

STATE OF NATURE 2021



Nature
Conservation
Council

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*Nature Conservation Council of NSW
acknowledges the Traditional Owners
of the lands and waters of Australia.*

*We pay our respects to Aboriginal and Torres
Strait Islander Elders past and present.
We aspire to learn from their traditional
knowledge to help nature thrive.*

FOREWORD

Welcome to the 2021 State of Nature Report. The environmental challenges facing our state are complex and broad ranging. For each of us, from our own patch and perspective, it can be hard to get an overall picture.

The State of Nature Report provides a helicopter view, bringing together state-wide snapshots across the issues we care about most – biodiversity and land management, bushfire, circular economy, climate and energy, forests, planning, protected areas and water policy and management.

The NSW Government publishes State of the Environment reports every three years. However, these do not track changes in policy and politics – the forces that ultimately drive environmental outcomes.

This report aims to give the reader a firm grasp of the main issues and recent developments in key areas of environment policy over the past 12 to 18 months.

We hope NCC member groups, supporters, and the general public draw on this report to inform, engage and advocate for nature.

This report has been compiled with input from NCC policy working groups, with support from staff.

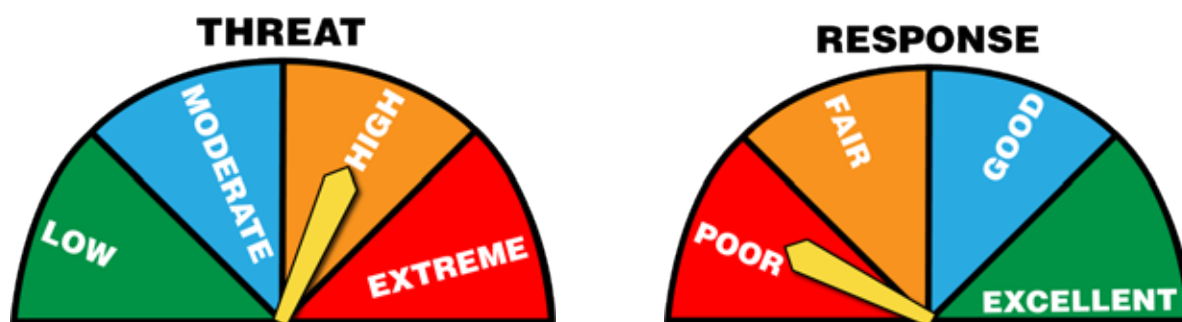
Each chapter provides two indicator ratings, one for the severity of the threat and the other for the adequacy NSW Government's response.

The key issues, recent developments, threats, opportunities, and essential reforms are then summarised.

This project is a work in progress. Each year we will refine and update each chapter with the aim of making the State of Nature Report an indispensable reference for anyone interested in environmental policy and politics in NSW.

Chris Gambian
Chief Executive
NSW Nature Conservation Council

BIODIVERSITY AND LAND MANAGEMENT



SUMMARY

- 39% of the native vegetation cover that existed prior to 1788 has been removed and only 9% is close to its natural condition.¹
- Only 9% of the state is protected in the reserve system, far less than the 17% target set by the United Nations.
- There are 1,025 species listed in NSW as at risk of extinction, including the koala by 2050.
- Land clearing, a key threat to many species and ecosystems, continues at disastrously high rates set after the NSW Government weakened habitat protections in 2016.
- The NSW Audit Office has warned that biodiversity is at “high risk” in nine out of 11 regions surveyed.
- Positive NSW Government responses:
 - Environment Minister Kean has pledged to add 400,000 hectares to the National Parks estate by 2022.
 - Extended Savings our Species program, although at reduced funding.
- Negative NSW Government responses:
 - Land clearing and logging continue at record levels (54,500 hectares in 2019). The regulatory framework is failing. The NSW Government has made no meaningful response. Reviews promised by government are incomplete and overdue.
- Essential reforms required
 - Fix the Land Management (Native Vegetation) Code to remove inappropriate self-assessment provisions and increase approval requirements.
 - Strengthen the Biodiversity Offset Scheme, consistent with best practice principles. Include a clear and objective ‘no net loss or better’ environmental standard and tighten like-for-like offsetting rules.
 - Deliver transparent monitoring, evaluation and reporting schemes for land clearing and biodiversity outcomes across NSW. This should include evidence of effective administration, compliance, and enforcement.

¹ NSW Environment Protection Authority 2018, *NSW State of Environment*, report, <https://www.soe.epa.nsw.gov.au/all-themes/land/native-vegetation>.

THE ISSUE

NSW is blessed with an inspiring diversity of plants, animals, and landscapes. Our shared natural heritage has evolved over millions of years and should be treasured. Yet, current government regulations risk leaving an unacceptable legacy of destruction for future generations.

NSW has lost millions of hectares of native vegetation since colonisation, including extensive areas of forest and woodland. It is estimated that 39% of the native vegetation cover that existed prior to 1788 has been removed.² Only 61% of the state still has intact native vegetation, and only 9% is close to its natural condition,³ the rest is in various states of degradation. The public conservation estate only covers 9% of NSW⁴, although the government has pledged to add 400,000 hectares to the estate by 2020⁵. Even if it delivers on that pledge, NSW will still be well short of the UN Aichi Target⁶ of protecting 17% of terrestrial ecosystems in reserves, and it does not constitute the comprehensive, adequate, and representative protection needed to ensure healthy ecosystems in the long-term.

The number of species at risk of extinction in NSW is very high and rising. There are currently 1,025 species and 112 ecological communities listed as threatened under NSW legislation.⁷ In 2021, one ecological community and five species were added or upgraded on the threatened list by the NSW Threatened Species Scientific Committee.⁸

Destruction of wildlife habitat continues today at such an alarming rate that WWF⁹ has identified eastern Australia as one of the world's 24 deforestation hotspots, along with the Congo and the Amazon. Australia is the only developed nation on the list.

A key driver of habitat destruction has been the NSW Government's weakening of land clearing and habitat protection laws in 2016. The government repealed the *Native Vegetation Act* and introduced the *Biodiversity Conservation Act* and *Local Land Services Amendment Act*, creating a new legal framework that deregulated land clearing and

² NSW Environment Protection Authority 2018, *NSW State of Environment*, report, <https://www.soe.epa.nsw.gov.au>.

³ NSW Environment Protection Authority 2018, *NSW State of Environment*, report, <https://www.soe.epa.nsw.gov.au/all-themes/land/native-vegetation>.

⁴ NSW National Parks and Wildlife Service 2021, *About NSW National Parks and Wildlife Service*, <https://www.nationalparks.nsw.gov.au/about-npws#:~:text=NPWS%20manages%20more%20than%209,state's%20biodiversity%20and%20cultural%20heritage>.

⁵ NSW Department of Planning, Industry and Environment 2020, *National Park Estate Target Doubled*, media release, <https://www.environment.nsw.gov.au/news/national-park-estate-target-doubled>.

⁶ Secretariat of the Convention on Biological Diversity 2020, *Aichi Biodiversity Targets*, <https://www.cbd.int/sp/targets/>.

⁷ NSW Environmental Protection Authority 2018, *NSW State of the Environment*, report, <https://www.soe.epa.nsw.gov.au/all-themes/biodiversity/threatened-species>.

⁸ NSW Department of Planning, Industry and Environment 2021, *NSW Threatened Species Scientific Committee Final Determinations*, webpage, <https://www.environment.nsw.gov.au/topics/animals-and-plants/threatened-species/nsw-threatened-species-scientific-committee/determinations/final-determinations>.

⁹ World Wildlife Fund 2020, *Deforestation Fronts*, <https://wwf.panda.org/discover/our-focus/forests-practice/deforestation-fronts/>.

biodiversity protection, shifting to a system of self-assessable land-clearing codes and broader application of a weakened Biodiversity Offset Scheme.

To compensate for anticipated habitat losses, the government established a \$240 million Biodiversity Conservation Trust to pay landholders to maintain and improve biodiversity values. It also invested \$100 million over five years in the Saving Our Species program to deliver conservation projects for targeted threatened species, and \$44 million for a Koala Strategy.

Such measures, however, have not compensated for continuing losses. Since the government's overhauled conservation laws in 2016, land-clearing rates in NSW have roughly doubled. In 2019, the latest year for which figures are available, about 54,500 hectares of native vegetation—native and plantation forest, woodlands, etc.—were destroyed for agriculture, forestry and property development.¹⁰

Regulatory failure of the new land clearing laws was confirmed in investigations by the Natural Resources Commission¹¹ and the NSW Audit Office¹² in 2019, which exposed high rates of unexplained clearing, inadequate compliance arrangements and declared biodiversity was at 'high risk' in 9 out of 11 regions.

Not enough action has been taken in response to these scathing assessments. Clear, comprehensive, up-to-date information on biodiversity outcomes under the reforms is not available. The three-year review promised by the government¹³ is overdue and there is no certainty it will be done at all.

Targeted conservation projects for priority threatened species are welcome and important. However, without addressing systematic drivers of habitat loss and biodiversity decline, throwing money at the problem will never be enough to maintain diverse and resilient ecosystems across the state.

Climate change is rapidly emerging as a singular threat to biodiversity on multiple fronts by increasing temperatures, altering rainfall seasonality, increasing evaporation and decreasing runoff. We are already experiencing one of the more disastrous predicted consequences of climate change – more extreme bushfire seasons.

¹⁰ NSW Department of Planning, Industry & Environment 2019, *Woody Vegetation Change, Statewide Landcover and Tree Study*, summary report, <https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Animals-and-plants/Native-vegetation/woody-vegetation-change-statewide-landcover-tree-study-summary-rpt-20190193.pdf>.

¹¹ NSW Natural Resources Commission 2019, *Land management and biodiversity conservation reforms*, final report, <https://www.nrc.nsw.gov.au/land-mngt>.

¹² Audit Office of NSW 2019, *Managing Native Vegetation*, report, <https://www.audit.nsw.gov.au/our-work/reports/managing-native-vegetation>.

¹³ Parliament of NSW 2016, *Parliamentary Debates: Legislative Assembly: official Hansard*, vol 56, <https://www.parliament.nsw.gov.au/bill/files/3357/2R%20Biodiversity%20and%20cognate%20bill.pdf>.

The 2019-20 Black Summer bushfires burnt 5.5 million hectares in NSW, including 38% of the state's national parks and 42% of state forests,¹⁴ and killed more than 1 billion native animals.¹⁵ That single catastrophic event has pushed ecosystems and the species they support, including koalas, closer to extinction. Protecting the burnt forests to allow regeneration and protecting the unburnt and lightly burnt forests as refugia for threatened species has become essential to prevent local extinctions.

Targeted conservation measures in specific locations or regions are no longer adequate on their own to ensure the survival of our treasured species and ecosystems. Deep cuts to climate pollution in Australia and around the world are urgently required to ensure nature conservation measures have every chance of success.

Protecting biodiversity and landscape health are crucial public good outcomes and should be a central priority of any responsible government. Wanting to protect native plants and animals are broadly held values - particularly for iconic species like the koala, which are central to our identity as Australians.

Social research by the NSW Government's environment department shows that over 97% of people across the state agree that we have a responsibility to look after nature and biodiversity.¹⁶

However, private interests, including developers and agribusiness, stand to benefit financially from a system that allows habitat destruction. These vested interests have disproportionate power over government decision making.

RECENT DEVELOPMENTS

Koalas. The NSW Environment Minister made a welcome pledge to double koala numbers by 2050.¹⁷ Lofty goals to double koala populations without stopping habitat loss across public and private land cannot be regarded as genuine. The political fiasco surrounding the Koala State Environmental Planning Policy in 2020/21 demonstrated that the Coalition government is incapable of improving regulatory protection for biodiversity if it in anyway limits property owners' freedom to destroy habitat. In the lead up to the 2023 state election, we hope all parties will increase their ambition to reduce habitat destruction and protect biodiversity with the necessary regulatory measures, as well as investment, incentives, and education.

¹⁴ NSW Department of Planning, Industry and Environment 2020, *NSW Fire and the Environment 2019-20*, summary report, <https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Parks-reserves-and-protected-areas/Fire/fire-and-the-environment-2019-20-summary-200108.pdf>.

¹⁵ University of Sydney 2020, *More than one billion animals killed in Australian bushfires*, <https://www.sydney.edu.au/news-opinion/news/2020/01/08/australian-bushfires-more-than-one-billion-animals-impacted.html>.

¹⁶ NSW Office of Environment and Heritage 2015, *Who Cares about the Environment?*, survey report, <https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Research/who-cares-about-the-environment-2015-170154.pdf>.

