GREAT SOUTHERN FOREST

a new approach to native forest management for beauty, culture, habitat, jobs, oxygen, soil, water, wildlife, climate mitigation and carbon sequestration

"This is the only sensible way forward on forests"
Dr Judith Ajani, Economist, Australian National University, Fenner School of Environment and Society.

Bega River mouth to Mumbulla and Gulaga mountains. photograph: the late Richard Green

"This work looks really impressive and important. I admire your work in this area immensely." Professor Tim Flannery, Chief Director, Climate Council

RECOMMENDATION

The Great Southern Forest recommends that Federal and State Governments change management of the 432,575ha of public native forests in the Eden and Southern Regions of NSW from timber extraction to retaining them for carbon sequestration and climate stabilisation with jobs in forest restoration, culture and tourism.

GUIDING PRINCIPLES

For the State's 432,575ha of public native forests in the Eden and Southern Regions of NSW, the Great Southern Forest recommends that the State and Federal Governments:

1. Espouse a new, ethically responsible long-term vision based on recognition that our public native forests now have greater environmental and economic value if left standing than being logged for woodchips; and acknowledge that plantation timbers surpass our domestic and export wood needs.
2. Endorse changing management of these biodiverse ecosystems from destructive and loss-making logging under outdated, failed RFA regimes, to their crucial roles in the climate and water cycles, and halt and reverse declines in their major contributions to species diversity and community well-being.
3. Develop new management arrangements by drawing on science and Aboriginal land management knowledge to empower Traditional Owners and others to participate in a highly skilled workforce in diverse regional jobs in forest restoration and adaptation.
4. Acknowledge the respect regional communities have: for our native forests and the life they support; for their carbon sequestration and climate mitigation benefits; and for their intrinsic uniqueness and beauty.

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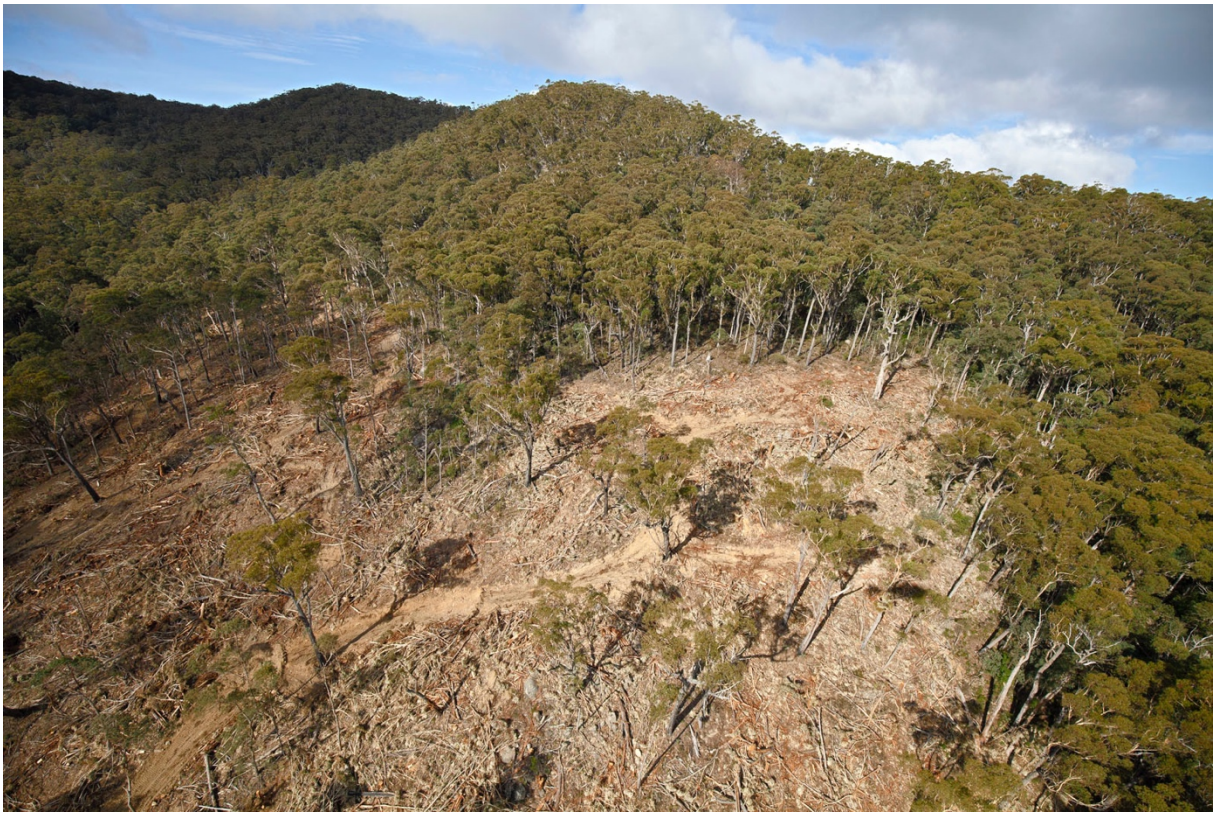
Logged Glenbog State Forest, 2016: photograph, the late Carolyn Green



