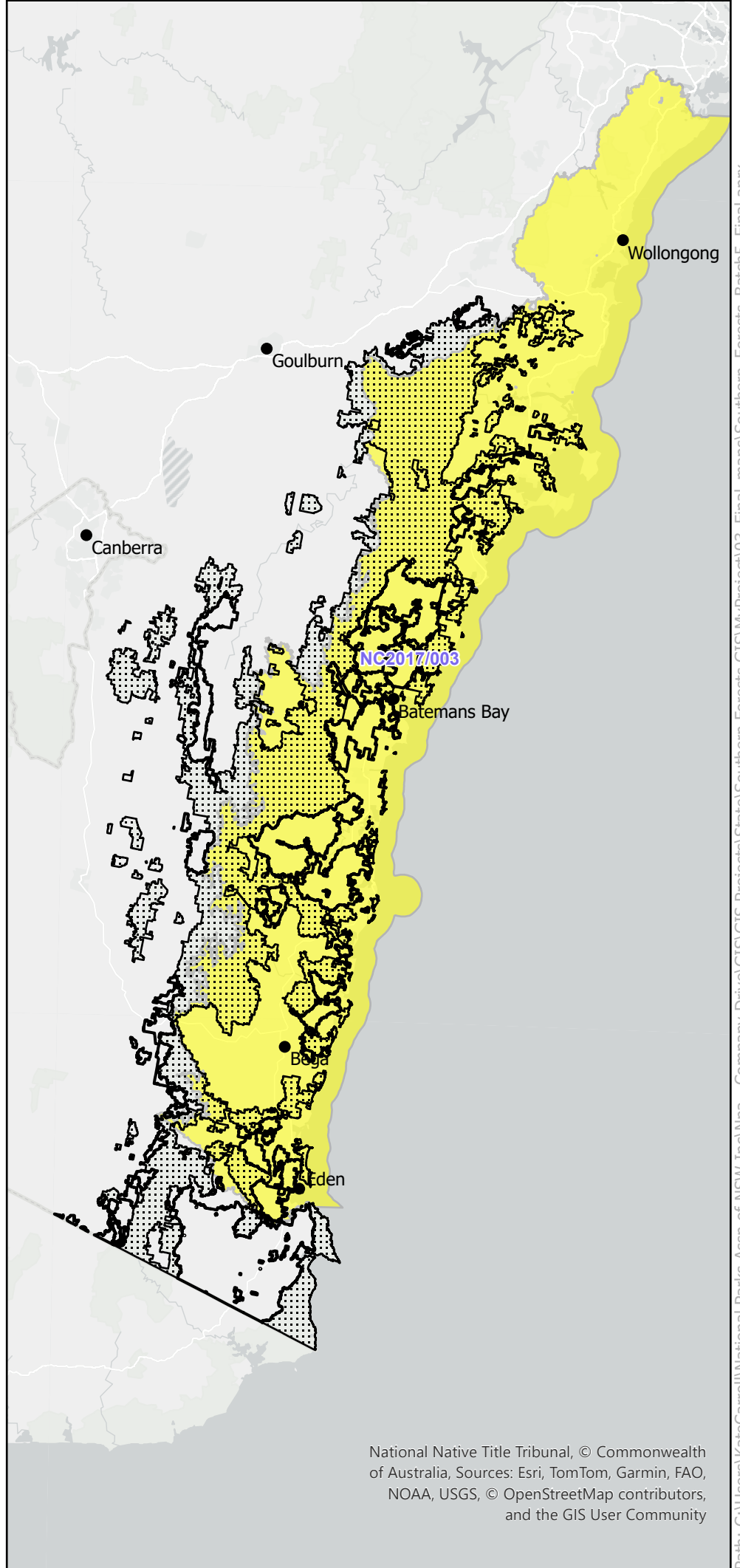
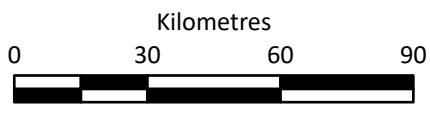


- State Forest
- NPWS Reserves
- Native Title Claim

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 NPWS Reserves © State Government of NSW and NSW Department of Climate Change, Energy, the Environment and Water 2021, Native Title data © Commonwealth of Australia and National Native Title Tribunal 2026

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Figure 44: South Coast People Native Title Claim and the Study Area

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12.2 Traditional owners and organisations

The Study Area spans the Country of a range of Traditional Nations, language groups, clans and families. Many are identifying as part of the Yuin Nation, which most of the Study Area sits within. This includes Dharawal, Jerrinja, Wandandian, Dhurga, Walbunja, Gundungurra, Djiringanj and Katungal peoples. It also extends to lands of the Bidwell, Ngambri and Ngarigo peoples.

There are fourteen Local Aboriginal Land Councils (LALCs) in the Study Area:

- Batemans Bay
- Bega
- Bodalla
- Cobowra
- Eden
- Illawarra
- Jerrinja
- Merrimans
- Mogo
- Ngambri
- Nowra
- Pejar
- Ulladulla
- Wagonga

12.3 Registered heritage items

Items of Aboriginal heritage can be listed under the Commonwealth EPBC Act through inclusion on the National Heritage List. The Bundian Way is a traditional Aboriginal pathway included on the National Heritage List and located between Turemulerrer (Twofold Bay) and Targangal (Mount Kosciuszko). The Bundian Way crosses the Study Area in multiple locations and is approximately 260 kilometres long. It is a network of pre-colonial trade and cultural routes, older than the Silk Road or Roman roads (DCCEEW, n.d.a.). It includes ceremonial grounds, stone arrangements, marked trees, whale places and moth places.

The Bundian Way is not only a cultural and ecological treasure but also holds powerful symbolic and educational meaning. It passes through Nalbaugh, Yambulla, Towamba and East Boyd State Forests. Parts of the track were cleared by NSW Forestry Corporation in the past (Blay, 2019). Conservation of these forests would ensure a higher level of protection and prevent further damage to the Bundian Way.

Items of Aboriginal Heritage are generally listed in NSW under the NPW Act, although in some cases they can also be listed under the *Heritage Act 1977*.

The NSW Aboriginal Heritage Information Service (AHIMS) lists hundreds of Aboriginal Heritage Items across the Region. These include many different types of sites, from ceremonial grounds to middens, rock shelters, occupation sites, scarred trees, grinding groves, rock art and scatters of stone artefacts.

The information in AHIMS is always only the ‘tip of the iceberg’, with the detection of items severely limited by inconsistent survey effort and, especially in the case of forested landscapes, by vegetation, organic debris

and soil coverage. The vast majority of Aboriginal Heritage Items remain undetected under vegetation and surface soils.

What the abundance of recorded sites does demonstrate is that the entirety of the coasts, waterways, forests and escarpments of the Region were occupied by First Nations people and their ancestors. The forests have supported, and been cared for, by their human inhabitants for millennia.

The AHIMS has records of Aboriginal Heritage Items in 43 State Forests in the Region. Recorded places are tabulated in Table 40. Locations with a particularly high density of recorded sites include Dampier, Tallaganda, Flat Rock, South and North Brooman, Mogo and Boyne State Forests.

Converting State Forests of the South East to National Park would prevent the risk of logging and other activities specific to State Forests that can damage or destroy sacred sites, ceremonial grounds, and culturally significant landscapes. National Park status can enable stronger legal protections and support joint management with traditional owners.

Table 40: Number of Aboriginal heritage places found in State Forests within the Study Area (Source: NSW Aboriginal Heritage Information Service (AHIMS))

State forest	Number of places
Badja	27
Benandarah	17
Bermagui	12
Bodalla	23
Bondi	8
Boyne	61
Bruces Creek	1
Buckenbowra	19
Cathcart	2
Clyde	3
Coolangubra	1
Currambene	9
Currowan	45
Dampier	126
East Boyd	19
Flat Rock	98
Glen Allen	5
Glenbog	24
McDonald	25
Meryla	34
Mogo	68
Moruya	2
Mumbulla	7
Murrah	3
Nadgee	22
Nalbaugh	2
North Brooman	55
Nowra	1
Nullica	17
Shallow Crossing	10
Shoalhaven	1
South Brooman	75
Tallaganda	92

State forest	Number of places
Termeil	9
Timbillica	5
Towamba	1
Wallagaraugh	8
Wandella	12
Wandera	8
Yadboro	40
Yambulla	41
Yerriyong	20
Yurammie	1

13 ECONOMIC AND SOCIAL CONTEXT

The earlier parts of this report concentrate on the environmental and conservation outcomes that would accrue from the permanent protection of the Region's State Forests as National Park or other category of protected area. This section shifts the focus to the economic and social benefits that would be generated by ending logging and managing all the Region's public native forests for their conservation, cultural, recreational and economic values.

The NSW Government's management of the public native forests under its care and control has significant implications for regional economies and the NSW budget. The funds generated and expended through management as State Forest differ markedly from those associated with a protected area model.

13.1 Economic Analysis

13.1.1 The economics of forestry - an overview

Discussion on the economics of the NSW forestry industry is often framed in ways that imply that Forestry Corporation's management of State Forests delivers a substantial net financial benefit to the people of NSW, while National Parks and other Protected Areas represent a net drain on the state budget. Our analysis demonstrates that expanding Protected Areas offers better economic outcomes than does the continuation of forestry activities.

The reality is that Forestry Corporation generates minimal gross revenue, especially in a Region dominated by low value wood chip and pallet products. When that revenue is offset against the costs of forest operations (i.e. roading, signage, fencing, fire and pest management, silvicultural activities, environmental remediation), the community service levy and ever-increasing penalties for non-compliance with legislative obligations, the net result is that continued logging is to the detriment of the regional economy and NSW budget.

Several studies over the last decade have found that ceasing public native forest logging in the Region and creating protected areas would generate significant net financial, economic and social benefits for NSW and Australia as a whole (Perkins and Macintosh, 2013; Macintosh and Frontier Economics, 2021; Frontier Economics, 2024). These studies are directly relevant to the 432,000 hectares of public native forest currently managed and logged by Forestry Corporation in the Southern Forestry Region, 365,000 hectares of which are in the Study Area. The analysis in this chapter is for the entire Southern Forestry Region and the findings give indications of applicability to the Study Area.

The output, profits and employment generated by the Southern Forestry Region's native forestry industry have declined rapidly in recent decades. In 2012, the private and public sector loggers and processors of the Southern Forestry Region's native forests together lost \$1.4 million (Perkins and Macintosh, 2013). By 2024-25 the same sector appears to have lost approximately \$10 million (State of New South Wales through Forestry Corporation of NSW, 2024; Allied Natural Wood Enterprises Pty Ltd, 2025). The bulk of losses, approximately \$7 million, were incurred by Forestry Corporation. Continued logging and processing of the Southern Forestry Region's public native forests, which now is almost entirely for exported wood chips, is expected to make further significant net financial losses, as well as significant net economic and social losses, in coming years, due to the industry's loss of competitiveness in the world woodchip market, as discussed below.

Direct private sector employment from Southern Forestry Region public native forest logging and processing has dropped from approximately 330 in 2011 to around 80-100 in 2026. This includes around 40 employees at the Eden chip mill, some of whom also process and load softwood exports sourced from outside the

Southern Forestry Region. These numbers also include about 10 employees of capital-intensive logging operations and 30-50 employees in the few small sawmills still operating in the Southern Forestry Region.