¹⁷ Hannam P 2020, 'Matt Kean aims to double koala population by 2050' *Sydney Morning Herald*, 26 July, <https://www.smh.com.au/environment/conservation/matt-kean-aims-to-double-koala-population-by-2050-20200725-p55fdc.html>.

OPPORTUNITIES AND THREATS

Land clearing codes. The government is in internal negotiations about updates to the land clearing code, which are likely to see protections for koalas further weakened. These updates could be announced any time.

Review of land management reforms. The three-year review of the land management reforms is overdue. The five-year statutory review is due in 2022.

Biodiversity offsets review. The NSW Upper House is conducting an inquiry on the integrity of the Biodiversity Offset Scheme, which will report early 2022.¹⁸ The Audit Office has also started an investigation of the Biodiversity Offset Scheme.¹⁹

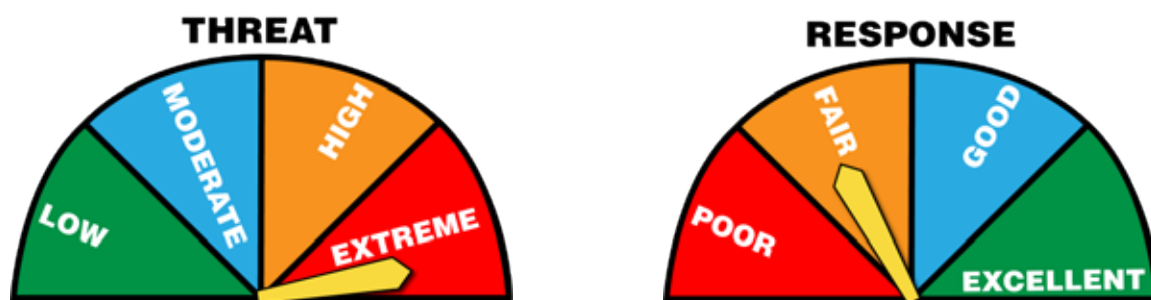
Strategic land management. Strategic land management can address the dual crises of climate change and biodiversity decline. By protecting remnant vegetation, replanting and restoring ecology, we can increase habitat extent and connectivity and sequester large amounts of carbon.

Regenerative agriculture. Regenerative agricultural and land management practices, which increase biodiversity and carbon in the landscape, also make farming more productive and resilient in an increasingly hostile climate. Biodiverse, more resilient landscapes are more attractive places to live, work and visit.

¹⁸ Parliament of NSW 2021, *Integrity of the NSW Biodiversity Offsets Scheme*, inquiry, <https://www.parliament.nsw.gov.au/committees/inquiries/Pages/inquiry-details.aspx?pk=2822>.

¹⁹ Audit Office of NSW 2021, *Biodiversity Offsets*, <https://www.audit.nsw.gov.au/our-work/reports/biodiversity-offsets>.

BUSHFIRE



What are the issues?

Contemporary bushfire management in Australia involves an ongoing challenge in striving to provide extensive protection to human life and property, but at the same time ensuring mitigation actions do not cause irreparable harm to native species and ecosystems. Although bushfires are a natural component in the Australian ecosystem, fire regimes are rapidly changing, which increases the complexity of managing fire for different objectives.

The 2019-20 bushfire season was devastating for people and biodiversity due to its extent, severity and impacts, with 4.8 million hectares burnt in NSW. In January 2020, the NSW Government commissioned the NSW Bushfire Inquiry into the 2019-20 bushfires to inform preparation for future bushfire seasons. NCC provided a submission ([here](#)). The Final Report (July 2020) examined the causes and response to the bushfires and included 76 recommendations.

NCC broadly supported the findings and recommendations of the report. However, there were matters that were not adequately addressed or did not have suitably strong recommendations. Issues requiring greater effort to mitigate the effects of bushfire on communities and our environment are:

- action on climate change;
- better protection of environmental assets in bushfire planning;
- wildlife recovery after bushfires;
- effective and sustainable hazard reduction; and
- increased focus on community engagement.

Action on climate change

The Report made it clear that climate change was a key factor in the fires of 2019-20 and that future fire seasons will be as bad or worse. Weather is becoming a major driver in fire behaviour, reducing the effectiveness of fire mitigation and suppression capabilities. These trends are predicted to increase due to rising greenhouse gas emissions, with more frequent heatwaves and drought escalating bushfire risk.

Protection of environmental assets

Current bushfire planning does not provide adequate protection to environmental or cultural assets, but the protection of the Wollemi Pine during the fires proved it can be done. The Final Report identified the need for environmental assets to be included in bushfire planning, but under the current arrangements, there is no consistent approach to identify and protect them. Consequently, usually no actions will be taken to protect these assets from fire.

It is acknowledged, however, that the government has recently created a new designation—Assets of Intergeneration Significance—that recognises natural assets of outstanding community value and provides for higher levels of protection.

Effective land management and protection of ecosystems requires strategic level planning across the state and all land tenures, with communities more effectively engaged. Modification of the existing bush fire risk planning process is needed to accommodate this expanded strategic planning model.

Wildlife recovery after bushfires

Nearly three billion animals were killed or displaced across Australia by the 2019-20 wildfires in "one of the worst wildlife disasters in modern history"¹. Losses of this scale could lead to species extinction and are unsustainable for the maintenance of healthy and biodiverse ecosystems.

The Final Report acknowledged the need for investment in long-term ecosystem monitoring and research. However, it did not recommend protection for patches of unburnt or partially burnt habitat as wildlife refuges, or longer term refugia. These areas are critical as habitat and resources for wildlife, but they currently have no special status, enabling ongoing disturbance such as logging.

Effective and sustainable hazard reduction

The Final Report recognised that hazard reduction burning should be done strategically in close proximity to development, rather than broadscale burns far from built-up areas. The focus of hazard reduction should be on Asset Protection Zones (APZs) immediately adjacent to assets.

Robust environmental assessment of all hazard reduction activities should be undertaken before approval by a firefighting authority. Instead, government continues to transfer the responsibility to assess bushfire protection activities onto landholders by introducing self-assessment codes such as the 10/50 Vegetation Clearing Code and most recently, the Rural Boundary Clearing Code. This latest Code enables landholders to clear vegetation up to 25m from their boundaries without approval. Landholders generally do not have the ecological knowledge necessary to undertake accurate assessments and such codes can be easily used for purposes other than bush fire protection.

Community engagement and resilience

Community engagement receives little attention compared to bushfire suppression and hazard reduction works. The community needs to know more about emergency events and how to prepare for them, which complements the role of land managers and fire agencies. An increased commitment for bushfire community engagement programs such as the Bushfire Program and Hotspots Fire Project would promote and expand an ongoing conversation between practitioners, land managers, scientists, and residents.

Key policy developments

There have been several bushfire events across Australia in recent years and a repeat of the scale of the fires seen in 2019-20, or worse, is a realistic prospect². This will result in ongoing and increasingly greater impact to life and property and further weakening of biodiversity resilience.

Much of the Final Report's findings focused on improving and utilising technology to enable quicker detection and response to fire ignitions, and more effective response and suppression mechanisms. These are positive ambitions which we support. Significantly less focus was placed on ecosystem resilience and government attempts to address fire management to enhance biodiversity have been inadequate.

In fact, the introduction of vegetation clearance self-assessment codes, transferring responsibility to manage vegetation to landholders produces the opposite effect. Rather, increasingly adverse impacts on biodiversity with little evidence to support reduced bushfire risk is likely.

APZs are important in protecting both planned and existing developments and should be implemented on the site being protected rather than on adjacent lands. Increasingly, policies are being altered to allow APZs to encroach onto adjacent lands to protect development. This results in more vegetation clearance and places the onus to clear onto neighbours (e.g. NPWS), contradicting planning principles in place for many decades.

Although the Final Report clearly identified a need for strategic hazard reduction burning rather than burns far from built-up areas, fire management agencies persist with hazard reduction targets focused on the total area burnt across the state, rather than the strategic location and value of burns. Target-based objectives are ineffective in mitigating fire impacts to communities.

Stakeholders and political issues

A large range of stakeholders with contrasting perspectives and opinions are involved in bushfire policy. Ministerial portfolios with an ongoing interest in bushfire include Emergency Services, Environment, Planning and Agriculture. The main Government departments include fire authorities such as NSW RFS and Fire & Rescue NSW, land managers including National Parks & Wildlife Service, Forestry Corporation and Local Land Services. Bush Fire Management Committees comprising agency and interest groups (including NCC, NSW Farmers) are responsible for local and State level bushfire

management planning, and communities in bush fire prone areas across NSW have a vested interest in how fire is managed.

Bushfire is an emotive issue, particularly when large fires severely impact on human lives, property and the environment. The aftermath of bushfires often results in public calls for increased action to combat fires – more hazard reduction burning, more firefighting resources, and more land clearing. Increasingly, there are opposing calls for improved conservation of wildlife and other assets, greater input of cultural burning and better adaptation to fire.

Recognition of the influence of climate change on bushfire behaviour has intensified, supported by significant numbers of firefighters themselves. The size, extent and impact of the 2019-20 fires has brought widespread public calls for governments to do more to reduce emissions to combat climate change impacts on the frequency and intensities of bushfires.

What's next in bushfire management?

Expected developments

Bushfire is a very seasonal phenomena, both in occurrence and in community engagement with it. The occurrence of one or two wet summers and interest in bushfire management and how bushfire policy is working can quickly dissipate. However, the destructive nature of the 2019-20 fires and the high numbers of people affected by them has created an opportunity to continue to remind politicians and the public that the next fire event is just over the horizon.

Recommendations from the Final Report will continue to be rolled out over the coming year. Resilience NSW is coordinating implementation of the recommendations, with progress reports released quarterly. The reports released to date suggest that the full intent of some recommendations is not being met.

Future decisions and new information

Commitments by governments to accept and where necessary fund the recommendations from the NSW Inquiry and Commonwealth Royal Commission should mean that funding for bushfire and climate related research, biodiversity protection, threatened species management and bushfire planning processes will continue to be forthcoming for some time. Scientific understanding and operational breakthroughs will be advanced.

Opportunities

There are priority actions for Government which would improve the resilience of communities in bushfire prone areas, maintain biodiversity and prevent species extinctions. Prioritising their implementation would also enable governments to catch up with views held by the NSW community, which already largely sees them as positive actions.

Improved Protection of Environmental Assets

- Give greater priority to protection of environmental and cultural assets via appropriate bushfire risk planning.

- Build on the widespread public support for the recent declaration by government of “Assets of Intergenerational Significance” by ensuring a properly informed and resourced bushfire management system capable of producing similar outcomes for all threatened species and communities.
- Engage with local communities to develop strategic level bushfire planning across all land tenures, with communities involved in developing land management programs that protect environmental and cultural assets, plan for bushfire risk reduction and build community and ecological resilience.
- Put in place policies that prioritise specific protection of unburnt and partially burnt areas as wildlife refuges.

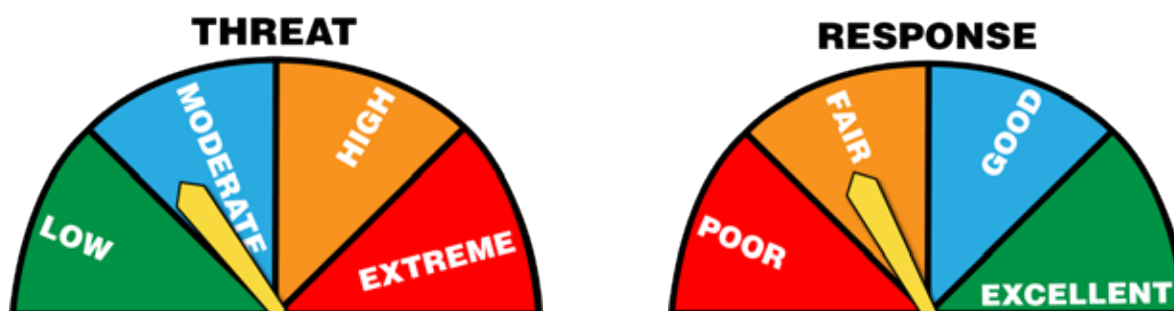
Increased community engagement

- The support of the Bushfire Inquiry for the Hotspots Program and the long-standing reputation of the biennial bushfire conferences featured by the Bushfire Program provide the impetus for Government to invest greater funding into bushfire engagement that is sought after by local communities across NSW.
- The input provided by local NCC Bush Fire Management Committee representatives into policy review and development can be expanded by providing increased support to the Bushfire Program so that government obtains valuable, detailed submissions on fire management issues which affect the environment and communities.