We acknowledge the peoples of the Yuin and Wiradjuri Nations and the Ngarigo, Walgalu, Dharawal, Gundungurra, Djirringanj and Ngunnawal tribal people, who are the Traditional Owners of the Country that is the subject of this vision. We pay respect to the Elders past and present of these Nations and to other Aboriginal people who read this Brief.

Endorsers: Australian Forests & Climate Alliance | Australian Plants Society NSW | Australian Rainforest Conservation Society | Australian Wildlife Society | Bega Valley Greens | Better Planning Network | Clean Energy for Eternity Inc. | Conservation Council ACT | Conservation Council of South Australia | Environment East Gippsland | Environment Victoria | Forest Media | Four Winds | Friends of Leadbeater's Possum | Friends of the Koala Inc | Green Music Australia | Healesville Environment Watch Inc. | Lawyers for Forests | My Environment | National Parks Association (Far South Coast branch) | National Trust NSW | Nature Conservation Council NSW | North Coast Environment Council | NPA NSW | NSW Bird Atlassers Australia Inc. | NSW Wildlife Council Inc. | Potoroo Palace | SEE-Change | SCPA South East Producers | South East Region Conservation Alliance Inc. | Stop Arms Fairs in Eurobodalla | Threatened Species Art Competition | Total Environment Centre | Trees For Life | Western Australian Forest Alliance | Wildlife Rescue South Coast | 13/12/2017

WHAT IS THE GREAT SOUTHERN FOREST PROPOSAL?

> *Our world is at a critical crossroad. Our very future and the existence of life depend upon us transcending our limitations by evolving solutions, which are at least one step above the thinking that created our problems.*[1]

As Australians, it is our responsibility to look after our country and its unique plants and animals. Custodial responsibility is at the heart of the post-logging vision for the Great Southern Forest (GSF) of NSW. This proposal heralds an alternative environmentally conservative and profitable future for the southeast region's forests for wildlife protection, job creation, and a changing climate.

The Great Southern Forest proposal is a widely researched, solutions-based initiative for the magnificent carbon and biodiversity dense south eastern native forests. It offers nature-based solutions to critical national and global problems at low cost and with great benefit in terms of climate stabilisation, environmental and economic success, increased resilience and biodiversity, regional employment, Indigenous participation and social coherence. It proposes a new model of forest management which is relevant and transferable nationally and internationally. The Great Southern Forest can reduce forest fragmentation thereby equipping forests as a whole with the capacity to withstand and ameliorate a disrupted climate.