The significant losses incurred by the Southern Forestry Region's private and public enterprises have resulted in on-going subsidies from NSW taxpayers. In 2025, the Australian Climate and Biodiversity Foundation estimated that over recent years, NSW's public native forest-based industry has received subsidies of approximately \$18 million per annum on average from NSW taxpayers (State of New South Wales through Forestry Corporation of NSW, 2018, 2019, 2020b, 2021, 2022; Australian Climate and Biodiversity Foundation, 2022; State of New South Wales through Forestry Corporation of NSW, 2023, 2024, 2025).

Despite receiving many subsidies and equity injections, Forestry Corporation has made significant losses from its NSW hardwood division for several decades. These totalled \$79 million between 2009 and 2014 and reached \$32 million in 2025 (Campbell and McKeon, 2016; State of New South Wales through Forestry Corporation of NSW, 2025). About \$7 million of the 2025 losses could be attributed to Forestry Corporation's operations in the Southern Forestry Region. Forestry Corporation cross-subsidises these losses with the significant profits it makes from its plantation softwood division.

By comparison, the conversion of State Forests to National Park is expected to generate significant positive financial, economic and social net benefits for NSW and Australia. Employment will be generated from multiple sources, including investment in park management activities, site restoration, nature-based tourism and associated jobs. Permanent protection would also improve ecosystem services increasing the natural capital value of the forest estate.

At the time of writing this report the Commonwealth is assessing an Improved Native Forest Management ACCU methodology developed and submitted by the NSW Government. Carbon credits represent the largest single potential source of financial and economic benefit to the NSW Government and the Region. Carbon credits revenue would be generated through the Australian Carbon Credit Unit (ACCU) scheme, from the Emissions Reduction Fund administered by the Commonwealth Clean Energy Regulator. On the (reasonable) assumption that the new ACCU method is approved, if adopted as the protected area funding model, the benefits described below would become available.

13.1.2 Economic benefits of protected areas

Creation of the National Park would have significant economic and social benefits both to the Region and local economies and the state of NSW. These include the net benefits accruing from increased opportunities for nature-based tourism and large-scale landscape restoration (Frontier Economics, 2024). Additionally, National Parks create employment and increase the natural capital from improved ecosystems services.

Tourism Australia's research invariably identifies immersion in nature as the primary motivator for travel in all Australia's inbound and domestic tourist markets. This lucrative and growing industry is threatened by destruction of the scenic values, essential to the tourist experience, by logging. National Park establishment would complement NSW's other protected areas to form outstanding nature-based experiences in NSW's South Coast.

Tourism-related activities generated by the expanded and enhanced protected area network and associated infrastructure would increase local business income and employment. The forests of the Study Area are mostly in scenic coastal areas which are valuable for tourism. Big Spotty – the world's tallest Spotted Gum at over 70 metres tall – is a potential tourist drawcard. It is in North Brooman State Forest and currently lacks appropriate visitor infrastructure and signage.

The investment in tourist infrastructure would further increase the attractiveness of the Region and hence tourism income and employment. Increased maintenance of fire and hiking trails and construction and

improvement of recreation infrastructure would attract higher recreation users to the forests, which would significantly support the growth of the local and NSW tourism industry. Tourism surveys indicate that coastal scenery, immersion in nature and wilderness activities are among the top experiences domestic and international tourists identify they are seeking. Nature-based tourism in NSW National Parks each year contribute an estimated \$19 billion annually to regional economies (NSW DCCEEW, 2026a).

A long-term economic assessment by the University of Newcastle of the Great Koala National Park estimated 9,810 new direct and indirect jobs could be created within 15 years from new tourism and conservation activities associated with the park's creation (The University of Newcastle, 2021). More conservatively, formation of the Great Southern Forest National Park could immediately directly create at least 250 to 300 new jobs in park management, ecosystem restoration, visitor services, the Indigenous Rangers Program and conservation programs.

According to the 2021 census, in the Bega Shire, accommodation and food services employed 1,481 people or 10.28% of employment (Appendix H (Frontier Economics, 2024)).

Creating the Great Southern Forest National Park is also likely to support income and employment growth in the region's other major industries, tourism and fishing, by preserving the region's natural beauty and protecting fish breeding estuaries and oyster beds.

Beyond tourism and employment, protected areas offer ecosystems services, which are a form of natural capital. These are often unvalued services that include clean water and high water yields in catchments, improved soil health and air quality, and climate and natural disaster mitigation.

Large-scale protection of the forests and cessation of logging would create large-scale emissions reduction as discussed in Chapter 13.1.3 and Appendix I. This would deliver major economic benefits from climate mitigation.

Ceasing logging and allowing natural or assisted regeneration of these forests would make them more resilient to wildfires. Logged forests are more prone to high intensity wildfires (see Chapter 10.6.5). During the megafires of 2019, the dense, spindly, regrowth forests left after decades of clear-fell logging of Southern Forestry Region forests, like those south of Eden, generated some of the most intense and rapidly moving forest fires ever recorded (Lindenmayer, Taylor and Blanchard, 2021; Lindenmayer *et al.*, 2022).

Hydrological improvements would occur from ceasing logging and permanently protecting forests. Hydrological impacts of logging are discussed in Chapter 10.6.4. Logged forests are drier. Unlogged forests provide considerably more water for agriculture and settlements compared to logged forests because there is less evapotranspiration in older forests. Additional water yield from ceasing logging would facilitate additional agricultural production and urban water supply, generating increased income and employment. Run off from current logging operations harms oyster leases, depressing their production (Macintosh, Keith and Lindenmayer, 2015). Conservation of forests in the upper catchments would improve runoff. Gains to industries such as aquaculture, oysters, agriculture, water for urban communities are likely to be significant. They will add considerably to the economic and social benefits of the proposed Park.

Case Study: Victorian Government Assessment of Economic Benefits of their Forests

In 2019, the Victorian government conducted an assessment of ecosystem services from forests in its Regional Forestry Agreement regions. The assessment estimated the value of a range of ecosystem services, including:

- Erosion control – forests prevented 382 million tonnes of soil erosion to major waterways, valued at \$3.1–8 billion based on the cost of artificially removing sediment.
- Flood mitigation – it was estimated that forests provided flood mitigation benefits to 646 localities across Victoria, with a minimum estimated value of \$97 million per year in avoided damages to property and infrastructure.
- Carbon sequestration – in 2017, forests were estimated to capture 41 megatonnes of carbon from the atmosphere, valued at \$3 billion. Carbon losses due to fire were estimated at 15 megatonnes, equating to a net carbon storage of 26 megatonnes.
- Recreation and tourism – supporting opportunities for active and passive recreation, forests were estimated to deliver up to \$905 million per year in recreation and tourism benefits to the community.

Altogether, erosion control, flood mitigation, carbon sequestration, recreation and tourism provided by forests in Victoria's RFA regions were valued at \$7.1 to \$12 billion, while timber and firewood harvested from these forests was valued at \$82 million and \$3-7 million, respectively.

Standing forests also provide many unquantified benefits including the immense cultural value to Traditional Owners and Aboriginal communities, air purification, health benefits, social and community connection and amenity.

Source: Adapted from Ecosystem services from forests in Victoria: Assessment of Regional Forest Agreement regions (Victorian Department of Environment, Land, Water and Planning, 2019)

While a comparable study has not yet been conducted in NSW, it could be assumed that similar economic benefits from protecting State Forests would apply.

13.1.3 The economic potential of carbon

By updating carbon capture estimates made by Perkins and Macintosh (2013) and Macintosh and Frontier Economics (2021) and using the current 2026 ACCU price of \$36 per tonne of avoided emissions, this analysis calculates that the establishment of the Great Southern Forest National Park could earn the NSW Government gross revenue of approximately \$40 million in 2026, and a revenue stream with a gross present value of \$475 million over the next 15 years.

After deducting an estimated \$16 million per annum for forest maintenance costs from this potential revenue flow, the NSW Government could earn net benefits with a present value of \$270 million over the next 15 years (see Appendix J for details).

Local regions would gain significant income and employment from forest restoration activities funded by ACCU revenue. ACCU income from the Great Southern Forest National Park could generate employment of 250 to 400 full time employment equivalents (FTE) per annum, far greater than the employment of 80 to 100 FTEs which the Southern Forestry Region's native forest industry currently provides. Associated additional tourism activity and employment would further expand this new revenue stream.

Ceasing logging the Southern Forestry Region is expected to prevent approximately 1 million tonnes of CO² emissions per annum (Perkins and Macintosh, 2013; Macintosh and Frontier Economics, 2021). In the lead up to creating the Great Southern Forest National Park, Australian Greenhouse Office modellers would need to more precisely model the expected abatement levels of this proposal, particularly post the 2019-20 bushfires.

Apart from these direct financial benefits, reducing greenhouse gas emissions on this scale will generate immense net economic, social and environmental benefits to the people of NSW, Australia and the world as whole in the battle against Climate Change.

These prevented emissions would equal approximately the current combined greenhouse emissions of Bega and Eurobodalla Shires, in which these forests are located (Zero SE, 2022). The proposed emission abatement from ceasing logging in the Southern Forestry Region would total about one third of the combined abatement of the 10 largest projects currently earning ACCUs under the Emissions Reduction Fund (ERF) (Macintosh and Frontier Economics, 2021).

13.1.4 The finances of logging public native forests

Allied Natural Wood Enterprises Pty Ltd (ANWE) sits within the Pentarch Group and operates the wood chip mill at Eden. They purchase approximately 90 per cent of the 300,000 metric tons of native hardwood that Forestry Corporation currently sells each year from the Southern Forestry Region. This represents about 300,000 mature eucalypt trees felled each year (Macintosh and Frontier Economics, 2021). ANWE processes these lower quality pulp logs into wood chips which it exports to Asian packaging material manufacturers. Less than 10 per cent of production involves processing small diameter sawlogs for pallets under bricks and making briquets from residues. Forestry Corporation supplies native forest hardwood to ANWE under several long-term Wood Supply Agreements (WSA) that end by 2033.

In 2013, the combined losses of Southern Forestry Region's native forest industry were estimated to be \$1.2 million, including a \$3 million loss by South East Fibre Exports (SEFE), the former Japanese owner of the Eden chip mill (Perkins and Macintosh, 2013).

ANWE bought the Eden chip mill from SEFE in 2015. Pentarch Group own and operate a range of smaller sawmills and other wood processing enterprises in NSW and Victoria, but the Eden chip mill is its main asset. As a major domestically-owned enterprises, ANWE and Pentarch are only required by Australian law to publish aggregate profit and loss statements in their Annual Financial Statements to Australian Securities and Investments Commission (ASIC), not more detailed financial information on their operations, as SEFE previously was required to do. However, in 2024-25, ANWE declared a total loss of more than \$30 million on all its activities while the Pentarch Group also recorded a combined loss of \$13 million last financial year (Allied Natural Wood Enterprises Pty Ltd, 2025; Pentarch Group Pty Ltd, 2025).

Due to the complex and rather opaque financial structure of ANWE and the Pentarch Group, it is not possible to determine why ANWE and Pentarch incurred such large losses in 2024/25. However, these followed large declared profits in \$60.45 million in 2020/21 and \$15.2 million in 2022/23. ANWE holds 2 long term Wood Supply Agreements from Forestry Corporation, to supply pulp logs, and a small quantity of small diameter sawlogs (see Appendix K).