¹ World Wildlife Fund 2020, Australia’s 2019-2020 Bushfires: The Wildlife Toll, *Interim Report*, <https://www.wwf.org.au/ArticleDocuments/353/Animals%20Impacted%20Interim%20Report%2024072020%20final.pdf.aspx?OverrideExpiry=Y>.

² Owens D and O’Kane M 2020, *Final Report of the NSW Bushfire Inquiry*, <https://www.dpc.nsw.gov.au/assets/dpc-nsw-gov-au/publications/NSW-Bushfire-Inquiry-1630/Final-Report-of-the-NSW-Bushfire-Inquiry.pdf>.

CIRCULAR ECONOMY (waste)



SUMMARY

- The industry and government have failed to meet targets in the NSW Waste Avoidance and Resource Recovery Strategy for several years.
- State governments came under increased pressure to minimise waste and maximise reuse and recycling after China and other Asian countries banned importation of mixed wastes.
- In 2020, NSW became the last state to ban single-use plastic bags, and in June 2021 announced plans to phase out use of single-use plastics (e.g., cutlery) by 2024.
- NSW now has a Waste and Sustainable Materials Strategy 2041 (Stage 1 2021-2027) and Plastic Plan, which has some very positive key objectives.
- The NSW Government has been trying to impose waste-to-energy incinerators on reluctant communities – first Western Sydney and now regional communities.
- Essential reforms required:
 - Mandate the packaging targets.
 - Ensuring recycled content is achieved.
 - Rule out new waste-to-energy plants.
 - Moving onto the second tranche of plastic item bans.

THE ISSUE

For some years the waste and recycling scene in NSW has been languishing. Landfill diversion and reprocessing targets weren't being met – and the incineration industry (which is not part of the circular economy) was rushing to fill in the gap.

The ban by China and other Asian countries on the import of mixed wastes increased the pressure on domestic policy settings. The circular economy was a mirage.

The previous NSW Waste Avoidance and Resource Recovery Strategy¹ aimed to increase recycling from 2010-11 to 2021-22 for:

¹ NSW Environment Protection Authority 2014, *Waste Avoidance and Resource Recovery Strategy*, <https://www.epa.nsw.gov.au/-/media/epa/corporate-site/resources/wastestrategy/140876-warr-strategy-14-21.pdf?la=en&hash=EC6685E6624995242B0538B18C2E80C0CA2E51B3>.

- Municipal solid waste (MSW) from 52% to 70% [42% now]
- Commercial and Industrial (C&I) waste from 57% to 70% [54% now]
- Construction and Demolition (C&D) waste from 75% to 80% [77% now]

Other products such as TVs and computers were subject to a national product stewardship program.

Little action beyond these items had been taken at national or state level, including for organics (FOGO: food and garden waste) which comprise a significant portion of landfill material.

Plastic pollution was intensifying as single-use disposable products proliferated and NSW remained the only state to not ban lightweight plastic bags.

Packaging was wasteful, even though it may have had a recycling label, because collection processes were virtually non-existent.

The only major advance was the introduction of the Return and Earn 10c refund scheme which doubled recycling of drink containers.

The EPA had begun a review of the waste strategies, but it was a poor effort and major revision was required.

The packaging industry only supported voluntary targets and governments gave lip-service to recycled content requirements.

FOGO remained a boutique exercise by some councils.

The national waste targets increased the pressure on state agencies to deliver with detailed plans, regulation and funding.

However, the situation has changed radically thanks to the efforts of groups such as the Total Environment Centre, Boomerang Alliance and Clean Up, support from key industry groups, and the appointment of a responsive Environment Minister in Matt Kean.

RECENT DEVELOPMENTS

Sustainable Materials Strategy 2041. NSW now has a Waste and Sustainable Materials Strategy 2041 (Stage 1 2021-2027) and Plastic Plan with the key objectives:

- 80% average recovery rate of all wastes by 2030.
- Introduce a new overall litter reduction target of 60% by 2030 and a plastic litter reduction target of 30% by 2025, as set out in the *NSW Plastics Action Plan*.
- Set a goal to triple the plastics recycling rate by 2030, as set out in the *NSW Plastics Action Plan*.
- Eliminate single use problematic plastics by 2025.

- Halve organic waste to landfill by mandating FOGO and reaffirm the commitment to the goal of net zero emissions by 2030, as laid out in the *NSW Net Zero Plan Stage 1: 2020–2030*.

New waste-to-energy facilities. Disappointingly waste to energy also received a tick, with up to four plants possible. After community opposition killed off plans for waste-to-energy incinerators in Western Sydney, then-Deputy Premier John Barilaro and Environment Minister Matt Kean announced it would offer the facilities to regional centres: Lithgow, Parkes, Richmond Valley, and the Southern Goulburn-Mulwaree Precinct.²

New bans on plastics. Legislation to implement the first stage of the ban on plastic items has been introduced as well as an upgraded product stewardship law. NSW banned lightweight plastic shopping bags in 2020³ and in mid-2021 signalled its intention to ban single-use plastics, such as cutlery, by 2024⁴.

New processing facilities. Commonwealth and state funds are flowing to support new reprocessing industries. However, will the circular economy become mainstream or remain a bunch of pilot projects?

THREATS AND OPPORTUNITIES

Key policies are still absent from the mix:

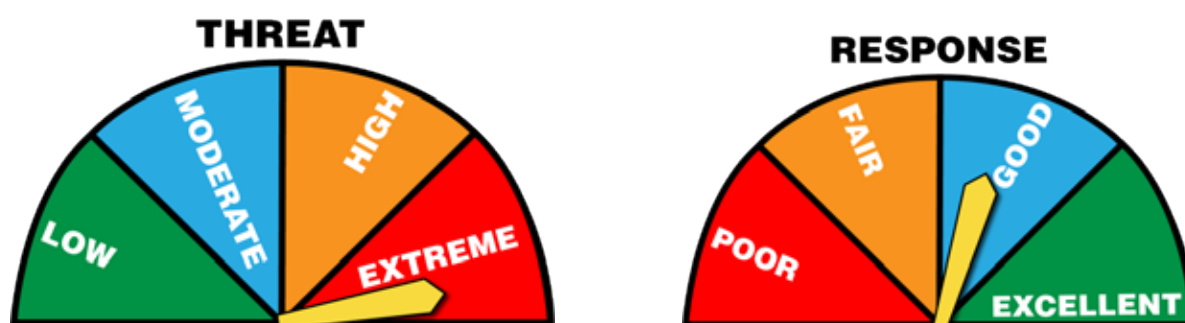
- Mandating the packaging targets (the sector has failed every other set of goals).
- Ensuring recycled content is achieved (the economy of materials collection is stunted if there is no market).
- Preventing new waste-to-energy plants, which will inevitably cannibalise material that could be recycled, to provide assured, long-term input to large facilities
- Moving onto the second tranche of plastic item bans.
- Strategies to reduce waste per capita (otherwise as population grows so does the tonnage of landfill).

² NSW Environment Protection Authority 2021, *Energy Recovery Facilities*, <https://www.epa.nsw.gov.au/your-environment/waste/waste-facilities/energy-recovery>.

³ Department of NSW Planning, Industry and Environment 2021, *NSW Plastics Action Plan*, https://www.dpie.nsw.gov.au/data/assets/pdf_file/0007/357226/NSW-Plastics-Action-Plan-2021.pdf.

⁴ Hunter, F 2021, 'NSW to ban plastic cutlery as end also looms for single-use cups, plates and bags', *Sydney Morning Herald*, 13 July, <https://www.smh.com.au/politics/nsw/nsw-to-ban-plastic-cutlery-as-end-also-looms-for-single-use-cups-plates-and-bags-20210612-p580hu.html>.

CLIMATE AND ENERGY



SUMMARY

- Climate change continues to gather pace and is affecting communities and ecosystems across NSW.
- Average temperatures in NSW have risen +1.4 degrees since 1910 and will exceed +2 degrees by 2070 without rapid emissions reductions globally.
- Climate change is threatening many already vulnerable species, ecosystems and regional communities.
- The electricity, transport and agriculture sectors continue to be the leading sources of carbon emissions in NSW.
- Positive NSW Government responses over the past year:
 - set a target net zero emissions by 2050
 - set a target of halving emissions by 2030
 - committed \$500 million to accelerate the uptake of electric vehicles
- Negative NSW Government responses over the past year:
 - continues to support unsustainably high rates of land clearing (30,300ha/y)
 - continues to support unsustainable rates of native forest logging
 - continues to approval new coal and gas projects
- Essential reforms
 - Phase out coal and gas fired power stations and make the NSW electricity grid 100% renewable by 2030.
 - Approve no new coal mines, mine expansions or gas projects, including the Narrabri gas field and end coal exports by 2030.
 - Accelerate the electrification of transport.

THE ISSUE

Atmospheric carbon dioxide levels are continuing to rise. In 2021, they reached 417 parts per million (ppm)¹, almost 50 per cent higher than the 280 ppm that prevailed in pre-industrial times.²

¹ Brad to supply

² Intergovernmental Panel on Climate Change 2001, *Working Group I: The Scientific Basis*, report,

HYPERLINK

"<https://archive.ipcc.ch/ipccreports/tar/wg1/016.htm>" <https://archive.ipcc.ch/ipccreports/tar/wg1/016.htm>.

In August 2021, the International Intergovernmental Panel On Climate Change (IPCC) issued its sixth report and a warning that without significant, urgent reductions in greenhouse gas emissions, temperatures would rise by more than 2°C.³ UN Assistant Secretary-General Selwin Hart said wealthy nations must stop using coal power by 2030 and the rest of the world must dump it by 2040.⁴

Australia's climate has already warmed by an average 1.44°C since national records began in 1910.⁵

Based on the IPCC's 2014 report, NSW environment authorities have forecast there will be up to 10 more heat wave days above 40°C by 2070 across the state, ranging from 33 more extremely hot days in northern regions to seven additional days in the south.⁶

Although there were no mega-fires in NSW in 2021, the forecast increases in heatwaves and the more frequent, longer droughts will lead to more extreme bushfire seasons like 2019-20.

Fires across the eastern states that season killed more than 33 people, destroyed more than 3,000 homes⁷, killed more than 1 billion native animals⁸ and burned more than 5.5 million hectares in NSW, including 38% of the state's national parks and 42% of state forests.⁹

While annual rainfall is projected to be similar across most of NSW under many climate change scenarios, its reliability, frequency and intensity will change.

Less reliable rainfall and increased evaporation rates from higher average temperatures poses significant risks to farmers and regional communities, water security and the health of inland rivers.

³ Intergovernmental Panel on Climate Change, 2021, *Climate Change Widespread, Rapid, and Intensifying*, Media Release, https://www.ipcc.ch/site/assets/uploads/2021/08/IPCC_WGI-AR6-Press-Release_en.pdf.

⁴ O'Malley, N 2021, 'Top UN official calls for Australia to urgently dump coal', *Sydney Morning Herald*, 6 September, <https://www.smh.com.au/environment/climate-change/top-un-official-calls-for-australia-to-urgently-dump-coal-20210905-p580zi.html>

⁵ Bureau of Meteorology 2020, *State of the Climate*, report, <http://www.bom.gov.au/state-of-the-climate/australias-changing-climate.shtml>.

⁶ NSW Environmental Protection Authority 2018, *NSW State of the Environment*, report, HYPERLINK "<https://www.soe.epa.nsw.gov.au/all-themes/climate-and-air/climate-change>".

⁷ Parliament of Australia 2020, *2019–20 Australian bushfires—frequently asked questions: a quick guide*, https://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/rp/rp1920/Quick_Guides/AustralianBushfires

⁸ University of Sydney 2020, *More than one billion animals killed in Australian bushfires*, <https://www.sydney.edu.au/news-opinion/news/2020/01/08/australian-bushfires-more-than-one-billion-animals-impacted.html>.

⁹ NSW Department of Planning, Industry and Environment 2020, *NSW Fire and the Environment 2019-20*, summary report, <https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Parks-reserves-and-protected-areas/Fire/fire-and-the-environment-2019-20-summary-200108.pdf>.

Changes in temperatures, rainfall, and rising sea levels are threatening the survival of many already vulnerable native species and ecosystems, including rainforests and alpine and coastal habits.

In 2016, the NSW Government committed to reduce the state's emissions to emissions net zero by 2050.¹⁰

However, today coal-fired power generation in NSW remains the largest source of carbon emissions and accounts for 96% of total emissions from the electricity sector.¹¹

Five years since the government zero by 2050 commitment, annual emissions have plateaued above 130 million tonnes.

Natural ecosystems such as forests and oceans blunt global heating by absorbing about half of all human emissions, however, the destruction of forest carbon sinks in NSW has remained at historic highs established after the Coalition Government repealed the *Native Vegetation Act* in 2017.