Expiration of the State Forests' Regional Forest Agreements (RFAs) in the Eden (2019) and Southern (2021) sub-regions is the catalyst for re-evaluating logging-based forest management. The GSF proposal focuses on 432,757ha of State Forests from Nowra to the Victorian border and inland to the Tumut region; one third of NSW's entire public native forest estate (pp. 7-8). The GSF is not a plan for a reserves system. The vision is to unite the current mosaic of public forests, National Parks and private forests in an integrated, cohesive forest landscape with comprehensive environmental protections. The provisions of the Environmental Protection and Biodiversity Conservation Act (1999) Cth. do not now apply in State Forests.

The principles of the Great Southern Forest would protect the State's degraded forests and their remaining unique wildlife. It will reorient the Federal and State Governments to recognise our public native forests as an important land-based aid to climate stabilisation and carbon storage. Recognising the value of regenerating forests has become critical. Regrowth of forests to maturity may take up to 200 years. Native forest logging disregards the fact that "… south eastern Australia has the highest known biomass carbon density in the world".[2] Thus, the Australian Government has a moral obligation to support their protection.

NEW MANAGEMENT REGIME

> *The economy is a wholly owned subsidiary of the environment. Whether at a national or global level, the economy exists inside the environment—the ecosystem. It's a box inside a circle, if you like. All human activity—all our producing and consuming—depends directly on the natural environment. The air we breathe, the water we drink, the food we eat, the clothes we wear, the shelters we build and the energy we use all come from the ecosystem that surrounds us.*[3]

This is the chance of a lifetime to implement new management which creates and supports sustainable jobs, creates healthy forest environments and acknowledges and observes global protocols. The GSF proposes halting native forest logging losses and directing funding into critically needed forest restoration and boosting tourism. Jobs under this model would be

sustainable and free from social controversy. To reap the benefits, the Governments would terminate the RFA process and end the native forest logging sector.

The GSF proposes a new management regime akin to that outlined in the paper "*Climate Change and Forests of the Future: Managing in the Face of Uncertainty*".[4] The authors offer a conceptual framework for managing forested ecosystems and acknowledge that no single solution fits all future challenges. This restorative structure of adaptation and mitigation approaches could be well suited post logging to native forests in the southeast region as these forests offer unique refugia for threatened species.

Adaptation strategies take into account: *resistance* options offering protection of highly valued resources; *resilience* options to improve the capacity of ecosystems to return to desired conditions after disturbance such as logging; and, *response* options to facilitate the transition of ecosystems from current to new conditions. Mitigation strategies include options to sequester carbon and reduce $C0_2$ emissions.[a] Management could apply new restorative technologies such as drones which plant 300 tree seeds per hectare in 18 minutes[b] in degraded forest areas.

NEW JOBS IN SOUTHEAST NSW

> *...citizens have right to live and flourish. Government, elected by the people, has a duty to protect the natural systems required for their survival: forests, wildlife, soil, water and air.*[5]

The Great Southern Forest proposes solutions for regional employment. Employment in native forest logging continues to decline. Only three small sawmills operate in the Southern Forest region and employ fewer than 100 people.[6] After declaring losses for many years, the Japanese owners of the Eden chip mill, the only one still operating in NSW, sold it to Allied Natural Wood Exports in 2016. The chipmill employs fewer than 45 people and the native forest industry employs only 0.1% of the workforce state wide.[7]

The GSF advocates investment in a critically needed, job-intense forest restoration industry to:

- create tree nurseries and silviculture for multispecies regeneration
- plant millions of trees on cleared land to connect fragmented landscapes
- support critically endangered wildlife, hollow-dependent species and small isolated colonies of koalas
- install and monitor nesting boxes for hollows-dependent species whose habitats have been destroyed
- manage pests and weeds and controlling feral animals
- combat forest diseases such as *phytophthora*
- install signs and trail maps to ecological and cultural attractions
- grade and repair roads and replace culverts
- manage vegetation on roads/trails/walking tracks
- install and maintain fences and tourism infrastructure such as eco huts and facilities.