In 2024-25, the native forest division of Forestry Corporation recorded a loss of \$32 million from its 1.8 million hectare NSW native forest estate. This followed losses of \$29 million in 2023-24, and \$15 million in 2022-23 (State of New South Wales through Forestry Corporation of NSW, 2023, 2024, 2025). Forestry Corporation no longer separately publishes profit and loss data for its Southern, Northern and Western regions. However, as the Southern Forestry Region represents 24 per cent of the Forestry Corporation's entire native forest estate, on a per hectare basis, approximately \$7 million of this loss could be attributed to the Southern Forestry Region in 2025.

Recent NSW Government subsidies to Forestry Corporation include a \$46 million equity injection in 2020 for fire recovery and Covid19 stimulus, and a \$60 million, three-year grant, commencing in 2022, for infrastructure and road repair (State of New South Wales through Forestry Corporation of NSW, 2022, 2023, 2025).

The main reason Forestry Corporation's hardwood division continues to make significant annual losses for NSW taxpayers is that it sells public native hardwood logs to processors below the costs it incurs in forest maintenance, logging and transporting them to customers (Perkins and Macintosh, 2013; Campbell and McKeon, 2016). This under-pricing represents a significant subsidy to the private forestry processing industry in the region, primarily ANWE.

Forestry Corporation annually supplies the remaining 10 per cent of the Southern Forestry Region's native hardwood logs to one Victorian sawmiller, which holds a Wood Supply Agreement, WSA, and a few small local NSW sawmillers and firewood suppliers, none of whom have WSAs (see Appendix K (Frontier Economics, 2024)).

As a result of over 50 years of short rotation clear-fell logging, the Southern Forestry Region can no longer produce many large native hardwood sawlogs. Virtually all the small and medium-sized hardwood sawmills in the region have closed in recent decades, contributing to the significant loss of the sector's workforce. Only four logging crews now operate in the Southern Forestry Region, down from 12 to 13 a decade ago.

The reduced employment and profitability of the Southern Forestry Region's native hardwood sector in recent decades is also in part caused by falling domestic demand for sawn native hardwood timber. This is a result of the substitution of alternative construction materials, such as steel, cement, bricks and plantation grown softwood timber since the 1960s.

Most importantly, the sector's decline in profitability can be linked to falling international demand for Australian hardwood chips over the last decade. Australia's share of the world woodchip export market has dropped from 25 to 10 per cent since 2000, due to the rapid growth in lower cost, mostly plantation grown hardwood chips from Vietnam, Thailand, China, Brazil and Chile (Perkins and Macintosh, 2013; Macintosh and Frontier Economics, 2021). While Japan was previously the major woodchips customer, first China and now Taiwan have become the main destinations for hardwood chip exports. China is increasingly sourcing higher quality, lower cost chips domestically and from South East Asian countries.

The analysis in 2013 indicated that ANWE's profitability declined despite an 11 per cent fall in nominal terms, and a 20 per cent fall in the real, inflation adjusted terms, in the cost per tonne of logs Forestry Corporation delivered it between 2008 and 2012 (Perkins and Macintosh, 2013). Hence, the industry's claim that tighter environmental controls and creation of protected areas will have a negative impact on the economy cannot be justified.

More recently, however, the catastrophic fires of 2019-20, which impacted over 80 per cent of the Southern Forestry Region, have substantially reduced available supply. The combined result of declining financial viability and reduced resource supply is that wood chip exports have fallen from a peak of about 1,000,000 metric tons per annum in the early 2000s, to 250,000 to 300,000 metric tonnes in 2024 and 2025. Importantly, ANWE has now also lost access to subsidised public native forest logs from Victoria since the Victorian Government announced an end to public native forest logging.

In addition to the grants to Forestry Corporation, private sector operators have directly received grants and subsidies from the NSW Government. In addition to heavily subsidised stumpage costs, these include \$8 million to transition workers from the Blue Ridge sawmill when its sawlog WSA was awarded to ANWE in 2015, \$1 million to the ANWE chip mill for bushfire recovery and restoration after the 2019 bushfires and a \$3 million, 17-year loan to install a briquette production facility at the Eden chip mill.

13.1.5 Pathways to a better economic future for the Region

Instead of making ongoing financial losses, the NSW Government could earn significant revenue by ending logging in the Southern Forestry Region. Two analyses in recent years estimated the value of revenue NSW

could earn via Australian Carbon Credit Units, ACCUs, from the Commonwealth's Emission Reduction Fund (Perkins and Macintosh, 2013; Macintosh and Frontier Economics, 2021). The analysis below recalculates the present value of these net revenue earnings, using the current spot price of ACCUs in early 2026. This increases the ACCU income NSW can earn from ceasing logging of the Southern Forestry Region.

In 2025 and 2026, the NSW and Federal Governments are actively pursuing the option of earning ACCUs from reducing public native forest logging. This revenue could be used to restore degraded forests, protect ecosystems and build recreation-related infrastructure to support tourism. The NSW Government is currently seeking to earn ACCUs in return for ceasing to log 176,000 hectares of former Forestry Corporation's native forest estate in the newly created Great Koala National Park in the mid-north of NSW.

A decision to cease logging and permanently protect the forests would reduce annual CO² emissions by an estimated 1 million tonnes per year on average for the next 15 years. These estimates were made by ANU's Professor Andrew Macintosh using the Australian Greenhouse Office (AGO) (Perkins and Macintosh, 2013; Macintosh and Frontier Economics, 2021). This methodology is outlined in Appendix I. The AGO model is employed to measure Australia's greenhouse gas emissions to meet its international abatement obligations.

This significant abatement project would assist Australia to meet its international carbon abatement commitments. Ceasing logging in the Southern Forestry Region would in fact be one of the cheapest methods available to NSW and Australia to reduce their CO² emissions. This is because NSW and the nation would actually gain income by ceasing logging and stopping these emissions, since the forestry industry and publicly owned Forestry Corporation currently lose significant net revenue from their Southern Forestry Region activities each year. Most other methods of reducing CO² emissions, such as subsidies to households to purchase wall batteries, require significant upfront payments by taxpayers.

In early 2026, the spot price of ACCUs fluctuated between \$36 and \$38 per tonne of emissions abated; this analysis uses a figure of \$36 per ACCU earned as the base case and assumes this price will remain constant in real terms over the next 15 years. This is a conservative assumption, as ACCU prices have increased substantially in real terms over the last 7 years. Based on the approximate average level of 1 million tonnes of abated CO² emissions from 2026 for the next 15 years, this updated analysis estimates that the NSW Government could earn gross revenue of approximately \$40 million in 2026 from earning ACCUs by ceasing to log the Southern Forestry Region. Over the next 15 years this gross revenue stream would have a net present value of \$475 million. See Appendix J for more detailed Cost Benefit results.

After deducting annual forest maintenance expenses of approximately \$36 per hectare, or an average of \$16 million per year to restore and maintain the Southern Forestry Region forests, the NSW Government could earn net revenue of approximately \$23.5 million in 2026 and a net revenue stream with a present value of \$270 million over the next 15 years. This Net Present financial benefit (NPFb) was estimated at a 3 per cent economic discount rate, appropriate to social and economic cost benefit analyses (Perkins, 1994). See Appendix J for more detailed results.

These revenue forecasts assume that ACCU prices will stay constant in 2026 dollars over the next two decades, though they have more than doubled in real terms in the last six years. Parts of the Southern Forestry Region will require assisted regeneration from intensive historical logging for over the last 50 years. Also, the NSW National Parks and Wildlife Service will need to install new recreation infrastructure. These activities could be funded from the significant ACCU revenue stream estimated by this updated analysis and will create many employment opportunities. These will be discussed in the following section.

13.1.6 Employment in the forests

The creation of the Great Southern Forest National Park would generate considerable employment growth in the local communities in which these forests lie, and beyond. Using the updated analysis of net revenue stream that the NSW Government could earned from ACCUs, reported above, the annual gross revenue of

approximately \$40 million that the NSW Government could earn from ACCUs in 2026-2028 could, including associated costs, notionally fund employment of at least 300 FTEs per year, well in excess of the direct NSW employment of less than 100 that the Southern Forestry Region’s private hardwood forestry sector currently provides in the Southern Forestry Region (Table 41). Much of the \$16 million per annum that our analysis estimates will be needed to maintain the Southern Forestry Region forests each year would be spent on the salaries of NPWS staff and First Nations rangers and could notionally fund as many as 200 additional positions.

These new jobs are well in excess of the 80 Forestry Corporation staff employed in the Southern Forestry Region in 2012 (Perkins and Macintosh, 2013). As employment in the private forestry industry has been falling for over a decade, and overall, the industry is loss-making even with government subsidies, jobs created in the Great Southern Forest National Park are likely to be more sustainable, better paid and more rewarding than existing forestry jobs. Former forestry industry employees could receive priority in accessing this new employment, as is occurring with the Great Koala National Park.

Far South Coast First Nations people have invaluable knowledge regarding forest management and restoration. This proposal envisages Indigenous traditional owners playing an important role in native forest management and protection, complementing the Indigenous Rangers Skills and the Working on Country programs and as envisaged in the Plan of Management for the Yuin Bangguri (Mountain) Parks. They therefore should receive high priority in receiving new employment.

Table 41: Estimated employment generated in Southern Forestry Region from logging and carbon capture activities (full time employment equivalents)

Logging and processing	Chipping and saw logs 2011, actual	Chipping and saw logs 2012, actual	Chipping and saw logs logs est. 2026		
Processing – chip and saw milling	188	159	55-65		
Logging and haulage	139	91	25-35		
Total private industry	327	250	80-100		
Estimated Carbon capture, full time employment funded by Australian Carbon Credit Unit revenue at 2026 ACCU price (notional, @\$100,000 per person, including on costs)					
	2026	2027	2030	2035	2045
Carbon assessment, weed and feral animal control, wildlife protection	200	200	200	200	200
Fire and walking trails, tourist roads, other infrastructure	50	50	70	80	100
Health & educational personnel funded from ACCUs	-	-	100	100	100
Total	250	250	370	380	400

13.1.7 Current employment in NSW private native forest sector in Southern Forestry Region

As outlined above, direct private sector Southern Forestry Region employment, related to the logging and processing of public native forests, is now quite small and has fallen rapidly in recent decades. In 2011, a detailed analysis indicated about 330 people were directly employed for logging and processing native hardwood from the Southern Forestry Region and Victorian public forests. However, due to falling profitability and retrenchments in the sector, by 2012, its employment had fallen to 250 (Table 41 and (Perkins and Macintosh, 2013)).

While detailed data is no longer publicly available, in 2026, direct private employment in the sector is

estimated to be between 80 and 100 FTEs. This fall in employment is mainly due to the closure and reduced production of most small and medium sized sawmills in the region, in particular Blue Ridge Hardwoods at Eden. These mills were considerably more labour-intensive than the Eden Chip mill. The limited availability of good quality sawlogs and loss of their WSAs are the main reasons for the small sawmills' closure. As none of the few remaining small sawmills have WSAs and now mostly process softwood or timber logged from private land, they would not be impacted by the creation of the Great Southern Forest National Park.

In addition, ANWE's own native hardwood woodchip production and its related employment, has fallen by 70 per cent, from over 1 million metric tonnes in 2000 to under 300,000 metric tonnes in 2024-25 (State of New South Wales through Forestry Corporation of NSW, 2025). By 2026, direct employment at the Eden Chip mill had fallen to 30 to 40 workers, some of whom are also employed loading softwood chips from the Tumut region.