Latest government data showed 30,300 hectares of native forest and woodland were destroyed in 2019 for agriculture, forestry and development.¹²

LATEST DEVELOPMENTS - 2020-21

NSW Energy Roadmap (November 2020). The NSW Energy Roadmap that parliament passed in November 2020 will result in 12 GW of renewable energy and 2 GW of storage being constructed by 2030. It is the most ambitious renewable energy policy in Australia.

Electric Vehicles (June 2021). The NSW Government committed almost \$500 million to encourage the uptake of electric vehicles, including by converting the government fleet to EVs, providing cash rebates for new purchases,¹³ and rolling out 1000 EV chargers across the state over the next six years.¹⁴

¹⁰ NSW Government 2021, *Budget Paper No 2*, https://www.budget.nsw.gov.au/sites/default/files/2021-06/Budget%20Paper%20No.%202%20-%20Outcomes%20Statement%20Budget%202021-22_0.pdf.

¹¹ Clean Energy Regulator 2021, *Greenhouse and energy information by designated generation facility 2019-20*, <http://www.cleanenergyregulator.gov.au/DocumentAssets/Pages/Greenhouse-and-energy-information-by-designated-generation-facility-2019-20.aspx>.

¹² NSW Department of Planning, Industry & Environment 2019, *Woody Vegetation Change, Statewide Landcover and Tree Study*, summary report, <https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Animals-and-plants/Native-vegetation/woody-vegetation-change-statewide-landcover-tree-study-summary-rpt-20190193.pdf>.

¹³ Rabe, T 2021, 'NSW to abolish stamp duty on electric cars in an effort to boost uptake', *Sydney Morning Herald*, 20 June, <https://www.smh.com.au/national/nsw/nsw-to-abolish-stamp-duty-on-electric-cars-in-an-effort-to-boost-uptake-20210619-p582g4.html>.

¹⁴ Rabe, T 2021, 'Electric avenue: The NSW plan for 1000 electric vehicle chargers', *Sydney Morning Herald*, 12 September, <https://www.smh.com.au/national/nsw/electric-avenue-the-nsw-plan-for-1000-electric-vehicle-chargers-20210911-p58qtv.html>.

50% emissions reduction by 2030 (September 2021). Then Premier Gladys Berejiklian set a target of reducing the state's greenhouse gas emissions by 50% reduction by 2030.

New coal mine and gas approvals. Despite advice from scientists that 95% of Australia's existing coal and most gas reserves must stay in the ground,¹⁵ and the government's commitments to cut emissions, it continues to approve new coal and gas mines.

The politics of the issue

Public opinion continues to be far ahead of the Federal Government, with most voters in every electorate wanting stronger action on climate.¹⁶

Most state governments are also well ahead of the Federal Government and have committed to around 50% emissions reductions by 2030, including a steady phase-out of aging coal power stations by the early 2040s.

The call action is now mainstream, with even laggard corporations and lobby groups such as the Minerals Council of Australia and Business Council of Australia committing to net zero by 2050. Many companies have also made more meaningful and less distant commitments¹⁷.

However, there is still a large gap between these commitments and the true level of ambition required to avoid runaway climate change.

The International Energy Agency and UN are now calling for Australia to phase-out all coal power stations by 2030, bolstering the demands of climate action groups who have been calling for this timeline for many years.¹⁸

The federal National Party is the most prominent opponent of meaningful action on climate change, despite the National Farmers Federation having committed in August 2020 to a net-zero by 2050 target.

ESSENTIAL REFORMS

With support for climate action gathering pace, now is the time to be clear about what is required to allow future generations to enjoy a safe climate.

To play its role in global efforts to keep temperature rises within safe levels, NSW must:

¹⁵ Welsby, D et al. 2021, 'Unextractable fossil fuels in a 1.5 °C world', *Nature*, vol 597, pp. 230–234, <https://doi.org/10.1038/s41586-021-03821-8>; Scimex 2021, *EXPERT REACTION: Australia must leave 95% of its coal in the ground to limit global warming to 1.5 °C*, <https://www.scimex.org/newsfeed/australia-must-leave-95-of-its-coal-in-the-ground-to-limit-global-warming-to-1.5-c>.

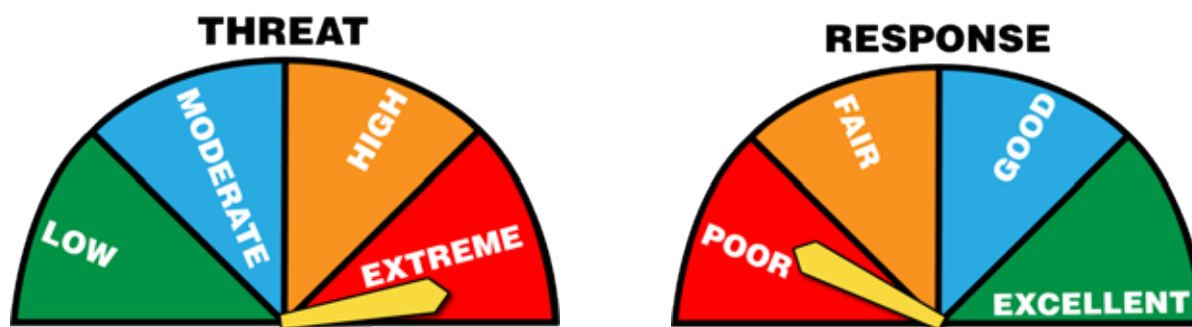
¹⁶ Australian Conservation Foundation 2021, *Australia's Biggest Climate Poll*, report, <https://www.acf.org.au/majority-in-every-seat-want-more-climate-action-poll>.

¹⁷ Reenergise 2021, *Rankings*, <https://reenergise.org/rankings/>.

¹⁸ Shields, B 2021, 'Top energy chief tells Australia to get to net zero emissions before 2050', *Sydney Morning Herald*, <https://www.smh.com.au/world/europe/top-energy-chief-tells-australia-to-get-to-net-zero-emissions-before-2050-20210517-p57sq7.html>.

1. Phase out coal and gas fired power stations and power the NSW electricity grid with 100% renewables by 2030.
2. Reduce emissions across the entire economy by 75% from a 2005 baseline by 2030.
3. Approve no new coal mines, mine expansions or gas projects.
4. End coal exports by 2030.
5. Block the Narrabri gas field.
6. Accelerate the electrification of transport.
7. Reach net-zero emissions by 2035.

FORESTS



SUMMARY

- Deforestation is a global problem that is driving climate change and the extinction of species around the world.
- Eastern Australia has been named a world deforestation hotspot along with the Congo and the Amazon.
- Logging and land clearing in NSW destroyed 33,000 hectares of forest, woodland and grassland in 2019 and is continuing rates faster than the previous decade.
- During the 2019-20 Black Summer bushfires, 48% of State Forests and 38% of national parks in NSW burned, and more than 1 billion native animals perished.
- Koalas are on track to become extinct in the wild in NSW by 2050 without urgent action to protect their habitat.
- Positive NSW Government responses:
 - 15,132ha of forests added to national parks estate since March 2019
 - Abandoned plans in June 2020 to remap old growth forests which would have permitted logging
- Negative NSW Government responses:
 - Resumption of logging in bushfire affected forests following 2019-20 fires (February 2020)
 - Ditching Koala State Environmental Planning Policy (SEPP) 2020 in December 2021 and weakening koala protections.
 - Passing of the 25m land clearing law in December 2020 with the *Bushfire Legislation Amendment Act 2020*, amending the Rural Fires Act 1997. The changes came into effect in September 2021.
 - Renewing Coastal Integrated Forestry Operations Approval (CIFOA) with weaker environmental protections for logging operations in 2018 .
- Essential reforms required:
 - End native forest logging.

- Further expand the forest conservation estate.
- Amend legislation to protect forests from key threats including biomass, clearing and logging.

THE ISSUE

The world's forests.

The importance of forests for life on earth cannot be overstated. They provide much of the oxygen we breathe and the water we drink, and they are home to 80% of all land-based species¹ on the planet, including many of Australia's 1 million-plus species. Forests are also, along with oceans, among the largest carbon stores and help regulate the climate. These vital ecosystems, however, are declining. The area of primary forest worldwide has decreased by more than 80 million hectares since 1990 and between 2015 and 2020 the world lost 10 million hectares of forest a year².

Forests in NSW

Forests³ in NSW are some of the state's most iconic ecosystems and provide habitat for a huge diversity of plants and animals. About 20 million hectares of NSW—roughly a quarter of the state—are forests, ranging from the tall, dense eucalypt forests of the east coast and ranges to the great stands of ironbark, river red gum and cypress that dominate west of the Great Dividing Range. More than half of NSW's forests—about 11 million hectares—are designated as available for timber production, including more than 2 million hectares in publicly owned State Forests⁴ and almost 9 million hectares on private land⁵.

Deforestation

NSW has lost millions of hectares of native vegetation since colonisation, including extensive areas of forest and woodland. It is estimated that 39% of the original native vegetation cover that existed prior to 1788 has been removed.⁶ Only 61% of the state still has intact native vegetation, and only 9% is close to its natural condition.⁷ Most of the remnant vegetation is in various stages of degradation.

Exploitation and destruction of our native forests continues today at such a rapid rate that WWF⁸ identifies eastern Australia as one of the world's 24 deforestation hotspots, along with the Congo and the Amazon. Australia is the only developed nation on the list.

¹ United Nations 2021, *Sustainable Development Goals – 15 Life on Land*, <https://www.un.org/sustainabledevelopment/biodiversity/>.

² Food and Agriculture Organisation of the United Nations 2020, *State of the Worlds Forest*, report, <http://www.fao.org/state-of-forests/en/>.

³ The Australia's National Forest Inventory defines forests as areas dominated by trees taller than 2m with crown cover of 20 per cent or more. NSW Department of Agriculture, Water and the Environment 2019, *Australia's National Forest Inventory*, <https://www.agriculture.gov.au/abares/forestsaustralia/australias-national-forest-inventory>.

⁴ Forestry Corporation 2021, *NSW State Forests*, <https://www.forestrycorporation.com.au/about/our-estate>.

⁵ Timber NSW 2021, *Private Native Forestry Review*, <https://timbernsw.com.au/private-native-forestry/>.

⁶ NSW Environment Protection Authority 2018, *NSW State of Environment*, report, <https://www.soe.epa.nsw.gov.au>.

⁷ NSW Environment Protection Authority 2018, *NSW State of Environment*, report, <https://www.soe.epa.nsw.gov.au/all-themes/land/native-vegetation>.

⁸ World Wildlife Fund 2020, *Deforestation Fronts*, https://wwf.panda.org/discover/our_focus/forests_practice/deforestation_fronts/.

Over the past decade, an average of 8,650 hectares of native forest has been logged each year in NSW. The most recent report on deforestation in this state found NSW had lost 6,900 hectares of native forest in 2019 through logging, including 4,850 hectares of public forest and 2,050 hectares of private land⁹. The same report found that in total, 54,500 hectares of native vegetation—native and plantation forest, woodlands, etc—were removed in 2019 for agriculture, forestry and property development.¹⁰

Bushfires.

The 2019-20 Black Summer bushfires burnt 5.5 million hectares in NSW, including 38% of the state's national parks and 42% of state forests,¹¹ and killed more than 1 billion native animals¹². That single catastrophic event has pushed forest ecosystems and the species they support, including koalas, closer to extinction. Protecting the burnt forests to allow regeneration and protecting the unburnt and lightly burnt forests as refugia for threatened species has become essential to prevent local extinctions. The number of species at risk of extinction in NSW is rising, with 1,025 species and 112 ecological communities listed as threatened under NSW legislation¹³, including many forests species. Despite the colossal impact of the fires, logging has continued in many regions before the fires, causing potentially significant ecological harm and increasing the risk of extreme fires in future¹⁴.

Biological threats

Logging, land clearing and bushfires are not the only threats to forests ecosystems in NSW. Changed fire regimes, rainfall patterns and temperature ranges that are being driven by climate change are undermining the ecological resilience of many forests and pushing some species beyond their limits. Other significant threats include myrtle rust, a fungi which sickens and kills eucalypts and other species in the myrtaceae family, and bell miner associated dieback (BMAD). Myrtle rust attacks young leaves and shoots and was first detected on the Central Coast in 2010. Within a year it had spread to forests stretching from

⁹ NSW Department of Planning, Industry & Environment 2019, *Woody Vegetation Change, Statewide Landcover and Tree Study*, summary report, <https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Animals-and-plants/Native-vegetation/woody-vegetation-change-statewide-landcover-tree-study-summary-rpt-20190193.pdf>.