> *To damage our Mountains is to physically damage us. The person is the Land and the Land is the person. Our connection with the Mountains, with this Earth, is alive and strong.*[8]

The GSF vision offers culturally responsive ways for Aboriginal people to play a vital role in land and native forest management and protection which complements Indigenous Rangers' Skills,

[a] See also, Professor Richard Hobbs's extensive research into restoration of damaged landscapes. Richard Hobbs, IAS Distinguished Fellow, Ecosystem Restoration and Intervention Ecology Research Group, UWA. Hobbs, R.J. 2005. Landscapes, ecology and wildlife management in highly modified environments – an Australian perspective. *Wildlife Research* 32:389-398.
[b] http://www.biocarbonengineering.com/technologies

the Working on Country programs[9], and the Plan of Management for the Yuin Bangguri Parks. Investment in activities such as Culture Camps involving cultural site management, bush harvest for production of bush oils, language and artefact workshops, cultural burns, and development of media and communications through stories on Country would help preserve cultural histories and practices and create opportunities for Cultural enterprises in tourism.

Changing management of State Forests may also take pressure off National Parks by opening up State Forest areas to tourism development. In the southeast region, the growing tourism industry contributes far more economic benefit than forestry, fishery and agriculture combined, which comprise only 3.2% of the workforce.[10] Tourism as one of the biggest employers requires the most infrastructure support. Over 60,000 international visitors travel to this region each year[11] and the benefits are shared across related businesses. Tourism Australia identifies 'immersion in nature' as the primary motivator for inbound and domestic travel markets. Tourists want adventure, such as Ranger led forest-based experiences, cultural, heritage and educational tourism. Seeking beauty, dark sky country and immersion in nature are primary motivators for inbound and domestic markets.

With a 'business as usual' approach to native forests, this prosperous and growing industry could be threatened by the rate of destruction of the natural beauty which forms the heart of the tourist experience. Global instances of pioneering restorative management of degraded landscapes have boosted the tourism industry.[c] Tourists' lengths of stay could be extended by creating the environment for a world-class eco and cultural tourism industry capitalizing on the increase in the growing Asian tourist market. Local jobs for the rapidly expanding cruise ship market in Eden Port and outstanding nature-based experiences in Australia's Coastal Wilderness could be augmented.

CLIMATE STABILISATION AND CARBON BENEFITS

> *In 2013, Australia was the 13th highest carbon emitter per capital in the world. 16.3 metric tons per person, per year. Nearly double 1960's figures.*[12]

Forests are living planetary organs which ensure homeostasis and so, the conditions for Life. Forests are living, breathing entities drawing down atmospheric carbon dioxide, storing it as terrestrial carbon, and breathing out oxygen. Globally, forests have been depleted to 1/8th their size from the beginning of the Industrial Revolution[13] yet they are vital for climate stabilisation.

Climate disruption compounds and accelerates threats to habitats and biodiversity, and is the single biggest global threat to human health[14] and the planet's economic future. Unlogged forests contain three times more carbon than logged forests.[15] The forests of southeast NSW store more carbon than first thought so the carbon deficit from logging is underestimated as are the deficits associated with logging process.[16] Whole interconnected forests have the capacity to address these multiple threats by actively sequestering carbon and maximising its storage.

The role of forests in climate dynamics and as carbon sinks was not considered when the Regional Forest Agreements were signed 20 years ago. Implementation of the RFA framework exacerbates critical current conditions. "In some respects, the RFAs must be viewed as being the antithesis of economic and environmental success".[17] In contrast, the Great Southern Forest proposal integrates global climate science, and local empirical and scientific knowledge.

Ceasing public native forest logging can help Australia to cost effectively meet its carbon emission reduction targets. Carbon accounting for forests is mandatory under the Kyoto Protocol.[18] As a signatory, the Commonwealth of Australia is internationally bound to meet

[c] Such as in New Zealand, Gorongosa National Park Mozambique, and Brazil

emission reduction targets. This requires that all signatories implement protection and enhancement of carbon sinks and reservoirs.