Finally, only 4 logging crews now operate in the Southern Forestry Region, down from 12 to 13 a decade ago. Whereas in the 2000s, each logging crew employed around 10 to 15 people, such operators are now very capital intensive and usually only require one to two workers to cut and load trees. Logging operators are also very mobile and can be readily redeployed to harvest softwood and hardwood plantation timber.

Public sector employment was not included in the above assessment of employment in the Southern Forestry Region. This is because we have assumed that many of the Forestry Corporation staff will be transferred to other forestry regions or the NPWS.

The timber industry lobby has sought to inflate their published estimates of direct employment which can be attributed to the Southern Forestry Region public native forest logging and processing sector. For example, it commissioned the *Economic distribution study of the NSW hardwood timber industry* (Ernst and Young, 2023) which claims the Southern Forestry Region's native forestry sector employs 2,230 full-time equivalent employees and generates gross revenue of \$720 million.

Their methodology is not comparable to the direct employment figures for this sector quoted above. This Ernst and Young report inappropriately included employment in the much larger softwood harvesting and processing sector and the public sector. It also includes 'multiplier effect' estimates of employment and income in associated manufacturing and service sector industries which supply inputs, like electricity, fuel products, external equipment maintenance, housing, retail, accounting and other tertiary services to the native hardwood and softwood sectors.

13.1.8 The economic case in summary

The creation of the Great Southern Forest National Park would significantly increase revenue flows to the NSW Government, enhance employment and income in the private hospitality and recreation-based sectors and the National Park related public sector, and hence enhance the overall financial, economic and social well-being of NSW and local communities.

We conclude that:

- Under a 'business as usual' model, Forestry Corporation and the Southern Forestry Region's private hardwood processors will continue to make significant financial losses and are likely to seek further government subsidies.
- The Park creation would have significant economic benefits from increased tourism, improved ecosystem services, carbon storage, natural disaster abatement and improved agri/aquacultural yield
- At current and projected ACCU prices, the NSW Government could earn significant on-going revenue from ceasing logging and creating the Great Southern Forest National Park.
- The NSW Government should use this revenue to restore degraded forests, invest in tourist infrastructure and protect endangered species and their habitats.

- Forest restoration would generate many more sustainable and well-paid jobs in the region than the forestry industry currently provides.
- Establishing the Great Southern Forest National Park would also generate significant revenue and employment opportunities in private recreation and hospitality-based sectors.

13.2 Recreation, visitation and tourism

13.2.1 Access

Public access and appreciation of the forests is integral to the Region's economy and economic future. Every visitor who enjoys memorable experiences in the forest helps to build the case for their permanent conservation.

Section 10.5 described the potential risks associated with the intensification of public access and recreation and suggests that those risks are best managed under a protected area model. This section provides a fuller examination of the range of activities that can be pursued in a low impact manner and considers the positive role they can play in maintaining social connection and appreciation of the forests.

More than 65.5 million visits were made to NSW National Parks in 2025, contributing an estimated \$19.5 billion annually to the NSW economy (NSW DCCEEW, 2026a). Visitation to the South Coast Branch of NPWS, which broadly coincides with the Region, have reached 7.5 million visits, growing 81% in the last 10 years (NSW DCCEEW, 2026b).

Public access, visitation and recreational activities take many forms, some of which are regulated to a greater or lesser degree depending upon land and reserve category. The dominant means of public access are walking, running, motor vehicles, cycles, horse, motorboats, kayaks and canoes. The Region's forests contain extensive networks of public roads, management (fire) trails, walking tracks and dedicated mountain bike and horse trails.

The forests provide opportunities for a wide range of recreational activities, from vehicle-based touring, sightseeing, camping, walking, cycling, mountain biking, swimming, angling, rock sports (climbing, abseiling and canyoning), hang gliding, bird watching and citizen science activities.

Some activities are restricted to specific locations and/or require a permit or other forms of approval, including dog walking, horse riding, 4WD touring, fossicking and feral animal control.

Table 42 summarises the access and activity types that occur across the Region.

Table 42: Access and activity types in public native forests

Access or activity type	State Forests	NPWS Reserves	Comment
Registered vehicles on public roads	Yes	Yes	Public roads are generally maintained to a standard suitable for 2WD vehicles
Registered vehicles on management/ fire tracks	Yes	No	
Unregistered motor vehicles	No	No	Includes unregistered cars, trucks, trail bikes, quad bikes and non-compliant e-bikes
Registered and unregistered vehicles on walking tracks and 'single track'	No	No	Construction and use of unauthorised single trails is prohibited in all public forests
Mountain biking	Yes	Yes	Permitted on public roads, management trails and designated circuits
Horse Riding	Yes	Partial	Horse riding in NPWS Reserves is restricted to specific trails described in reserve Plans of Management
Boating, kayaking, canoeing etc	Yes	Yes	Watercraft use is regulated by NSW Maritime
Walking and running	Yes	Yes	NPWS Reserves, especially those on the coast, have extensive networks of walking tracks

Access or activity type	State Forests	NPWS Reserves	Comment
Camping	Yes	Yes	Formal campgrounds are provided in many State Forests and NPWS reserves. Informal camping is subject to the relevant reserve Plan of Management
Angling	Yes	Yes	Fishing is regulated by NSW Fisheries
Shooting	Partial	No	Shooting for the purpose of feral animal control is permitted in selected State Forests under a permit system
Dog walking	Yes	Partial	Dog walking in NPWS Reserves is restricted to those classified as Regional Parks
Rock Climbing, Abseiling, Canyoning	Partial	Partial	These activities require a licence in State Forests and are subject to the relevant Plan of Management in NPWS Reserves
Fossicking	Yes	Partial	Requires a licence and is subject to the relevant Plan of Management

A notable feature of the table is the common access restrictions that apply to all public forests:

- Only registered motorised vehicles are permitted on public roads or management trails
- Unregistered motorised vehicles are prohibited on all forms of public land, including public native forest
- The construction of unauthorised 'single trails' for the purpose of trail biking, mountain biking and horse riding is strictly prohibited in all public native forests

Most public roads through the forests are constructed and maintained to a standard that supports 2WD access. In contrast, management trails tend to be unformed and are often only suitable for 4WD access, especially after wet weather. All management trails are accessible for walking and cycling.

Management trails in NPWS Reserves are designed for fire management and other operational purposes and are not generally open to private motor vehicles. The situation differs in State Forests, where most management trails are available for public access. However, State Forests also contain tracks that are installed for the specific purpose of supporting logging operations, and which are often not constructed or maintained to a standard that enables safe public use.

There are numerous walking tracks, especially within the protected areas, and a smaller number of approved horse trails and purpose designed mountain biking circuits. The walking tracks tend to be concentrated on the coastal fringe, adjacent to rivers and in locations where they provide access to points of scenic interest such as lookouts, waterfalls and canyons. The Bundian Way, Murramurrang and Light to Light walks all provide for multiday walks through the Region. Mountain bike circuits have been constructed in Bodalla, Mogo and Nullica State Forests.

Tourist and visitor accommodation is concentrated along the coast, mostly provided in commercial operations on private lands. Nonetheless, there are several popular campgrounds in National Parks and State Forests, including: Congo and Brou Lake in Eurobodalla National Park; Depot Beach, Pretty Beach and the Murramurrang Resort in Murramurrang National Park; Bittangabee and Saltwater Creek in Beowa National Park; Middle Beach in Mimosa Rocks National Park; and Yadboro Flat in Yadboro State Forest.

Two key distinguishing features of NPWS Reserves and State Forests are dog walking and shooting. Shooting is permitted under special licence in selected State Forests for the purpose of feral pest

control. In contrast, while pest control programs in NPWS Reserves are implemented by NPWS staff and contractors, the general public are not permitted to carry or use firearms in NPWS Reserves.

Dog walking is permitted in State Forests and selected Regional Parks. The Regional Park category of protected area is typically applied in urban fringe locations. Dog walking is not permitted in the other categories of NSW protected area, including National Parks and Nature Reserves.

Angling is a popular recreational activity throughout the region, especially on the coast. Most aspects of angling are regulated under the *Fisheries Management Act 1994* and *Marine Estate Management Act 2014*. The only involvement of NPWS or Forestry Corporation in the management of fishing relates to the provision of access to the coast and waterways, generally via boat ramps, roads and walking track.

Less common recreational activities, such as caving, abseiling, gliding, canyoning and fossicking, are highly site specific. The locations in which these activities are permitted, and the conditions that apply, are prescribed in the relevant Plan of Management.

13.2.2 Reserve categories and management planning

This report proposes that all areas of public native forest in the State Forests of the Region be transferred for declaration as National Park or another category of protected area under the NPW Act.

In recent years, there have been increasing claims that declaring areas as “National Parks” removes public access and prevents popular recreational activities. While this is untrue, the suggestion that parks exclude the community has contributed to strong opposition to the creation of new National Parks.

The governing legislation—the NPW Act—mandates the provision of opportunities for tourism, recreation, education and enjoyment in National Parks, State Conservation Areas and Regional Parks. The same requirement does not apply to Nature Reserves, although these areas still generally allow public access and other low-impact activities.

Plans of Management regulate the mix of recreational, commercial and other activities permitted within each reserve. They also set priorities for park management operations and the installation of visitor infrastructure.

Depending on the context, a particular recreational activity or visitor facility may be considered appropriate in one reserve but inappropriate in another. For example, dog walking or the construction of a mountain bike circuit may be permissible in a Regional Park on the urban edge of a regional centre yet prohibited in a nearby Nature Reserve.

The reserve category applied to any new reserve has a significant impact on the range of activities and infrastructure that are likely to be permitted. The NPW Act specifies the objectives and management principles for each reserve category. These categories can be placed along a spectrum ranging from areas managed strictly for conservation, research and education to those that allow varying levels of recreational, tourism and commercial activities.

The following summary of reserve categories highlights the different elements of conservation and recreation.

Nature Reserves sit at the strict conservation end of this spectrum. They are declared over areas of exceptional importance for biodiversity conservation and generally make limited or no provision for recreational activities or visitor infrastructure.

National Parks are declared over contiguous landscapes across which ecosystem processes are largely intact. They are typically large enough to ensure the conservation of natural and cultural heritage while also providing opportunities for low-impact visitation and recreation. National Parks comprise the majority of the total extent of the NSW protected area network.

State Conservation Areas are declared over landscapes that are subject to various forms of legal encumbrance, most commonly mineral exploration licences or mining leases. The State Conservation Area category allows governments to signal their intention to reclassify a reserve as a Nature Reserve or National Park once such encumbrances are removed. There is a statutory five-yearly review of all State Conservation Areas to determine whether reclassification has become feasible. In recognition of their intended future status, the management principles for State Conservation Areas are consistent with those for Nature Reserves and National Parks.

Regional Parks differ significantly from the three categories above. This category was originally designed for urban parklands with a dual conservation and recreational function, often containing substantial picnic areas, recreational infrastructure and sporting facilities. The Regional Park designation has also been used for areas undergoing large-scale landscape restoration, including former military sites requiring the removal of unexploded ordnance. Unlike other reserve categories, on-leash dog walking may be permitted in Regional Parks. Some Regional Parks are also managed by local government authorities or statutory trusts rather than NPWS.

Other reserve categories under the NPW Act include Karst Conservation Areas, Aboriginal Areas, Historic Sites and Aboriginal Places. These categories are generally applied to relatively small sites and have limited applicability to the forests of the Region.