¹⁰ NSW Department of Planning, Industry & Environment 2019, *Woody Vegetation Change, Statewide Landcover and Tree Study*, summary report, <https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Animals-and-plants/Native-vegetation/woody-vegetation-change-statewide-landcover-tree-study-summary-rpt-20190193.pdf>.

¹¹ NSW Department of Planning, Industry and Environment 2020, *NSW Fire and the Environment 2019–20*, summary report, <https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Parks-reserves-and-protected-areas/Fire/fire-and-the-environment-2019-20-summary-200108.pdf>.

¹² University of Sydney 2020, *More than one billion animals killed in Australian bushfires*, <https://www.sydney.edu.au/news-opinion/news/2020/01/08/australian-bushfires-more-than-one-billion-animals-impacted.html>.

¹³ NSW Environment Protection Authority 2018, *NSW State of Environment*, report, <https://www.soe.epa.nsw.gov.au/all-themes/biodiversity/threatened-species>.

¹⁴ Zylstra, P et al 2021, 'Native forest logging makes bushfires worse – and to say otherwise ignores the fact', *The Conversation*, 20 May, <https://theconversation.com/native-forest-logging-makes-bushfires-worse-and-to-say-otherwise-ignores-the-facts-161177>; Humphries, A 2021, 'Link between native forest logging and bushfires prompts calls for rethink of forest management', *ABC News*, 6 October, <https://www.abc.net.au/news/2021-10-06/research-finds-young-native-forests-more-bushfire-prone/100516562>.

Ulladulla to Cairns and in 2011 was designated a key threatening process. BMAD is a complex process of species interactions (birds, insects, plants) triggered by forests disturbance (logging, fire). The result is eucalypt defoliation, dieback and deaths across large areas of forest. In 2008, BMAD was listed as a key threatening process.¹⁵

Economics of native forest logging.

The native forest logging operations of the Forestry Corporation of NSW are often unprofitable or only marginally profitable with significant taxpayer-funded subsidies. The corporation's Softwood Division (pine plantations) is much larger and more profitable than the Hardwood Division (native forests). From 2009-2014, the accumulated losses of the Hardwood Division were \$78 million.¹⁶ In the 2019-20 financial year, the Hardwood Division made \$400,000 profit, or just \$28 per hectare of timber harvested¹⁷. Softwood and hardwood plantations and associated processing industries provide the vast majority of forestry jobs in NSW, not native forests, with only 850 of 20,000 jobs in the broader industry directly employed in public native forest logging¹⁸. Automation continues to take jobs away from the industry. Already 86% of sawlogs come from plantations¹⁹. Processing plantation wood into milled timber, panels and paper generates 15 times more jobs than exporting the equivalent log volume unprocessed as logs or chips²⁰.

Public support for ending native forest logging.

Native forest logging has lost its social licence in NSW and around the nation. A leaked survey conducted by Forest Wood and Products Association in 2018 found 65% of rural voters believed native forest logging was unacceptable²¹. After the Black Summer 2019-20 bushfires, that figure would likely now be higher.

RECENT DEVELOPMENTS

¹⁵ Silver, MJ and Carnegie, AJ 2017, An independent review of bell miner associated dieback, *Final report prepared for the Project Steering Committee*, <https://www.environment.nsw.gov.au/resources/vegetation/bell-miner-associated-dieback-independent-review.pdf>.

¹⁶ Campbell, R and McKeon, R 2016, *Money doesn't grow on trees: The financial and economic losses of native forestry in NSW*, Discussion Paper for the Australia Institute, <https://australiainstitute.org.au/wp-content/uploads/2020/12/P209-Money-doesnt-grow-on-trees-NSW-Forestry-Final-Final.pdf>.

¹⁷ Shoebridge, D 2021, Media Release: Cliff Edge Plunge for Native Forest Profits as Forestry Corporation engages in damaging post-fire logging, <https://www.scribd.com/document/500875790/210330-Cliff-Edge-Plunge-for-Native-Forest-Profits-South-Coast>.

¹⁸ Correspondence from FCNSW to EPA, January 2021, released in NSW Parliament call for papers. Hannam, P 2021, 'Forestry Corp sought to ease post-bushfire logging curbs to save jobs', *Sydney Morning Herald*, 18 January, <https://www.smh.com.au/environment/sustainability/forestry-corp-sought-to-ease-post-bushfire-logging-curbs-to-save-jobs-20210118-p56u2n.html>.

¹⁹ Gavran, M 2020, *Australian forest and wood products statistics datasets 2020*, ABARES technical report, <https://doi.org/10.25814/fxaj-2687>.

²⁰ Ajani, J 2007, *The Forest Wars*, Melbourne University Publishing, Melbourne.

²¹ Hannam, P 2018, 'Bush turns its back on support for logging native forests', *Sydney Morning Herald*, 14 November, <https://www.smh.com.au/environment/sustainability/bush-turns-its-back-on-support-for-logging-native-forests-20181113-p50frc.html>.

Koala protections removed. Koala populations in NSW have plummeted over the past 30 years. Without decisive action, koalas are headed for extinction by 2050. Habitat loss, driven by urban development, logging and land clearing for agriculture, is the biggest threat to koalas in NSW. Current regulatory frameworks in NSW are facilitating widespread deforestation, helping drive koalas to extinction. Despite this, the NSW Minister for the Environment states he wants to double koalas numbers by 2050. In 2019 and 2020, the NSW Government attempted to improve protections for koala habitat in the planning system through the Koala SEPP 2019. These efforts were derailed when the National Party threatened to leave the Coalition over the policy. This issue remains unresolved, with the Minister for Agriculture and Minister for the Environment, and their respective agencies, negotiating on the details of updated PNF and land clearing codes under the Local Land Services Act.

Renewal of IFOA 2018. The introduction of the renewed Integrated Forestry Operations Approvals (IFOAs) 2018 was a major regression in public native forest protection. The new rules weakened protections for threatened species and streams to allow access to areas previously off limits to logging²². The changes gave loggers access to areas with the last of the large trees in the landscape. The 2018 IFOAs also allowed significant increases in logging intensity, with clear felling patches of up to 60 hectares in some areas²³.

Biomass for energy. Woodchipping of native forests has re-emerged as a significant and growing threat, with proposals use biomass from forests to generate electricity and create liquid hydrogen. In addition to the Eden export woodchipping, two new energy companies, Sweetman Renewables and Verdant Earth Technologies, plan to feed up to a million tonnes of woodchips into power stations in the Hunter Valley and Japan every year.

Verdant Earth Technologies is seeking to convert the shuttered coal-fired Redbank power station in Singleton to burn 850,000 tonnes of woodchips every year.²⁴ Biomass fuel to power Redbank would come from a range of sources, including 70% from native forest logging operations²⁵.

Sweetman Renewables is new Hunter-based company that plans to develop a 'biomass' production operation using wood waste products and woodchips from native forests on the North Coast. Sweetman has a contract to supply 60,000 tonnes of woodchips a year to

²² Environmental Defender's Office NSW 2018, *Submission on the Draft Coastal Integrated Forestry Operations Approval*, https://www.edo.org.au/wp-content/uploads/2020/01/180713_Coastal_Draft_IFOA_-_EDONSW_sub_FINAL.pdf.

²³ Environmental Defender's Office NSW 2018, *Submission on the Draft Coastal Integrated Forestry Operations Approval*, https://www.edo.org.au/wp-content/uploads/2020/01/180713_Coastal_Draft_IFOA_-_EDONSW_sub_FINAL.pdf.

²⁴ Verdant Technologies Australia 2021, *Redbank Power Station QA/QC, Supply Chain and Material Handling*, report, <https://portal.singleton.nsw.gov.au/RedDocServ24/default.aspx?DocID=EhaOICYTTaw%3d>.

²⁵ Verdant Technologies Australia 2021, *Redbank Power Station QA/QC, Supply Chain and Material Handling*, report, <https://portal.singleton.nsw.gov.au/RedDocServ24/default.aspx?DocID=EhaOICYTTaw%3d>.

Japanese power company, Sinanen, to burn for electricity²⁶ and plans to supply much of the fuel required by Redbank²⁷.

The threat from the expansion of the biomass market here and abroad is significant. Native forestry in NSW is barely profitable, but the opening of a new pulp log market on the North Coast may extend the life of the industry and lead to more intense logging operations and accelerate the ecological decline of native forests.

Post-bushfire management—25m clearing rule. The *Bushfire Legislation Amendment Act 2020*—the government’s response to the inquiry into the 2019-2020 bushfire season—amended the *Rural Fires Act 1997* to allow landowners to clear 25m strips of land along their boundaries. The changes do not reduce fire risk in extreme conditions and it is not supported by science or experience. It will, however, will permit the removal of thousands of hectares of native vegetation without expert assessment of environmental impacts. Boundary bushland is often the last vestige of forest in many areas and the only refuge for many species. They are crucial steppingstones for animals, especially migratory species, in heavily cleared landscapes. The 25m clearing rule is an ecologically harmful policy that conflicts with the government’s stated desire to prevent extinctions and double koala populations.

Other states are ending native forests logging. NSW is lagging other states in the transition from native forest logging. The Western Australia Government announced in September 2021 it would end native forest logging by 2024. The WA Government will invest \$350 million to expand softwood timber plantations. A \$50 million Just Transition Plan will support affected workers and communities. A Native Forestry Transition Group will be established to develop and implement of the plan, and will be comprised of local industry, union and government stakeholders. The Victorian Government announced in November 2019 it would end native forest logging by 2030. The \$120 million [Victorian Forestry Plan](#) includes supporting workers, businesses and communities through the transition²⁸. The plan is complemented by the Victorian Government’s \$110 million [Gippsland Plantation Investment Program](#)²⁹.

Additions to the national parks estate. While the NSW Government has added more than 270,000 hectares to the national parks estate during its current term, most areas added have been in the far west of the state which are mostly semi-arid, open woodlands and or shrublands. Of this total, only 15,132ha of forests have been reserved since the NSW State election in 2019. The government has still not committed to creating the Great Koala National Park on the Mid-north Coast, which would result in 175,000 hectares being transferred from State Forest to national parks.

²⁶ Sweetman Renewables 2021, *Sweetman Biomass agree to supply Japan with the “fuel of the future”*, <https://srld.com.au/2021/09/sweetman-biomass-agree-to-supply-japan-with-the-fuel-of-the-future>.

²⁷ Condon, M 2021, ‘NSW Country Hour’ ABC, podcast, <https://www.abc.net.au/radio/programs/nsw-country-hour/nsw-country-hour/13424452>.

²⁸ VIC Government 2021, *Victorian Forestry Plan*, https://djpr.vic.gov.au/data/assets/pdf_file/0008/1924811/DJPR-RRV-Forestry-and-Game-Victorian-Forestry-Plan.pdf.

²⁹ VIC Department of Jobs, Precincts and Regions 2021, *Plantations*, <https://djpr.vic.gov.au/forestry/plantations>.

THREATS AND OPPORTUNITIES

Private Native Forestry—regulatory changes. Private native forests constitute 8.85 million hectares, or 40% NSW’s native forest estate (22.3 million hectares)³⁰. Recent developments, including changes and proposed changes to the protection of koala habitat on private land, have encouraged private landholders to make their forests available for logging. A review of private native forestry (PNF) begun in 2018 and resulted in a proposed reforms being exhibited in early 2020. There is an expectation this review will weaken environmental controls for PNF operations and accelerate the degradation of private native forests.

Wood supply agreements up for renewal. FCNSW has a long history of resource overestimation and over allocation of timber from state forests³¹. In recent decades, FCNSW has had to pay millions of dollars of public money in compensation to sawmills, because they made wood supply commitments they could not fulfil³². These mistakes should not be repeated. With the majority of the large (>1000 tonnes per annum) Wood Supply Agreements on the North Coast expiring in 2023, it is an ideal opportunity to develop a plan to transition the forestry industry out of native forests.

Parliamentary inquiry into the timber industry. This NSW Legislative Council Portfolio Committee No. 4 (Industry) in March 2021 established an inquiry into the *Long- term sustainability and future of the timber and forest products industry*. Submissions closed in May and hearings were held in September. The committee, which is chaired by Shooters, Fishers and Farmers Party MLC Mark Banasiak, is expected to report in early 2022. It does not auger well that Mr Banasiak was also the chair of the 2013 parliamentary inquiry into Public Land Use, which recommended opening national parks for logging to make up timber short falls.

Transitioning from timber production to conservation, recreation and carbon storage. Public forests should be a public asset for the people. Alternative uses of state forests can create more value for the people of NSW. Better management can transform local state forests into valuable recreational areas for local communities and tourists.