> *Carbon sequestration policies remain at a higher level of abstraction, stating merely strategic objectives, possibly because these markets are only emerging and remain political and highly uncertain.*[19]

The Lancet Commissions' enquiry[20] found that the greatest carbon mitigation benefit would be achieved by protecting native forests, afforestation and reforestation. The Paris Agreement, signed by 196 nations, allocated a separate Article[21] to forests in recognition of the role they play as critical global carbon sinks.[22] As the country with the most carbon-dense forests in the world[23], Australia can begin creditable forest management by ending native forest logging.

SAFEGUARDING OUR WILDLIFE AND COMMUNITIES

> *Since 1788, nearly 65% of the koala forests of Australia have been cleared – over 116 million hectares. The remaining 35% (41 million hectares) remains under threat from land clearing for agriculture, urban development and unsustainable forestry.*[24]

Australia is facing an extinction crisis: the Australian Government lists more than 1,700 species of animals and plants at risk of extinction. We have the worst mammal extinction rate in the world. Over 30 native mammals have become extinct since European settlement. In the last 400 years, one in three global mammal extinctions have occurred in Australia. Around 30% of our surviving non-bat mammal species are threatened.[25]

The unique Southern Koalas once roamed the region yet now only highly endangered small isolated colonies remain on the far south coast.[26] The EPBC Act does not protect them in State Forests.[27] Koalas prefer deep-rooted, tall specific eucalypts and logging compromises their ability to disperse and breed with other populations in the southern highlands, north-eastern Monaro and the far south coast.

The Commonwealth states that firewood harvesting of the habitat of hollows-dependent threatened species (such as the Glossy Black-Cockatoo, Swift Parrot and Superb Parrot) is a key threatening process.[28] Hollow-bearing trees in State Forests are not given the protection they require.[29] Mature and old hollow-bearing trees provide flowers, nectar, fruit and seeds and a complex substrate that supplies diverse habitats for invertebrate populations.[30] The southeast region hosts endangered hollow-dependent fauna such as the Yellow Bellied Glider and the Powerful Owl. When the fragile and defenceless Greater Glider loses its home tree it goes to ground and a predator takes it. Native forest logging and burning destroys the maturity of essential wildlife habitat. Logging rotation lengths are too short as hollows don't form in eucalypts younger than 100 years and some wildlife species need trees older than 150 years. Whole forests are needed for wildlife preservation; not fragmented parcels.

In April 2015, the World Wildlife Fund listed Australia as "one of 11 places around the world that will account for 80% of global forest loss by 2030".[31] Nearly 300,000 ha of the State's native forests in the Southern Region are logged. These native forests support wildlife, store and draw down carbon, protect soil, and provide us with clean water. Logging removes canopy shade, causes emissions, compacts soil and yet also causes erosion and downstream sedimentation [32] [33], and "is in conflict with maximised water yields from native forests".[34] This jeopardises the supply of clean water from catchments to local communities, and affects fish nurseries and aquaculture such as oyster production.[35] Canopy removal dries forest floors so logging makes forests more fire prone.[36] [37]

Native forest logging is a key threat to our native wildlife as it causes habitat destruction, modification and fragmentation and alters the natural species composition. Australia has a dismal record of species extinctions, and the number of species being declared vulnerable or threatened continues to grow. The Great Southern Forest would create a protected and connected landscape to help reduce loss of our unique wildlife. The GSF can protect vulnerable and threatened wildlife by safeguarding habitat and restoring the connectivity wildlife needs to roam and breed.

A National Parks Association study determined, "The RFAs did not achieve intended targets to protect threatened species, and the RFAs have reduced protections for threatened species as compared to protections under the EPBC Act 1999".[38]

The GSF would improve the health of the region's communities by avoiding the use of poisons and post-logging burning, and improve the emotional health of people, and wildlife carers, for whom native forest logging causes angst and stress. Communities seeking justice for our native forests is echoed in a study[39] arguing for ecological justice to be considered as "an important aspect of more socially orientated environmental justice for forest protection".