The NPW Act also provides for the declaration of areas as Aboriginal Places and Assets of Intergenerational Significance. Such declarations provide additional levels of protection and place greater responsibility on the land manager to achieve conservation outcomes.

The NSW reserve categories correspond to the standards of the International Union for Conservation of Nature (IUCN) for protected areas. Nature Reserves correspond broadly to IUCN Category Ia, wilderness-type reserves to Category Ib, National Parks and State Conservation Areas to Category II, and Regional Parks to Category V.

PART F

14 RESERVE SELECTION

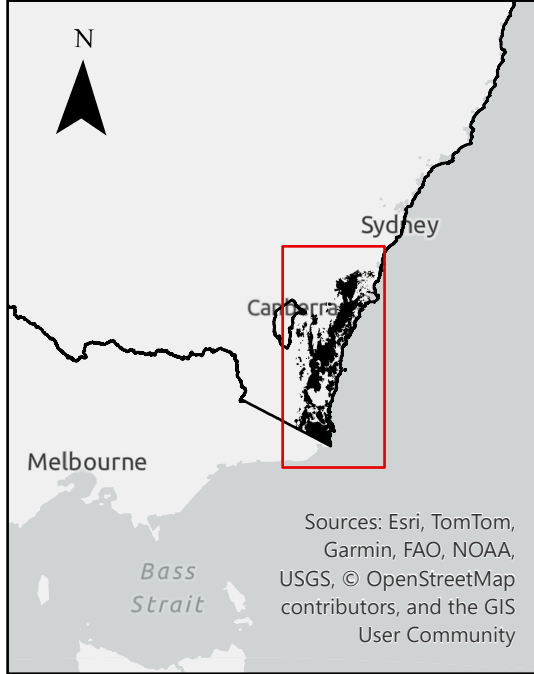
14.1 Assessment findings


This Report describes and details the extraordinary biodiversity, cultural and natural values of the public native forests of the Region. These forests should be treated as no less significant, or deserving of full protection, as the World Heritage listed forests of the Greater Blue Mountains and Border Ranges. Indeed, under the looming threats of climate change, urban development, mining and agricultural expansion, it can even be argued that our Southern Forests are fast becoming **the** most important component of the NSW forest estate.

This section brings together and summarises all of the factors that contribute to this significance assessment and its unavoidable corollary- that the highest and best use of the public native forests is not to support a low value, environmentally devastating wood chip industry, but as the new jewel in the crown of the NSW protected area network.

The assessment in Part C of this report and the State Forest Values Matrix in Appendix C demonstrate that all State Forests contain significant ecological and environmental values that warrant inclusion in the **Great Southern Forest National Park**. Across the Region, key habitats and vegetation communities, corridors and refugia are under-represented in the NPWS Reserves. The addition of all State Forests to the NRS would achieve a truly Comprehensive, Adequate and Representative (CAR) reserve system in South East NSW, connecting existing protected areas across key habitat corridors in the landscape. Nearly all State Forests are considered highly productive, contain threatened fauna species and glider corridors, TECs and Key Fish Habitat. Values unique to different State Forests are present, such as Critically Endangered flora and fauna populations, Grey-headed Flying-fox camps, critical climate refugia, Indigenous heritage and unburnt areas that are important fauna refuges for populations recovering from the 2019-20 fires. Seven major catchments are in the Park. Healthy forests in the catchments underpin freshwater ecosystem integrity. Intact forests stabilise soils, regulate streamflow and reduce sediment and nutrient runoff. Protecting the forests of these catchments benefits downstream environments including wetlands, estuaries and coastal waters. Industrial logging impacts hydrological processes (e.g. reduced water yield) and water quality, which has negative impacts on catchment health. Ecosystem integrity is threatened by logging, both in the terrestrial and aquatic environments. Industrial logging reduces hollow-bearing trees, alters forest successional dynamics, spreads invasive species, fragments connectivity, impacts soil, elevates bushfire risks, and increases carbon emissions. Several fauna species are vulnerable to industrial logging and require stronger protections, such as Greater, Yellow-bellied and Feathertail Gliders. The 2019-20 fires had significant impacts on fauna populations in the Region, where some of the most severely burnt areas in NSW were found. Logging has continued in burnt areas, cumulatively impacting species already suffering from the 2019-20 fires. The Park gazettal would give them much-needed respite from logging, promoting the recovery of fauna populations.

The **Great Southern Forest National Park** is shown in Figure 45 and encompasses the 55 State Forests and 98 existing NPWS Reserves of the South East Region of NSW. It includes all 24 Flora Reserves and excludes softwood plantations. The park is a total of nearly 1.2 million hectares in size, being approximately 365,000 hectares of State Forest and 824,000 hectares of NPWS Reserves (see Chapter 3.1). The Great Southern Forest National Park is 1.5% of the total land area of NSW and 53% of the Region. It would be the largest park in NSW and a significant contribution to the government's ambitions to meet the 30 by 30 target. The following chapters outline how the Park would meet NSW and Commonwealth government priorities and guidelines for the reserve network.

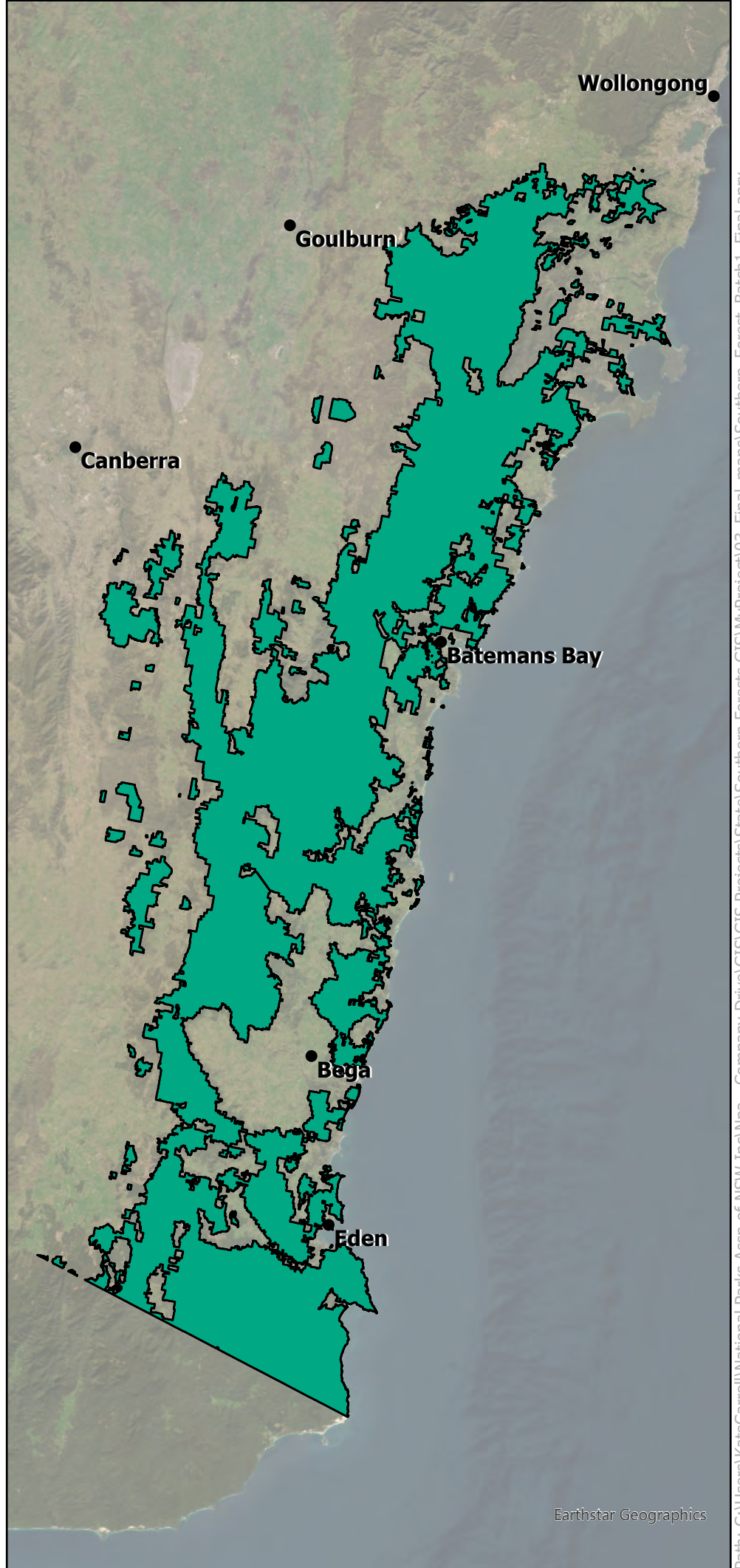
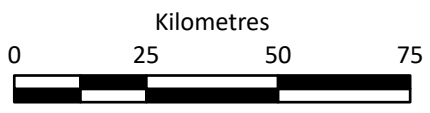


 Great Southern Forest National Park

NPWS Reserves © State Government of NSW and NSW Department of Climate Change, Energy, the Environment and Water 2021, State Forests © Forestry Corporation of NSW 2024, Aerial imagery © ESRI

Map produced by Kate Carroll, National Parks Association of NSW

15/05/2026



Earthstar Geographics

Figure 45: Great Southern Forest National Park proposal

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14.2 Commonwealth government priorities for NRS

The Commonwealth has identified priority areas for the NRS through mapping biodiversity values and combining these with ecological representativeness mapping. Ecological representativeness reflects CAR principles by assessing vegetation group presence within protected areas across different IBRA bioregions. Higher scoring priority areas represent higher biodiversity values and low ecological representativeness and protection. Higher scored areas are comparatively more important for protection and priorities for inclusion in the NRS. These are mapped in Figure 46 and show that areas of ‘high priority for inclusion in the NRS’ occur throughout the State Forests of the Region. Forty-two of the State Forests contain areas over 90%, being the most important areas for protection. This includes large areas of Bodalla, East Boyd, Dampier, Nadgee, Nullica and Yaboro State Forests. All State Forests contain areas 60% or higher, indicating they are in the top 40% of areas to be prioritised for inclusion in the NRS.