Carbon storage. Past logging has more than halved the carbon stored in logged State Forests. Ending logging will enable the sequestration of vast amounts of carbon every year. If the avoided emissions and increased sequestration are counted as Australian Carbon Credit Units they will generate millions of dollars per annum for our economy while helping avert the worst of climate change and its associated costs.

³⁰ Timber NSW 2021, *Private Native Forestry Review*, <https://timbernsw.com.au/private-native-forestry/>.

³¹ Pugh, D 2015, *The Battle for Sustainable Yields is Lost*, *Report for North East Forest Alliance*, https://d3n8a8pro7vhmx.cloudfront.net/ncec/pages/47/attachments/original/1422926080/The_Battle_for_Sustainable_Yields_is_Lost.pdf?1422926080

³² Boral 2014, *Boral’s Response to Changes in Timber Supply from North Coast Forests*, media release, https://www.boral.com/sites/corporate/files/media/field_document/14-0624-Press-Release-North-Coast-Forest-Resources-25June2014.pdf.

Job creation. There are huge opportunities for job creation associated with the protection, restoration and management of our state forests outside of the reserve system. Managing state forests for nature-based tourism and recreation could include establishing and maintaining new walking tracks, boardwalks, lookouts, campgrounds with amenities and scenic driving routes, attracting tourists and supporting local economies. For example, a government study of the Far South Coast found that national parks and reserves management and tourism already supports 920 local jobs and contributes \$54 million per year to the local economy³³. A recent study undertaken by the University of Newcastle found that establishing the Great Koala National Park would alone create nearly 10,000 full time jobs and generate \$412 million³⁴.

Post COVID-19 recovery. Demand for access to natural attractions like national parks and state forests will be spike as COVID-19 restrictions easing. Eco-tourism has a role to play in the recovery of regional economies reeling from the effects of 2019-20 Black Summer bushfires and the pandemic. Government funding and a need to support regional communities will be an opportunity to push for additions to the conservation estate.

Reconciliation and justice. There is a significant opportunity to further Aboriginal reconciliation and land rights by supporting the transfer of Crown land and State Forests to jointly managed national parks estate.

Great Koala National Park. The government has an opportunity to protect a significant area of forest in NSW by creating the Great Koala National Park on the Mid-north Coast, which would result in 175,000 hectares being transferred from State Forest to national parks. Current protected lands only cover 13.6% of koala habitat and populations in NSW³⁵. Given that logging and fragmentation of koala habitat is a key cause of the koala's plight, any remaining large tracts of land that have significant value to this species must be protected and incorporated into the national parks estate. The Great Koala National Park has the potential to provide significant additional benefits to broader forest ecosystems and local economies through increased tourism³⁶.

ESSENTIAL REFORMS

Several factors are converging that make the case of ending native forest logging more compelling than ever. Surveys show a clear most people, even in rural areas, no longer support the industry, and there is a growing recognition of value of native forests as carbon stores, conservation reserves and ecotourism destinations.

³³ NSW Department of Planning, Industry and Environment 2019, *The economic impact of national parks and reserves on the NSW Far South Coast*, <https://www.environment.nsw.gov.au/research-and-publications/our-science-and-research/our-research/social-and-economic/economic-analysis-and-research/far-south-coast>.

³⁴ University of Newcastle 2021, *Great Koala National Park: Economic impact analysis and environmental benefit assessment*, report, https://www.hrf.com.au/uploads/research/UON_GKNP_EIA-and-EBA_final-report_February-2021.pdf.

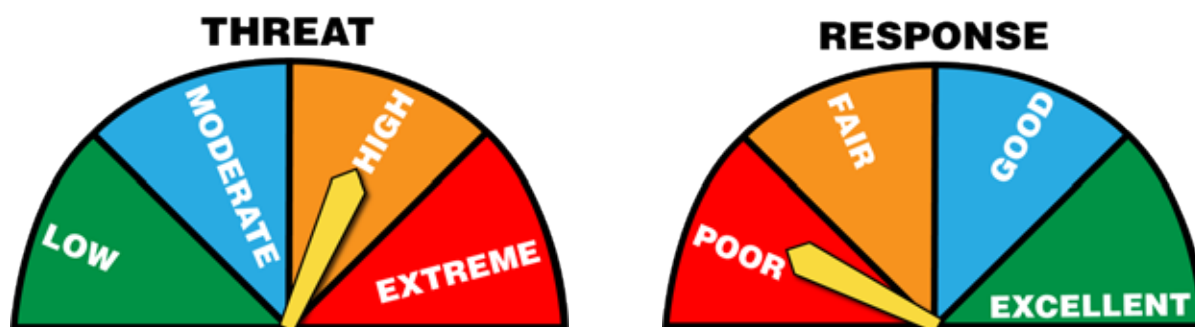
³⁵ World Wildlife Fund Australia 2019, *The Koala Conservation Plan*, <https://www.wwf.org.au/knowledge-centre/resource-library/resources/the-koala-conservation-plan#gs.ddou74>.

³⁶ Jambor, C 2021, 'Great Koala National Park would generate thousands of jobs, but at what cost?', *ABC News*, 2 February, <http://ab.co/3dEW5WS>.

To end the destruction of our priceless natural heritage and to capitalise on the significant opportunities presented by ending native forests logging, the NSW Government should:

1. Announce the end of public native forest logging by 2030.
2. Develop a comprehensive transition plan for affected industries and workers.
3. Create 100,000ha of additional hardwood plantation on already cleared land across the state, with the aim to shift native forest workers into this field during a phase-out of native forest logging.
4. Ban the use of native forest biomass for electricity generation and hydrogen production.
5. Immediately protect high-conservation value forests through gazettal of new reservations in the National Parks estate, including the Great Koala National Park.
6. Invest in the development of infrastructure and management of public forests to maximise their utility as a tourism attraction and site for recreation. Leverage this public asset to reap benefits for local communities.
7. Ensure that PNF regulations are strengthened, rather than weakened, following review and koala code amendments.
8. Amend the *Bushfire Legislation Amendment Act 2020* to repeal the 25m clearing rule.
9. Expand the number of forested reserves within the national parks system that are jointly managed with Traditional Owners.

PLANNING



SUMMARY

- The planning system has profound, long-lasting effects on the health and ecological sustainability of nature and communities in NSW.
- The system currently favours economic development and private commercial interests ahead of local communities, wildlife and ecosystems.
- Rights of third parties, such as community and environmental groups, to appeal in court the merits of poor planning decisions have still not been restored.
- Climate change is still not adequately considered in assessment processes. Climate change impacts are rarely valid grounds for rejecting major development proposals.
- Positive government responses over the past year:
 - The proposed Design and Place SEPP could make buildings and communities ecologically sustainable if the developer lobby does not hijack the consultation.
- Negative government responses over the past year:
 - The 2021 Rapid Assessment Framework has streamlined the approvals process for state significant development proposals without adequate protections to ensure quality environmental assessments.
 - 16% of Cumberland Plain Woodland and critical wildlife corridors would be lost under the Draft Cumberland Plain Conservation Plan, putting southwest Sydney's koala population at greater risk.
- Essential reforms
 - Strengthen climate change provisions in all planning instruments.
 - Include mandatory best-practice minimum environmental standards in the proposed Design and Place SEPP.
 - Strengthen bushland and wildlife protections in planning instruments, including the Koala SEPP and Urban Vegetation SEPP.
 - Strengthen environmental protections in the land clearing codes.
 - Reform the Biodiversity Offset Scheme to conform with world's best practice, which means ending cash for credits as an option for developers.
 - Restore third-party appeal rights of communities and environmental groups to challenge poor planning decisions in court.

THE ISSUE

Planning decisions have profound implications for nature and people in NSW. Decisions made under the *Environmental Planning and Assessment Act 1979* (EP&A Act), the legislation controlling planning and environmental assessment in NSW, have not effectively implemented ecologically sustainable development, a core objective of the Act.

Lack of strategic vision, prioritisation of economic considerations over environmental or social considerations, flawed environmental impact assessments, the payment of ecological consultants by proponents, as well as poor political platforms, and in some cases corruption, have resulted in planning outcomes that fail to adequately protect the natural environment.

Habitat destruction and landscape degradation have occurred at a range of scales – from small-scale urban development to large mines and infrastructure projects. The impact of these developments includes removal of remnant vegetation, particularly mature trees, changed hydrological cycles and ecosystem functions.

The problems with the planning system are state-wide. However, some areas experiencing the highest development pressures, population increases and resource exploitation have been impacted most by poor decision-making. Examples include the rapid expansion of greenfield development in Western Sydney, the proliferation of coal mines in the Hunter Valley and the expansion of urban development along the coast in regional areas.

In the era of climate change, our planning system is not fit-for-purpose. Coal mines, gas drilling and emissions intensive projects continue to be approved. In too many places, the built environment is hot, treeless, and dominated by hard surfaces. Buildings where people live and work are energy inefficient, reliant on mechanical cooling and not designed for human wellbeing in a heating world. There is no honest recognition that areas suitable for development will change as natural hazards escalate, let alone proportionate strategic planning.

THE POLITICS OF PLANNING

Planning outcomes are influenced by politics. The major political parties promote jobs and economic growth without adequate environmental and social safeguards, so the outcome for the environment and many communities is poor.

The planning system attempts to reconcile inherently conflicting objectives and competing interests. The stakes can be very high for developers, state and local governments and the community.

For developers, potential profits from new projects are tantalising, so they continue to push the envelope in relation to rezoning and building characteristics, such as height and site coverage, to maximise yields.

Some developers resist public interest regulation, such as the proposed Design and Place SEPP, with claims of excessive red tape and arguments about housing supply and affordability. The developer lobby has influence at the highest levels of government and threatens that investment will flee the state if they don't get their way.

The continued approvals of new fossil fuel extraction projects are an absolute disgrace for so many citizens across the state.

Any change that impacts individuals' homes and property values, can quickly inflame tensions, and prevents clear-eyed, long-term planning for climate impacts, such as sea level rise, flood, fire risk and water availability.

For local communities, too often planning decisions destroy the natural and built places they know and love. Forced council amalgamations in 2016 have left many communities feeling disenfranchised from local planning matters.

Decision-making power in the planning system has been increasingly removed from local councils and concentrated further in the state government, the Planning Minister, planning panels and the Independent Planning Commission (IPC).

History of corruption and poor environmental and social outcomes in the planning system is a legacy of both major political parties. We look to all parties in the lead up the 2023 election to articulate an ambitious plan to create a planning system fit for the 21st century.

RECENT DEVELOPMENTS

'Streamlining' project assessments. Following on from the 2017 amendments to the EP&A Act, the NSW Government continues to pursue planning system changes aimed at "streamlining" development pathways. The government's Rapid Assessment Framework, exhibited and adopted this year, seeks to expedite assessment of applications for State Significant Development and State Significant Infrastructure. These changes focus on processes that can override community engagement and specialist advice rather than improving the quality of outcomes. Accelerated "tick-a-box" assessment increases the risk of poor environmental outcomes by giving environmental impacts only superficial consideration.

Cumberland Plain Conservation Plan. The Cumberland Plain Conservation Plan (CPCP) in Sydney's west has been exhibited and will be finalised soon. A test case for strategic conservation planning under the *Biodiversity Conservation Act 2016*, it seeks to lock in conservation protections at a landscape level, meaning new developments in western Sydney won't require individual assessment and biodiversity offsetting over coming years. However, the draft plan slates 16% of critically endangered Cumberland Plain Woodland for destruction, reduces critical habitat connectivity and threatens the Campbelltown koala population. Important changes must be adopted in the final plan for it to have credibility as a conservation initiative, rather than just a streamlining mechanism to enable unimpeded development.

Design and Place SEPP. The Design and Place SEPP Explanation of Intended Effects was exhibited early this year and the draft SEPP is currently being finalised. This far-reaching policy aspires to make all new development in NSW more aesthetic, ecologically sustainable, better designed and resilient. However, some standards proposed are likely to

be discretionary. This is particularly concerning given the Design and Place SEPP will replace the existing BASIX SEPP, which sets mandatory environmental performance standards for residential buildings. However, if the SEPP contains sound mandatory controls for tree retention, tree planting and energy-efficient building design, construction and performance, it could significantly promote urban greening and lower carbon emissions.

Fossil fuel project assessments. Recent decisions by the Independent Planning Commission (IPC), including the rejection of the Dendrobium coal mine extension in the Illawarra and the Hume Coal mine proposal in the Southern Highlands, provide glimmers of hope. However, the IPC did approve several coal mining proposals this year. In 2020, Narrabri Gas Project was also approved. This was despite 18,000 objections to the proposal and considerable scientific evidence about the likely negative environmental impacts, which include contamination of aquifers and significant methane emissions from the gas fields.