FINANCIAL BENEFITS

> *Much of our economic activity involves misusing, overusing and abusing the natural environment. We've done great damage to our soil, rivers and aquifers, we've destroyed much habitat and many species, and now the world's overuse of fossil fuels is playing havoc with the climate.*[40]

The native forest woodchipping sector of NSW is not financially or economically viable; it is unprofitable, in decline, and has been displaced by the expanding plantation industry. Over 80% of sawn timber from NSW now comes from mature Australian softwood plantations.[41] Between 2009 and 2014 the Softwood Plantations Division of Forestry Corporation (formerly ForestsNSW) cross-subsidised native forestry logging to the order of $79 million.[42] Average losses in other recent years have been $11 million per year.[43] Thus, native forest logging makes no economic sense and is heavily subsidised by the taxpayer. Diverting native forest logging subsidies, and jobs, into softwood plantations could result in a larger overall timber industry.[44.]

Additionally, carbon credits, as part of an honest carbon accounting scheme, could offer a viable economic alternative to failing commercial forestry, with its declining output and employment. The Australia Institute reports that "native forestry doesn't currently provide any economic value to the state of NSW, and that citizens of NSW would be $40 million per year better off if native forests were left alone rather than logged".[45]

The developers of this proposal welcome engagement in State and Federal Governments' initiatives to set right the consequences of native forest logging for woodchips generated by inappropriate past decisions which unfortunately failed to take into account either its detrimental impact on the environment and the economy, or the importance of the role played by healthy forests in a changing climate.

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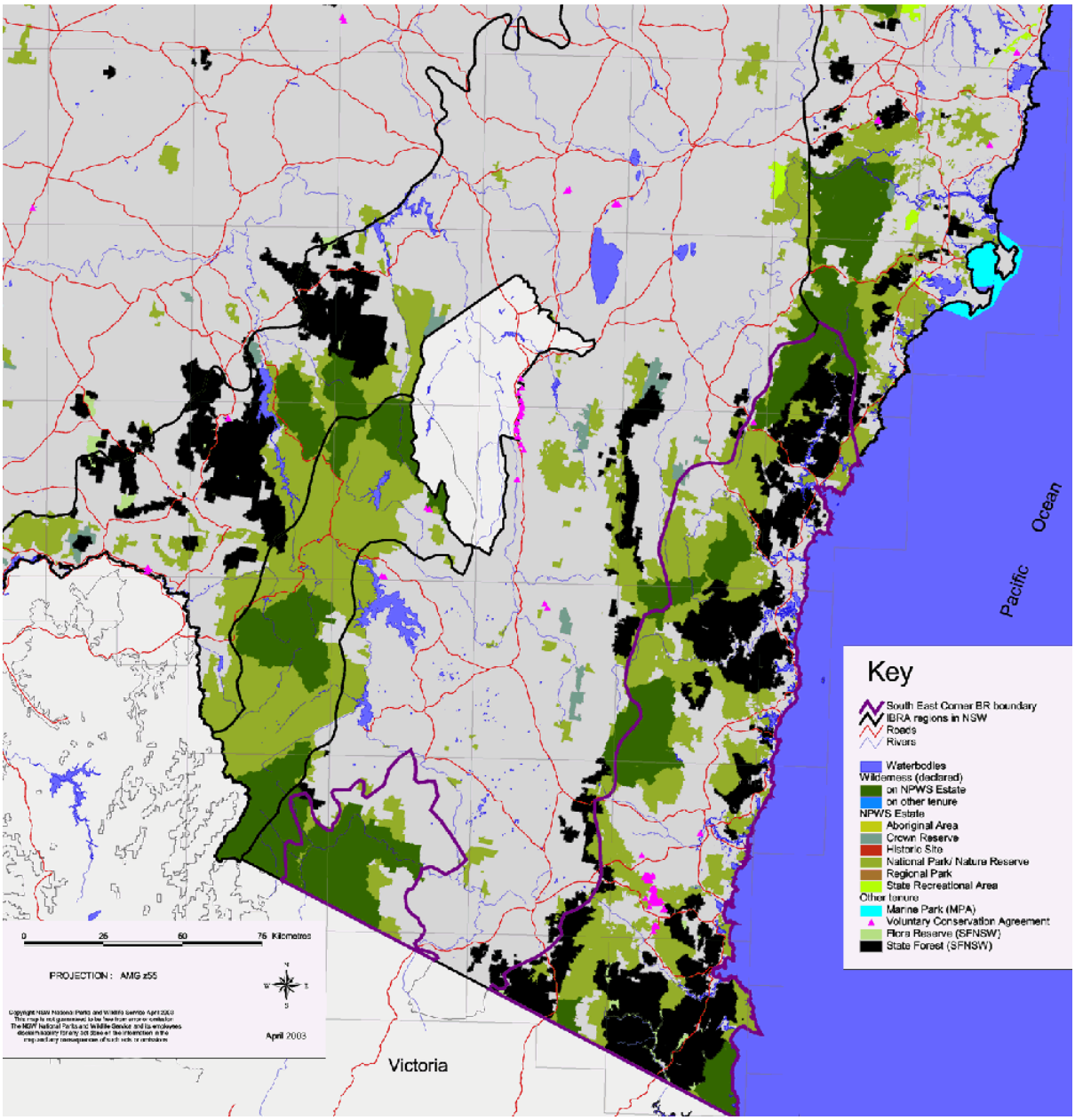
Supplementary materials: http://www.greatsouthernforest.org.au/resources.html | 13 December 2017