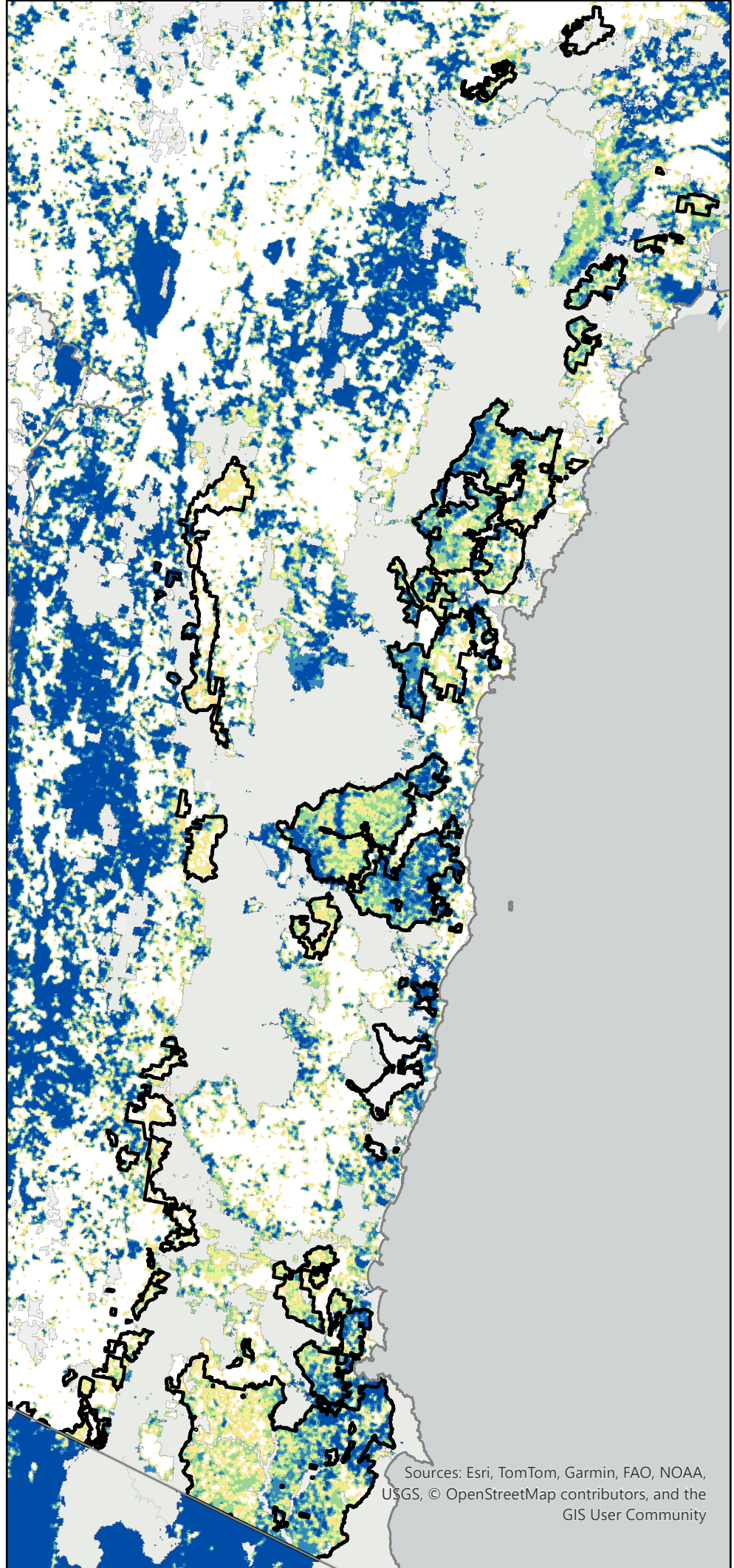
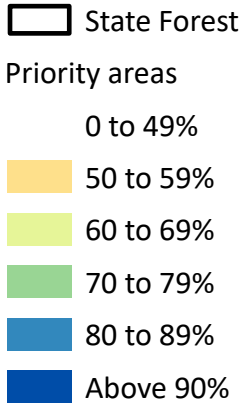
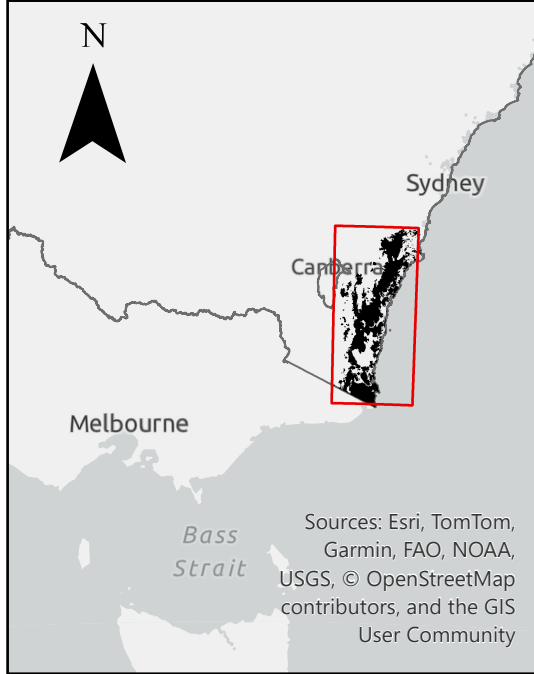
Priority criteria for additions to the NRS were developed by the Commonwealth in the 30 by 30 National Roadmap (DCCEEW, 2024). Table 43 outlines how the proposed Park meets the priority criteria, warranting inclusion in the NRS.

Further, the South East Coastal Ranges of NSW and Victoria are one of 14 priority places identified by the Commonwealth on mainland Australia for research, support and recovery actions for threatened species and TECs (DCCEEW, 2022). The Commonwealth government aims to improve the condition of priority places to benefit species and ecological communities as part of the Threatened Species Action Plan. The Great Southern Forest National Park would complement the goals of the Action Plan.

Table 43: Priorities for the NRS in the 30 by 30 National Roadmap and relevance to the proposed Park

Priority criteria	Relevance	Report reference
Priority should be given to areas that:		
<ul style="list-style-type: none"> are high in species diversity 	The proposed Park would protect a diversity of threatened flora and fauna species, including 36 threatened flora and 133 threatened fauna species. It also protects key habitat for 16 flora species and 28 fauna species.	Chapter 6.2
<ul style="list-style-type: none"> contain species that are highly endemic to an area 	Twelve threatened flora species and two fauna species (Watson’s Tree Frog and Long-footed Potoroo) are endemic to the South East Region or just beyond.	Chapter 6.2.1 and 6.2.2
<ul style="list-style-type: none"> provide habitat for nationally listed threatened species and ecological communities, and migratory species 	Several nationally listed threatened flora, fauna, migratory species and TECs occur within the State Forests of the proposed Park.	Chapter 5.2, 6.2, 1.1
<ul style="list-style-type: none"> contain, or provide habitat for, species and/or ecological communities under severe and imminent threat, that are irreplaceable, and/or at risk of extinction 	The State Forests contain habitat for many threatened species and communities including those at highest risk of extinction listed as Critically Endangered. Large areas of River-flat Eucalypt Forest, a listed Critically Endangered Ecological Community under the EPBC Act	Chapter 5.2, 6.2

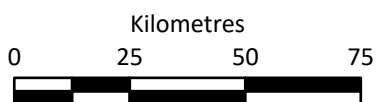
Priority criteria	Relevance	Report reference
	occur in the State Forests. As do the following Critically Endangered species: Long-footed Potoroo, Smoky Mouse, Swift Parrot, Eastern Curlew, Regent Honeyeater, Eastern Hooded Dotterel, <i>Acacia constablei</i> , <i>Prasophyllum canaliculatum</i> , <i>Rhodamnia rubescens</i> , <i>Thelymitra atronitida</i> . It also provides key habitat for glider species that are particularly vulnerable to the threat of logging.	
<ul style="list-style-type: none"> are important for the continued provision of ecosystem functions and services 	45 of the 56 State Forests in the Study Area have critical climate refugia for fauna. These areas will be important in the future (2070) for ecosystem function and services. The catchments require greater protections for ensuring water quality and water yield in the freshwater, estuarine and marine habitats.	Chapter 6.2.2
<ul style="list-style-type: none"> have ecological integrity and intactness 	The State Forests have had variable logging histories, yet old growth forest attributes remain. Other than logging, the forests have not been subject to other disturbances (e.g. mining, development).	Chapter 5.3
<ul style="list-style-type: none"> contribute to ecological connectivity. 	Key forest corridors occur across State Forest land connect missing links between NPWS Reserves. State forests are particularly important in the coastal regions as a major arterial route for gliders.	Chapter 8
Alignment with the CAR scientific framework. Priority should be given to including adequate samples of ecosystems within and across each IBRA bioregion and subregion.	The different IBRA bioregions and subregions of the Study Area would see a marked increase in protection of a range of ecosystems, including some that have had significant historical clearing.	Chapter 5.1.2



Priority Areas © Commonwealth of Australia, Australian Government of Department of Climate Change, Energy, Environment and Water 2025, State Forest © Forestry Corporation of NSW 2024

Map produced by Kate Carroll, National Parks Association of NSW

15/05/2026



Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community

Figure 46: Commonwealth priorities for the NRS

14.3 NSW Government NRS progress monitoring

The NSW government has assessed priorities for the reserve network by undertaking mapping against CAR targets for IBRA bioregions and subregions. A summary of the current NSW government CAR status of the IBRA bioregions and subregions relevant to the Park is provided in Table 44. This data was obtained from the maps in the *NSW 2024 State of the Environment Report* (NSW EPA, 2025) (SoE Report). Table 44 highlights significant shortfalls in most subregions in respect to adequacy. Adequacy mapping is variable across each subregion, and the range of values mapped are shown.

The SoE Report results relate to the following targets:

- **Comprehensiveness** - 80% of regional ecosystems (by number) are sampled in protected areas in each IBRA bioregion
- **Adequacy** – 15% of regional ecosystems (by area) sampled in protected areas in each IBRA subregion
- **Representativeness** – 80% of regional ecosystems (by number) sampled in protected areas in each IBRA subregion

The assessment methods by the NSW government to measure against these targets uses Mitchell Landscapes as a surrogate for regional ecosystems. Mitchell Landscapes were developed using geomorphic characteristics and are not informed by vegetation mapping. At the time they were developed, there was no consistent mapping of vegetation communities and formations across the state. However, that is no longer the case with the introduction of State Vegetation Type Mapping (SVTM). Vegetation mapping directly represents the biodiversity values that the reserve system is meant to protect and is therefore more meaningful in assessing against CAR targets. Vegetation can vary significantly across a single Mitchell landscape and is a limitation to using this data to assess ecosystem protection in the reserve network. As such, the more detailed analysis in this report, to ensure ecosystem protection for CAR targets, is focused on Vegetation Formation and Plant Community Type (PCT) analysis. Additionally, the Commonwealth specifies regional ecosystems as the “native ecosystem and its associated land form(s) mapped at a scale of at least 1:50,000 in the intensive land use zone and at least 1:100,000 scale in the extensive land use zone” (DCCEE, n.d.e). Under this definition, native ecosystem is “an ecosystem that would naturally occur in this locality. It includes native vegetation, bare rock, soil and sand communities and open water aquatic communities.” State-wide vegetation community mapping is best aligned with the regional ecosystem definition and therefore has been used in the CAR assessment.

The vegetation assessment in Chapter 5 used PCTs and Vegetation Formations as meaningful surrogates for regional ecosystems. We used a 30% adequacy target based on the 30 by 30 goals, which aims to protect at least 30% of the remaining extent of ecosystems within each IBRA bioregion and subregion. Our analysis in Chapter 5.1 identified three ecosystems that would reach over 30% protection in the Region from the proposed Park:

- Dry Sclerophyll Forests (Shrub/grass sub-formation)
- Dry Sclerophyll Forests (Shrubby sub-formation)
- Freshwater Wetlands

Additionally, the proposed Park would substantially improve subregional representativeness, particularly in subregions with lower initial reservation. Forested ecosystems consistently meet or exceed the 30% benchmark across most subregions, while non-forested and wetland formations remain the primary gaps.

The vegetation assessment was supplemented by an assessment of flora and fauna species in Chapter 6, assessing the adequacy of the protections of distributions, where species with inadequate protections in NPWS Reserves were identified. This was benchmarked as containing less than 30% of their Areas of Occupancy (AOO) and populations and/or less than 30% of their occurrences as measured using Bionet records. The assessment found that nearly all focal flora and fauna species would reach protection of over 30% of their habitat and/or occurrences from the proposed Park. In some cases, it is entire or near entire populations of flora species and over 90% of fauna occupied habitats (e.g. ground mammals and small mammals).