Review of SEPPs. The use of State Environmental Planning Policies (SEPPs) came under scrutiny with an inquiry by the parliamentary Regulation Committee¹ investigating whether they vest too much discretionary power with the planning minister. SEPPs are powerful instruments that cannot be disallowed by parliament. There is no mandatory requirement that draft SEPPs be publicly exhibited. The report² from the inquiry made several recommendations, however none would substantially change how SEPPs are made and used in the planning system.

Other parliamentary inquiries. Parliamentary inquiries have also investigated the proposal to raise the Warragamba Dam wall³, the Western Harbour Tunnel and Beaches Link⁴, the impacts of new dams and other water infrastructure in NSW⁵, developer contributions⁶ and a review of the *Heritage Act*⁷.

¹ Regulation Committee 2021, *Environmental Planning Instruments (SEPPs)*, report, [https://www.parliament.nsw.gov.au/lcdocs/inquiries/2740/Report%20No%208%20-%20Regulation%20Committee%20-%20Environmental%20planning%20instruments%20\(SEPPs\).pdf](https://www.parliament.nsw.gov.au/lcdocs/inquiries/2740/Report%20No%208%20-%20Regulation%20Committee%20-%20Environmental%20planning%20instruments%20(SEPPs).pdf).

² Regulation Committee 2021, *Environmental Planning Instruments (SEPPs)*, report, [https://www.parliament.nsw.gov.au/lcdocs/inquiries/2740/Report%20No%208%20-%20Regulation%20Committee%20-%20Environmental%20planning%20instruments%20\(SEPPs\).pdf](https://www.parliament.nsw.gov.au/lcdocs/inquiries/2740/Report%20No%208%20-%20Regulation%20Committee%20-%20Environmental%20planning%20instruments%20(SEPPs).pdf).

³ Parliament of NSW 2019, *Select Committee on the Proposal to Raise the Warragamba Dam Wall*, <https://www.parliament.nsw.gov.au/committees/listofcommittees/Pages/committee-details.aspx?pk=262>.

⁴ Parliament of NSW 2021, *Impact of the Western Harbour Tunnel and Beaches Link*, <https://www.parliament.nsw.gov.au/committees/inquiries/Pages/inquiry-details.aspx?pk=2767>.

⁵ Parliament of NSW 2020, *Rationale for, and impacts of, new dams and other water infrastructure in NSW*, <https://www.parliament.nsw.gov.au/committees/inquiries/Pages/inquiry-details.aspx?pk=2614>.

⁶ Parliament of NSW 2021, *Environmental Planning and Assessment Amendment (Infrastructure Contributions) Bill 2021*, <https://www.parliament.nsw.gov.au/committees/inquiries/Pages/inquiry-details.aspx?pk=2821#tab-hearingsandtranscripts>

⁷ Parliament of NSW 2021, *Review of the Heritage Act 1977*, <https://www.parliament.nsw.gov.au/committees/inquiries/Pages/inquiry-details.aspx?pk=2814>.

THREATS AND OPPORTUNITIES

Design and Place SEPP. The Draft Design and Place SEPP is yet to be made. It will be exhibited and finalised in coming months. With developers pushing back against increased application requirements and assessment considerations, the government needs to know the community supports a robust SEPP with ambitious mandatory environmental performance standards. These must include net-zero emissions targets across all building types (adaptive reuse and new construction), a commitment to no new gas connections and improved minimum greening requirements.

Cumberland Plain Conservation Plan (CPCP). Biocertification of the CPCP is yet to occur. The fate of koalas and Cumberland Plain Woodland will be determined by the CPCP. Crucially, the CPCP, along with the Mt Gilead Lendlease project, must protect koala habitat, maintain corridors 425m wide and contribute to ongoing bushland management.

ESSENTIAL REFORMS

People and nature. Effective policy and law reform could put environmental outcomes, human wellbeing, and the public interest at the heart of the planning system. We need simpler, user-friendly planning legislation with stronger measures to protect nature and peoples' health and environment.

Climate change. The planning system fails to adequately address the challenges of climate change. This glaring deficiency needs to be addressed urgently. Future land-use decisions must use the latest forecasts for climate change-related natural disasters, including sea level rise, bushfires, floods, droughts and heatwaves.

Design for safe, healthy communities. All new buildings and precincts should be designed to minimise carbon emissions. Urban greening and heat mitigation strategies must be mandatory and designed to take into account projected temperature increases over coming decades. The *Design and Place SEPP* could be an important start.

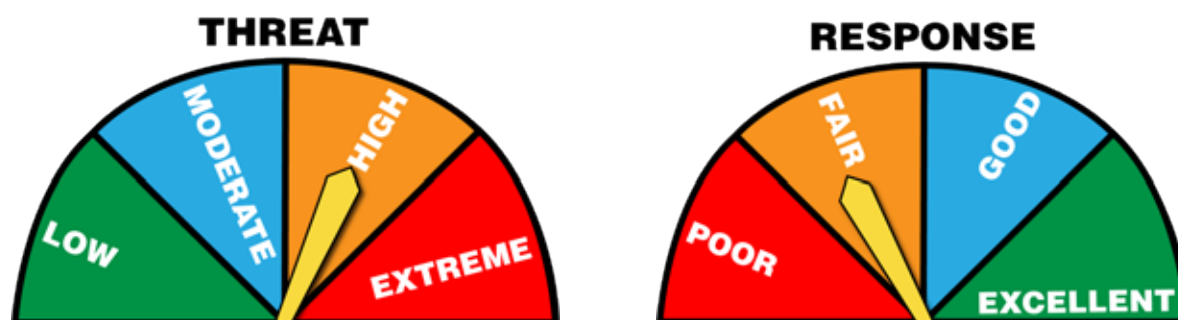
Assess the full climate impacts of major projects. Major Projects, like coal mines and infrastructure, should require Climate Impact Statements that make emissions and adaptation risks explicit. We need legal mechanisms that enable approval bodies to refuse and modify projects according to minimise climate impacts, including consideration scope three emissions from burning fossil fuels overseas.

Wildlife habitat. Protection of ecosystems, including remnant native vegetation must increase. Land clearing must be substantially reduced. Specific measures required include remaking SEPPs that properly protect koalas and urban vegetation.

Biodiversity offsets. The Biodiversity Offset Scheme (BOS), the key intersection between planning and biodiversity conservation frameworks, has fundamental flaws that pose a significant risk to wildlife habitats. A stronger, credible BOS would translate to better outcomes for nature across the breadth and depth of the planning system.

Appeal rights. The removal of avenues of legal appeal for approvals remains a central concern. Full third-party appeal rights must be restored for IPC decisions, which determines some of the largest and potentially most damaging projects.

PROTECTED AREAS



SUMMARY

- The terrestrial Protected Area Network only covers 9% of NSW.
- The current Protected Area Network does not meet comprehensive, adequate, and representative targets for all NSW bioregions.
- The Protected Area Network is under threat from development, fragmentation, climate change and invasive pest species.
- Positive NSW Government responses:
 - Addition of more than 520,000 hectares to the parks estate since 2019.
 - While overdue and inadequate, the draft Kosciuszko National Park Wild Horse Heritage Management Plan proposed significant reduction in feral horse numbers.
- Negative NSW Government responses:
 - Continued pressure on Kosciuszko National Park through Snowy 2.0 infrastructure and the Snowy Mountains Special Activation Precinct, which proposes more accommodation and recreational infrastructure in the park.
 - Progressing with the proposed raising of the Warragamba Dam Wall which will damage the Blue Mountains World Heritage Area.
 - Advancing commercialisation projects across many protected areas, which have significant environmental and amenity impacts.
- Essential reforms required:
 - Adequately fund National Park and Wildlife Services to manage parks for conservation and manage climate impacts.
 - Expand and connect the conservation estate, particularly in underrepresented areas.

THE ISSUE

The state's protected areas, including national parks, nature reserves, regional parks and state conservation areas, are the jewels in the crown of landscape and biodiversity conservation.

Amid a mass extinction crisis, protected areas are vital for arresting species decline and maintaining ecosystem viability.

Our protected areas do the heavy lifting to preserve biological diversity in our state. Nearly two-thirds of the protected area network retains at least 60% of original ecological carrying capacity. Outside the Protected Area Network, only 2% of the total area of other tenures have that level of habitat condition.¹ This highlights the crucial role protected areas play.

However, the terrestrial Protected Area Network only covers 9% of NSW². This is a far cry from the IUCN target of 17% to which Australia is a signatory, and far below the 30% target recently adopted by the Commonwealth when it endorsed the international High Ambition Target.³ In addition, the current network does not meet comprehensive, adequate, and representative targets for all NSW bioregions, with a particular shortfall across Western NSW.⁴

The Protected Area Network is under threat from development, fragmentation, climate change and invasive pest species. For example:

- the Snowy Special Activation Precinct and Kosciuszko National Park Plan of Management will allow a significant intensification of tourist development.
- Snowy 2.0 transmission lines will require the removal of hundreds of hectares of bushland and wildlife habitat from a national park.
- Climate change extremes have resulted in parts of the Gondwanan rainforests on the North Coast burning for the first time ever during the 2019-20 Black Summer fires.
- Invasive species are not being adequately controlled, including feral horses in the alpine parks, as well weeds after the Black Summer fires.

RECENT DEVELOPMENTS

National parks additions. Since 2019, the NSW Government has added or promised to add more than 520,000 hectares to the parks estate, notably in the Far West. These include Avenel/Mt Westwood Station (121,390ha) near Broken Hill

¹ NSW Department of Planning, Industry and Environment 2020, *Biodiversity Outlook Report*, <https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Animals-and-plants/Biodiversity/Biodiversity-Indicator-Program/biodiversity-outlook-report-first-assessment-200621.pdf>.

² NSW National Parks and Wildlife Service 2021, *About NSW National Parks and Wildlife Service*, <https://www.nationalparks.nsw.gov.au/about-npws#:~:text=NPWS%20manages%20more%20than%209,state's%20biodiversity%20and%20cultural%20heritage>.

³ Prime Minister of Australia, *Australia Joins International Alliance to Conserve Planet's Biodiversity*, media release, <https://www.pm.gov.au/media/australia-joins-international-alliance-protect-planet%E2%80%99s-biodiversity>.

⁴ NSW Environment Protection Authority, *NSW State of Environment*, report, <https://www.soe.epa.nsw.gov.au/all-themes/land/protected-areas-and-conservation#adequacy>.

(announced September 2021)⁵, Koonaburra Station (45,534ha) near Ivanhoe (September 2021)⁶, Langidoon and Metford sheep stations (~60,000ha) near Broken Hill (June 2021)⁷ and Narriearra Station (~153,000ha) in the north west corner of the state (June 2020)⁸.

However, even with such additions the western bioregions are still critically under represented. The opportunity to address similar shortfalls in the central west and coastal bioregions are being compromised by record levels of land clearing associated with development, agriculture and logging⁹.

Kosciusko National Park under threat. Kosciusko National Park (KNP) is under pressure on a range of fronts.

Feral horses. Feral horse populations in KNP, protected by the *Kosciuszko Wild Horse Heritage Act* 2018, have increased significantly in recent years to 14,000¹⁰. This has had devastating impacts for the sensitive alpine ecosystems of KNP. In October 2021, the long-awaited draft *Kosciuszko National Park Wild Horse Heritage Management Plan*¹¹ was released for consultation. It proposes reduction of horse numbers to 3,000 by 2027 in 32% of KNP.

Electricity infrastructure. Hydro The Snowy 2.0 hydroelectric project will inflict immense damage on KNP. The Snowy 2.0 Transmission Connection Project¹² will require the removal of swathes of vegetation for the easements under overhead transmission lines, ignoring the far less damaging alternative of undergrounding.

⁵ [National park land boosted by purchase of two huge properties in state's west](#), ABC, 26-10-21.

⁶ [NSW buys 60,000 hectares of farmland near Broken Hill for outback nature reserve](#), The Guardian, 7-6-21

⁷ [NSW buys outback station in state's largest single property purchase for a national park](#), ABC, 27-6-20

⁸ NSW Department of Planning, Industry and Environment 2020, *National Park Estate Target Doubled*, media release, <https://www.environment.nsw.gov.au/news/national-park-estate-target-doubled>.