Map of the Southern Region's State Forests

Black areas show approximate boundaries of the State Forests to which the Great Southern Forest management principles apply (apart from plantations).



List of Southern Region's Native State Forests

# denotes management by two regions * GIS / survey area

	Forest Name	Hectares			Forest Name	Hectares
1.	Badja	7156		40.	Moruya	4527
2.	# Bago	32190		41.	Mowamba	167
3.	Bateman	0.60		42.	Mumbulla	5971
4.	# Belanglo	2324		43.	# Mundaroo	1951
5.	Benandarah	2489		44.	# Murraguldrie	2550
6.	Bermagui	1829		45.	Murrah	4592
7.	Bodalla	23987		46.	Nadgee	20216
8.	Bolaro	1810		47.	# Nalbaugh	2761
9.	# Bombala	337		48.	North Brooman	3626
10.	# Bondi	8334		49.	Nowra	578
11.	# Bondo	14278		50.	Nullica	14281
12.	Boyne	6195		51.	Nungatta	915
13.	Broadwater	160		52.	# Penrose	442
14.	Bruces Creek	991		53.	Shallow Crossing	3948
15.	Buckenbowra	5043		54.	Shoalhaven	94
16.	Bungongo	2401		55.	South Brooman	5537
17.	Carabost	2708		56.	# Tallaganda	24796
18.	Cathcart	1614		57.	Tanja	874
19.	Clyde	3565		58.	Tantawangalo	2181
20.	Coolangubra	968		59.	Termeil	573
21.	Corunna	197		60.	Timbillica	8094
22.	Currambene	1676		61.	Tomerong	210
23.	Currowan	12035		62.	# Towamba	960
24.	Dampier	33671		63.	# Tumut	1104
25.	East Boyd	18585		64.	Wandella	5452
26.	Flat Rock	4829		65.	Wandera	5196
27.	Glen Allen	1083		66.	# Wee Jasper	1217
28.	# Glenbog	8624		67.	# Wingello	2318
29.	Gnupa	1353		68.	Woodburn	10
30.	Ingebirah	2657		69.	Woomargama	1849
31.	Jellore	1400		70.	Yadboro	10689
32.	Jerrawangala	575		71.	# Yambulla	45707
33.	Kioloa	379		72.	Yarrawa	121
34.	Mannus	888		73.	Yerriyong	5489
35.	Maragle	13846		74.	Yurammie	3061
36.	McDonald	3788				
37.	# Meryla	3821				
38.	# Micalong	2736				
39.	Mogo	14584				

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