We also assessed Old Growth Forest mapping, which indicates that JANIS targets of 60% for each IBRA subregion would be met with the inclusion of State Forests into the NRS (see Chapter 5.4).

Table 44: SOE analysis of IBRA bioregions and subregions of the Region (NSW EPA, 2025)

	Comprehensiveness (IBRA bioregion only) Target 80%	Adequacy (IBRA subregion only) ²⁷ Target 15%	Representativeness (IBRA subregion only) Target 80%
IBRA bioregion			
Sydney Basin	90-100%		
South East Corner	90-100%		
South Eastern Highlands	80-90%		
IBRA subregion			
Burraborang (SB)		>15%	>80%
Ettrema (SB)		>15%	>80%
Illawarra (SB)		0-5%	>80%
Jervis (SB)		>0->15%	>80%
Moss Vale (SB)		0-5%	>80%
Bateman (SEC)		>0->15%	>80%
South East Coastal Ranges (SEC)		5->15%	>80%
East Gippsland Lowlands (SEC)		>15%	>80%
Bungonia (SEH)		10->15%	>80%
Kybeyan-Gourock (SEH)		10->15%	>80%
Monaro (SEH)		0-10%	70-80%

14.4 Guidelines

Assessment against the various State and Commonwealth reserve system guidelines and plans has been undertaken. This has included a review of the *Australian Guidelines for Establishing the National Reserve System* (Commonwealth of Australia, 1999). Assessment of the proposed Park against Tables 2 and 3 of these guidelines is provided in Table 45 and Table 46. Relevant Chapters of this report are noted against each criteria.

²⁷ Adequacy percentages are reported as variables across the subregions (there is not a single percentage for each subregion in the State of the Environment Report)

Table 45: Guidelines to be considered as a basis for identifying protected areas (Table 2 of the Australian Guidelines for Establishing the National Reserve System (Commonwealth of Australia, 1999))

Item	Relevance	Report reference
<i>Comprehensiveness</i>		
Does the area:		
increase the comprehensiveness of the NRS at a continental scale, and to what extent?	The Park would increase the NRS by 365,000 hectares. This would equate to an increase of 0.5% in NSW and 0.05% Nationally.	Chapter 14.1
add to the reservation of the full range of ecosystems recognised at an appropriate scale across and within each IBRA region, and to what extent?	The proposed Park would incorporate a range of ecosystems into the NRS from 7 IBRA subregions of southern NSW. A detailed analysis of the Park's comprehensiveness using the Global Biodiversity Framework target of 30% protection is available in Chapter 6.1. Regional analysis found that over 30% of 7 of 12 vegetation formations would be represented in the NRS as a result of the proposed Park.	Chapter 5.1
<i>Representativeness</i>		
Does the area:		
add to the representativeness of the NRS and to what degree?	The inclusion of State Forests would improve the representation of forested ecosystems in the NRS exceeding the 30% benchmark across most subregions	Chapter 5.1
enable better representation of ecosystems across their geographical or environmental range within the IBRA region?	The conservation status of 199 PCTs would be significantly improved by the State Forest inclusions in the NRS and add 3 additional PCTs that are currently unprotected.	Chapter 5.1
include the intrinsic variability of the ecosystems it represents?	The proposed Park includes a range of PCTs and vegetation forms across several subregions. The Park is spread across a wide geographic range, connecting large areas of vegetation accounting for variability in ecosystems.	Chapter 5.1
<i>Adequacy</i>		
Does the area:		
<ul style="list-style-type: none"> provide long-term security for one or more ecosystems and associated species? 	Significant increases in protection to Wet Sclerophyll Forests, Dry Sclerophyll Forests and Rainforests would occur from the proposed Park. It would increase the	Chapter 6.2, 8

Item	Relevance	Report reference
	<p>protection of highly cleared ecosystems such as Grasslands, Grassy Woodlands and Forested Wetlands. Further, up to 30 TECs would receive additional protections by the Park, including significant areas of River-Flat Eucalypt Forest. The Park would ensure habitat connectivity, at scale, important for species that move across the landscape. It would also ensure future refugia for landscape species, and the ecosystems they rely on, would be protected under predicted climate change. Many threatened species are reliant on the ecosystems of the State Forests, and the permanent protection of those State Forests would provide security for their conservation (e.g. Yellow-bellied Glider, Golden-tipped Bat, Sooty Owl, <i>Pomaderris bodalla</i>).</p>	
<ul style="list-style-type: none"> increase the security provided by the protected area system for one or more ecosystems and associated species, and to what degree? 	<p>Additional ecosystem protections would include >150,000ha Wet Sclerophyll Forests and Dry Sclerophyll Forests, >14,000ha Rainforests, >200ha Grasslands, >6,500ha Grassy Woodlands, 12,500ha of Forested Wetlands, and 10,000 hectares of potential TECs, of which 5,000 hectares are River-Flat Eucalypt Forest</p> <p>The proposed Park would protect entire or near entire known populations of 10 flora species. In many cases more than 50% of the known habitats or occurrences of threatened fauna species would be protected, this includes ~75% of Yellow-bellied and Greater Glider habitat and >90% of all known locations in the Region of Southern Brown Bandicoot, Spotted-tailed Quoll, Southern Long-nosed Potoroo, White-footed Dunnart and the rare, Critically Endangered Long-footed Potoroo and Smoky Mouse.</p>	<p>Chapter 5, 6.2, 8, Table 23, Table 24, Table 25, Table 26</p>

Table 46: Guidelines to be used as a basis for selecting protected areas (Table 3 of Australian Guidelines for Establishing the National Reserve System (Commonwealth of Australia, 1999))

Item	Relevance	Report reference
Ecological importance		
Does the area:		
contain a high diversity or abundance of ecosystems or species?	The proposed Park would protect a diversity of threatened flora and fauna species, including 36 threatened flora and 133 threatened fauna species. It would also protect 199 PCTs and up to 30 TECs.	Chapter 5.1, 5.2, 6.2
represent a centre of endemism, or refugia?	Twelve threatened flora species and two fauna species (Watson's Tree Frog and Long-footed Potoroo) are endemic to the South East Region or just beyond. Entire or near entire populations of 10 flora species occur in the Park, 6 of which are endemic to the Region. 45 of the 56 State Forests in the Study Area have critical climate refugia for fauna.	Chapter 6.2
contain areas significant for migratory species?	The State Forests provide critical habitat for migratory birds, offering both connectivity and essential refuge along their migration routes. Many migratory birds rely on a network of intact forest habitats to forage and shelter along their migration route. Migratory birds are known to inhabit 36 State Forests within the Region. The Critically Endangered Swift Parrot migrates from Tasmania to winter in south-eastern Australia, relying on blossoming eucalypts for food and is commonly found in the State Forests.	Chapter 1.1
contain habitat for rare or threatened species?	The State Forests provide habitat for a diversity of threatened flora and fauna species, including 31 threatened flora and 133 threatened fauna species.	Chapter 6.2
contain one or more areas which are a biologically functional, self-sustaining ecological unit?	The State Forests are vast areas containing extensive tracts of native vegetation supporting a diversity of threatened species. There are discrete ecosystems such as wetlands and rainforest, forest, grassland, heath and woodland vegetation formations. Old growth forest is	Chapter 5.1, 5.2, 5.4, 6.2, 10.1.3.2

Item	Relevance	Report reference
	present across much of the park and unburnt areas, providing refuge for fauna since the 2019-20 fires.	
To what degree has the area been protected from, or not been subject to, human induced change?	The State Forests have had variable logging histories, yet old growth forest attributes remain. Other than logging, the forests have not been subject to other disturbances (e.g. mining, development).	Chapter 5.3
Does the area capture important geographic attributes such as biological interzones or environmental gradients?	The proposed Park is spread across a wide geographic range, encompassing environmental and landscape variations from coastal plains, escarpments and tablelands and a range of ecosystems types.	Chapter 4.2 and 5.1
Reserve system design		
Is the area:		
<ul style="list-style-type: none"> based upon a bioregional assessment of reserve options aimed at maximising the comprehensiveness of the NRS? 	The proposed Park would incorporate a range of ecosystems into the NRS from 7 IBRA subregions of southern NSW. A detailed analysis of the proposed Park's comprehensiveness using the Global Biodiversity Framework target of 30% protection is available in Chapter 6.1. Regional analysis found that over 30% of 7 of 12 vegetation formations would be represented in the NRS as a result of the proposed Park.	Chapter 5.1
<ul style="list-style-type: none"> set in a landscape context with strong ecological integrity? 	The State Forests are vast areas containing extensive tracts of native vegetation supporting a diversity of threatened species and areas of old growth forest. There are aquatic habitats including freshwater streams and wetlands that support threatened and protected fish communities.	Chapter 5, 6, 8, 7
<ul style="list-style-type: none"> selected to ensure that a 'core' area is protected with an effective buffer and the provision of adequate connectivity (i.e. linkages/corridors) to other protected areas, or other areas which are managed sustainably for their natural resources? 	The State Forests are critical in maintaining habitat connectivity in Southern NSW. The State Forests contain key habitats in the north-south corridors, linking extensive tracts of National Park. Protecting these areas is critical for maintaining connectivity across Southern NSW and for facilitating fauna movement across the landscape into Victoria and the Sydney Basin.	Chapter 8
<ul style="list-style-type: none"> of sufficient extent to ensure that ecological functioning and species composition will be maintained? 	The proposed Park is significant in size, being 1.2 million hectares, adding about 365,000 hectares to the protected	Chapter 8

Item	Relevance	Report reference
	area network. The State Forests support a range of threatened species and ecosystems and provide important habitat corridors, linking existing NPWS Reserves across the landscape.	
<ul style="list-style-type: none"> • delineated to minimise 'boundary-to-area' ratio? 	The proposed Park would incorporate State Forests that are generally large areas and/or directly adjacent to existing NPWS Reserves.	
<ul style="list-style-type: none"> • designed to consider good neighbour policy and implications for on-going management? 	Management as protected area brings strong community consultation obligations in all management planning as well as substantial opportunities for community representation on Regional Advisory Committees. NPWS, as the State's largest public land manager, has an extensive array of 'good neighbour' policies that would apply to the transferred lands.	Chapter 13
<ul style="list-style-type: none"> • designed to minimise the impact of key threatening processes? 	<p>The proposed Park would reduce key threatening processes that are currently impacting the forests from logging such as:</p> <ul style="list-style-type: none"> ○ Feral fauna ○ Invasive plants ○ Loss of hollow bearing trees ○ Inappropriate fire regimes <p>NPWS administration of the Park would deliver improved resources towards fire and invasive species management. Ceasing of logging would prevent the loss of hollow-bearing trees, higher fire risk and disturbance patterns increasing the risk of invasive flora and fauna.</p>	Chapter 10
Economic Interests		
Does the area:		
<ul style="list-style-type: none"> • have current or likely use for the extraction or exploration of resources which may be foreclosed by declaration as a protected area? 	There are 17 exploration licences and 13 mining title applications (for exploration) in the Park. There are no major operating mines in the Park.	Chapter 10.2
<ul style="list-style-type: none"> • make an existing or potential contribution to economic value by virtue of its protection, e.g. recreation, tourism, refuge for economically important species? 	Our analysis demonstrates an overwhelming positive economic benefit to fully protecting all of the Region's	Chapter 13

Item	Relevance	Report reference
	public native forest as the Great Southern Forest National Park.	
Indigenous Interests		
Does the area:		
<ul style="list-style-type: none"> • contain Indigenous cultural values? 	<p>Aboriginal heritage items are found across 42 State Forests within the Region. Some State Forests are particularly rich in Aboriginal heritage including Dampier, Tallaganda, Flat Rock, South and North Brooman, Mogo and Boyne State Forests. The State Forests also hold two declared Aboriginal Places and The Bundian Way, a traditional Aboriginal pathway listed on the National Heritage List. It is a network of pre-colonial trade and cultural routes, older than the Silk Road or Roman roads (DCCEEW, n.d.a.). It includes numerous sacred sites, such as ceremonial grounds, stone arrangements, marked trees, whale places and moth places, many of which are interconnected and remain culturally significant. The Bundian Way passes through Nalbaugh, Yambulla, Towamba and East Boyd State Forests.</p>	Chapter 10.2
<ul style="list-style-type: none"> • have traditional usage and/or current or potential economic value for Indigenous people? 	<p>The Region's forests have unquestionable significance to Indigenous people and joint management of the proposed Great Southern Forest National Park would offer substantial employment, service contracts and business opportunities</p>	Chapter 10.2
Scientific Importance		
Does the area:		
<ul style="list-style-type: none"> • have existing or potential value for scientific research and/or environmental monitoring? 	<p>The Region's forests have made major contributions to research into first nation's history and heritage, forest ecology, fire management and species recovery. It includes numerous sites declared as Assets of Intergenerational Significance and subject to rigorous monitoring programs.</p>	N/A

Item	Relevance	Report reference
Social Interest		
Does the area:		
<ul style="list-style-type: none"> • have existing or potential value to the local, national or international community because of its heritage, cultural, aesthetic, educational, recreational or economic values? 	The public native forests of the Region clearly satisfy the requirements for the National Heritage List and have strong potential for consideration as a landscape of World Heritage.	Chapters 10.2, 13
Feasibility		
Is the area:		
<ul style="list-style-type: none"> • available? 	This study is restricted to public native forests under the care and control of the NSW State Government. It is entirely within the legal authority of the parliament to extinguish any commercial encumbrances (e.g. wood supply agreements) and existing use rights (permissive occupancies, grazing leases, exploration licences) and to pass legislation declaring the former State Forests as National Park	
<ul style="list-style-type: none"> • cost-effective in terms of acquisition, establishment and management? 	This Report has demonstrated that the most cost-effective land management model for these forests is as protected area rather than State Forest	
<ul style="list-style-type: none"> • able to be managed to mitigate threatening processes and ensure persistence of ecosystems and species over time? 	<p>The proposed Park would reduce key threatening processes that are currently impacting the forests from logging such as:</p> <ul style="list-style-type: none"> ○ Feral fauna ○ Invasive plants ○ Loss of hollow bearing trees ○ Inappropriate fire regimes <p>NPWS administration of the Park would deliver improved resources towards fire and invasive species management. Ceasing of logging would prevent the loss of hollow-bearing trees, higher fire risk and disturbance patterns increasing the risk of invasive flora and fauna. This would improve the persistence of ecosystems and species in the Region.</p>	Chapter 10

15 CREATING THE GREAT SOUTHERN FOREST NATIONAL PARK

15.1 The Great Southern Forest National Park

The term Great Southern Forest National Park is used in this report as an overarching title for all of the public native forests that NPA proposes be permanently protected through gazettal under the NPW Act. NPA is not proposing that the existing protected areas within the Region all be renamed- there is far too much community attachment and familiarity with those reserve names. Instead, just as already applies to the Greater Blue Mountains and Great Koala National Park, the Great Southern Forest National Park is a way of expressing and identifying the connections that apply across a landscape of protected areas.

15.2 Preparing for transfer of State Forests

There have been many previous transfers of State Forests to National Parks. Recent examples include the Great Koala National Park and, within the Region, the transfer of the Murrah Flora Reserves and establishment of the South East Forest National Park. The processes involved in transfers have been refined over the decades. Notable changes include a greater investment in assessing options and support requirements for affected timber industry workers and more intensive 'pre-gazettal' engagement with First Nations communities about their wishes for the future of the lands.

Based on these precedents we would expect that, prior to finalising reserve boundaries and introducing a gazettal Bill, the NSW Government would:

- Establish community, industry and Indigenous panels to advise the Minister on final boundaries, governance, compensation and transitional arrangements;
- Identify alien uses across State Forests, e.g. agistments, exploration licences, permissive occupancies, easements, utilities, telecommunications facilities and other encumbrances on title;
- Prepare an inventory of the design, location and condition of infrastructure and other assets across State Forests, including roads, boundary fences, quarries, fire observation platforms, weather stations, visitor facilities, picnic areas and campgrounds; and
- Develop a funding package for Treasury and Cabinet, covering industry payouts, worker retraining, one off planning expenses (community engagement, restoration strategy, visitor and tourism strategy) one off operational expenses (road closures, logging area rehabilitation and restoration), ongoing NPWS staffing and operational costs and joint management costs.

15.3 Reserve categories

It is recommended that all existing protected areas within the Region retain their current reserve category. For State Forests that would be newly declared as protected areas, NPA recommends classification as National Park, Nature Reserve or State Conservation Area. The latter would apply where legal encumbrances prevent immediate declaration as a National Park or Nature Reserve.

The National Park, Nature Reserve and State Conservation Area categories maintain a primary focus on managing the landscape for ecosystem health. National Park and State Conservation Areas also provide considerable scope for low-impact recreational activities and the installation of appropriate visitor

infrastructure. This may include campgrounds, lookouts, walking tracks, mountain bike circuits, horse trails and picnic areas.

The existing Flora Reserves within the Region should all be reclassified as Nature Reserve. This step maintains their standing under Category 1 of the IUCN classification of protected areas.

As detailed in Chapter 13.2.2, there are areas within the existing State Forests that might be more appropriately managed as Regional Park rather than National Park or Nature Reserve. This applies specifically to areas with pre-existing use for walking dogs or where high intensity mountain bike facilities have been constructed.

In NPA's view any of the remaining 'standard' recreational uses such as camping, walking, cycling, horse riding and fossicking can be accommodated within National Parks and subject to location specific suitability assessment as part of the preparation of Plans of Management.

NPA accepts that there may be situations where existing encumbrances on title require the use of the 'transitional' reserve category State Conservation Area. The key proviso on the use of this reserve category is that there must be regular reviews to determine when such encumbrances have been resolved to enable the reclassification as National Park or Nature Reserve.

NPA recommends that legislation declaring the new protected areas make explicit provision for the establishment of joint management arrangements as a matter of priority. However, it is not recommended that declaration be deferred until such arrangements have been finalised.

Decisions about which activities should be accommodated in specific locations across the Region should be resolved during the preparation of the publicly exhibited draft Plan(s) of Management.

Matters requiring careful consideration will include:

- Identification of a credible pathway towards the implementation of Aboriginal joint management across all of the Region's public native forests
- Resolution of existing use rights, including agistments, easements, licences, leases and occupancies
- Assessment, repair and installation of fences, boundary signage, water sources, roads, tracks, lookouts, picnic areas, telecommunications facilities, helipads and other basic infrastructure
- Rationalisation, repair and restoration of secondary roads and tracks
- Review of community demand for mountain biking and dog walking, and identification of appropriate locations
- Transition of existing State Forest campgrounds to NPWS booking systems
- Support for, and enablement of, nature- and culture-based tourism businesses

15.4 Park establishment

Following the gazettal of the Great Southern Forest National Park, responsibility for the planning, management and regulation of activities within the new park will transfer to NPWS and the Aboriginal Board of Management.

Initial priorities for the establishment phase include:

- Finalisation of joint management arrangements

- Recruitment of staff
- Issue of a Statement of Management Intent
- Rationalisation of the road and trail network, including closure of temporary roads installed solely for forestry operations
- Fencing
- De-agistment
- Boundary and entry signage
- Begin preparation of POM, including landscape restoration, fire and pest management strategies
- Resolution of existing use rights, including agistments, easements, licences, leases and occupancies
- Assessment, repair and installation of fences, boundary signage, water sources, roads, tracks, lookouts, picnic areas, telecommunications facilities, helipads and other basic infrastructure
- Rationalisation, repair and restoration of secondary roads and tracks
- Transition of existing State Forest campgrounds to NPWS booking systems

15.5 Management planning

Plans of Management (POM) are the primary plan that applies to every NPW Act reserve in NSW. The minimum contents of POMs are defined under Section 72 of the NPW Act and standard templates are used across the State.

The development of a new POM or POMs will play a critical role in guiding, regulating and prioritising activities in the former State Forests. In some cases it may be possible to simply expand the scope of an existing POM for an adjoining protected area, while in others a wholly new plan will be required. Another option, which has been adopted in relation to the GKNP, is to prepare a new POM to include all of the newly transferred State Forests. Whichever option is adopted, planning at such a scale, over 1 million ha, will necessarily be complex and require careful management and sufficient resourcing.

Key considerations for the new POM(s) include:

- Joint management arrangements
- Landscape scale restoration and habitat integration
- Visitor and tourism facilities
- Tourism economy support and enablers
- Population monitoring and recovery for key at-risk fauna, flora and ecological communities including Koala, Bellinger River Turtle, Greater Glider and fire refugia
- Resolution of existing use rights, including agistments, easements, licences, leases and occupancies
- Review of community demand for mountain biking and dog walking, and identification of appropriate locations
- Support for, and enablement of, nature- and culture-based tourism businesses

15.6 Whole of landscape issues (additional recommendations)

There are many additions to the NPWS Reserve network in the Region and surrounds that warrant consideration. These are beyond the scope of this report which was limited to State Forests, biogeographically bounded. These other areas include but are not limited to:

- Connectivity of Seven Mile Beach National Park: expanding park boundaries to adjacent private and crown land to protect a unique Southern Greater Glider population
- Private and public land in the Southern Highlands: connecting habitat corridors of the South East Region to the Sydney Basin and Blue Mountains
- Tinderry Nature Reserve: Expanding the reserve into Crown land to the south east

- Identification, restoration and conservation of ecological communities in other tenures. For example, a focus on those communities that occur on higher fertility lands that have been largely lost from historical clearing

Additionally, NPA has proposed a National Park in the Jervis Bay region. It is a mixture of private and public land tenures, including the State Forests of the Great Southern Forest National Park, protecting missing links in the NRS of what is a highly unique and biodiverse area. The Jervis Bay proposal is supplementary, and we aim to have it included in the Great Southern Forest National Park.

15.7 Conclusion

The Great Southern Forest National Park Proposal presents a compelling, evidence-based case for a transformative shift in forest management in south-eastern NSW. It demonstrates that:

- The Region's biodiversity is globally significant yet inadequately protected.
- State Forests contain irreplaceable ecological values that cannot be sustained under current logging regimes.
- Adding these forests to the Protected Area network would dramatically improve CAR outcomes, strengthen climate resilience, and deliver long-term social and economic benefits.
- The proposal aligns with Australia's commitments under the Global Biodiversity Framework and represents one of the most significant conservation opportunities in NSW history.

The report concludes that permanent protection of the Region's public native forests is essential to secure their ecological, cultural, and community values for future generations.

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