⁹ Since the government's overhauled conservation laws in 2016, land-clearing rates in NSW have roughly doubled. In 2019, the latest year for which figures are available, about 54,500 hectares of native vegetation—native and plantation forest, woodlands, etc.—were destroyed for agriculture, forestry and property development. NSW Department of Planning, Industry & Environment 2019, *Woody Vegetation Change, Statewide Landcover and Tree Study*, summary report, <https://www.environment.nsw.gov.au/research-and-publications/publications-search/woody-vegetation-change-statewide-landcover-tree-study-summary-report-2019>.

¹⁰ Malone, U 2021, 'NSW Government supports more culls after survey finds 14,000 wild horses in Kosciuszko National Park' ABC News, 13 January, <https://www.abc.net.au/news/2021-01-13/wild-horse-population-in-kosciuszko-slashed-by-a-quarter/13053240>.

¹¹ NSW Department of Planning, Industry and Environment 2021, *Kosciuszko National Park wild horse management*, <https://www.environment.nsw.gov.au/topics/animals-and-plants/pest-animals-and-weeds/pest-animals/wild-horses/kosciuszko-national-park-wild-horse-management>; Reardon, A and Proust, K 2021, 'Kosciuszko Park brumby numbers to be heavily cut under new draft management plan', ABC News, 1 October, <https://www.abc.net.au/news/2021-10-01/wild-horses-management-brumbies-kosciuszko-100507398#:~:text=The%20draft%20Kosciuszko%20National%20Park,down%20from%20about%2014%2C000%20now>.

¹² Transgrid 2021, 'Snowy 2.0 Transmission Connection Project Environmental Impact Assessment', *Environmental Impact Statement Executive Summary*, <https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=SSI-9717%2120210212T013731.952%20GMT>.

Tourist development. The *Snowy Mountains Special Activation Precinct Master Plan*¹³, and associated amendments to the *KNP Plan of Management*¹⁴, were exhibited earlier this year. These proposals would lead to unacceptable environmental damage, with a 40 per cent increase in the permitted capacity of accommodation in KNP, expansion of commercial infrastructure and intensification of recreational activities.

Warragamba Dam. Even our World Heritage-listed national parks are facing damage by the NSW Government. The proposed raising of Warragamba Dam wall continues to progress, with the environmental impact statement¹⁵ now on exhibition. A recently published upper house parliamentary inquiry report¹⁶, and years of work by the Give a Dam campaign¹⁷, has highlighted the totally unacceptable impacts on the natural and cultural heritage in the Blue Mountains World Heritage Area if the proposal goes ahead.

Marine parks. The status of the Bateman's Bay Marine Park remains under dire threat. In 2019, the NSW Government effectively lifted a fishing ban in sanctuary zones in the park with a 'fishing amnesty'. This change—made without consultation and totally inconsistent with scientific advice—hasn't been formalised and the future of the sanctuary zones remains unresolved.

Inappropriate tourist development. Across the conservation estate, several concerning trends present ongoing threats to our precious protected areas. The NSW Government's focus on commercialising national parks has seen multiple proposals for 'glamping' and private accommodation, such as the Light-to-Light walk and the Great Southern Walk. Done insensitively, these proposals risk destroying the natural values which make our protected areas so special.

Mountain bike trails. Impacts of illegal and legal mountain biking tracks in protected areas is increasing, with more outdoor recreation during COVID-19 lockdowns. Diffuse illegal track building across parks is leading to habitat loss, fragmentation, erosion, and loss of amenity for other users. Formal proposals for mountain biking track networks, for example on the Illawarra escarpment and Royal National Park, present larger scale impacts.

THE POLITICS

¹³ NSW Department of Planning, Industry and Environment 2021, *Snowy Mountains Special Activation Precinct*, <https://www.planning.nsw.gov.au/Plans-for-your-area/Special-Activation-Precincts/Snowy-Mountains-Special-Activation-Precinct>.

¹⁴ NSW Department of Planning, Industry and Environment 2021, *Kosciuszko National Park Draft Amendment to the Plan of Management: Snowy 2.0: Public Consultation*, <https://www.environment.nsw.gov.au/topics/parks-reserves-and-protected-areas/park-management/community-engagement/kosciuszko-national-park/kosciuszko-national-park-draft-amendment-to-the-plan-of-management-snowy-2-0>.

¹⁵ NSW Planning Portal 2021, *Major Projects: Warragamba Dam Raising*, <https://www.planningportal.nsw.gov.au/major-projects/project/10571>.

¹⁶ Parliament of NSW 2019, *Select Committee on the Proposal to Raise the Warragamba Dam Wall*, <https://www.parliament.nsw.gov.au/committees/listofcommittees/Pages/committee-details.aspx?pk=262>.

¹⁷ Colong Foundation for Wilderness 2019, *Give a Dam*, <https://www.giveadam.org.au/>.

The long-standing cross-party agreement that protected areas are to be conserved in perpetuity and out of bounds to development has been eroded by the current Coalition government.

Declaring a particular landscape national park, or seeking international recognition as World Heritage, requires a steadfast commitment to future generations to ensure these places are maintained and improved. The current policies and proposals of the NSW Government fall short of this standard.

The Coalition government rightly recognise the economic and social value of parks, with park visitation and management contributing more than \$18 billion to the NSW economy each year¹⁸. However, their enthusiasm for further commercialisation and intensive use of protected areas risks losing sight of the core objective of protected areas: conservation.

At the same time, investment to meaningfully expand and connect the protected area network and increase resourcing for land management and biodiversity conservation has been severely lacking under this government.

The antipathy towards protected areas from the Nationals and the Shooters, Fishers and Farmers Party frustrates progress towards a bigger, better-managed reserve network.

In the lead up to the 2019 election, the Labor Opposition committed to establishing the Great Koala National Park¹⁹, which would require the transfer of koala habitat in North Coast from state forests to the conservation estate.

We welcome this type of vision and look forward to seeing all parties bringing ambitious commitments for growing and better resourcing protected areas in the lead up to the 2023 election.

OPPORTUNITIES AND THREATS

Feral horses. The draft KNP *Wild Horse Heritage Management Plan* exhibition period will end on November 2. The timeframe for adopting and implementing the plan is unclear. This is concerning given the need to reduce feral horse numbers in urgent.

Warragamba Dam. A decision by the NSW Government on whether to raise the Warragamba Dam wall is expected in 2022.

Expanding the parks estate. Opportunities for expanding and increasing connectivity of the Protected Area Network are well understood. In many cases, high

¹⁸ NSW Department of Planning, Industry and Environment 2021, *New iconic walks to showcase State's extraordinary national parks*, media release, <https://www.environment.nsw.gov.au/news/new-iconic-walks-to-showcase-state-s-extraordinary-national-parks#:~:text=NSW%20national%20parks%20already%20attract,74%2C000%20direct%20and%20indirect%20i obs.>

¹⁹ Driver, D 2019, 'Labor Says Yes to Great Koala National Park', *NBN News*, 18 March, <https://www.nbnnews.com.au/2019/03/18/labor-says-yes-to-great-koala-national-park/>.

conservation value unprotected land is publicly owned, such as state forests, meaning the NSW Government is well placed to act.

In 2018, the NSW National Parks Association published the *50 Parks Proposal*²⁰. These include significant, high-profile park proposals such as the Great Koala National Park and Sydney Marine Park, as well as smaller, important and strategic additions. NPA is currently conducting a large-scale review of potential acquisitions across Western NSW and intends to identify a range of opportunities for improving the protection of these highly underrepresented bioregions.

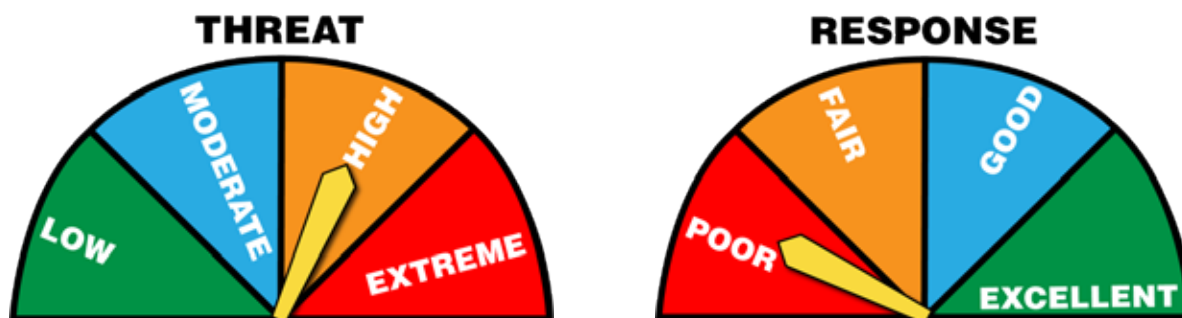
With enough political will and investment, NSW could build on past gains and make real progress towards a truly comprehensive, adequate, and representative conservation estate.

Increasing funding for parks management. National Parks and Wildlife Service funding falls short of what's required to properly manage protected areas for conservation and recreation. Interconnectivity and management of protected areas will only become more important as climate change places stress on species and ecosystems.

Climate change. NSW has already warmed by more than 1 degree Celsius. The ecological impacts of continued warming will be profound. Disturbed ecological processes, shifting species ranges and more severe and frequent fires will place biodiversity under enormous pressure. Protected areas must be expanded and connected so species can move as conditions change. Other stressors, such as invasive species, must be managed to increase ecosystem resilience to climate change. Highly resourced, strategic and ecologically sensitive bushfire management will be required across the conservation estate.

²⁰ National Parks Association of NSW 2018, *50 Park Proposals*, report, <https://npansw.org.au/50-park-proposals/>.

WATER POLICY AND MANAGEMENT



SUMMARY

- Rivers, wetlands and floodplains are hotspots for biodiversity and provide water vital water supplies for cities and towns, agriculture and industry.
- Almost all the 58,000 kilometres of rivers in NSW has been modified and degraded to some extent since colonisation.
- Dam construction, over extraction from rivers and their floodplains for agriculture, land degradation and invasive species are driving significant declines in biodiversity and water quality and threatening international significant Ramsar wetlands.
- Climate change is multiplying the threats by increasing evaporation and reducing run-off, and changing the times of year that rainfall and peak river flows occur.
- The Murray-Darling Basin Plan, the principal policy response to the alarming decline in health of inland rivers in NSW, aims to deliver enough water to the system to restore the system to health.
- The NSW Government has actively worked against delivery of environmental water targets, delaying essential water-sharing plans, opposing water buy-backs, and attempting to give away billions of litres public water through the licencing of floodplain harvesting.
- Separation of water licences from land titles and the creation of markets to buy and sell licences has enriched large property owners and water speculators and undermined environmental restoration.
- Positive government responses
 - Launched the NSW State Water Strategy.
 - Deferred plans to “re-engineer” the Menindee Lakes to ensure they would never fill and would empty more quickly.
- Negative government responses
 - Announced plans to build new dams or dam expansions, including raising Warragamba Dam wall.
 - Continues to stall the full implementation of the Murray-Darling Basin Plan.
 - Opposing water licence buy-backs from willing seller. B Plan and
 - Attempted to transfer billions of litres of publicly owned water to private landholders through the licencing of floodplain harvesting.
- Essential reforms
 - Build no new dams or weirs.
 - Improve drought management strategies.

- Invest in water recycling for agriculture, industry and human consumption.
- Implement the 'no meter no take' policy.
- Assess the cumulative environmental impact of flood plain harvesting and reduce the licenced volume to under the accredited 1994-95 cap.
- Implement Water Sharing Plans that grant cultural water rights and rules to protect river health and integrity of groundwater sources.

THE ISSUE

NSW has about 450¹ rivers and streams that run a total of 58,000 kilometres². The largest are the Murray, Murrumbidgee, Darling, Lachlan, Macquarie, and Barwon, which all drain the western side of the Great Dividing Range and form part of the Murray-Darling Basin, a vast catchment covering a million square kilometres³. The Basin is of immense cultural, environmental, and economic significance to First Nations peoples⁴ and millions of other Australians who depend on it for their livelihoods and drinking water supplies. The region supports 16 internationally significant Ramsar wetlands, 35 endangered species and 98 species of waterbird.⁵ More than 2.2 million people live in the basin, and about 40% of Australia's agricultural output is produced there.⁶ On the other side of the Great Dividing Range, scores of shorter, faster flowing rivers systems spill into the Tasman Sea through 148⁷ estuaries. Significant rivers include the Richmond, Clarence, Macleay, Manning, Hunter, Nepean and Shoalhaven. These waterways and their wetlands and estuaries support highly diverse fresh and brackish water ecosystems as well as many of the state's largest population centres.

Almost all NSW rivers (97%)⁸ have been substantially modified since colonisation and only a handful, including the Warrego and Paroo in the northwest, do not have major dams or weirs impeding their flow or interrupting natural processes, such as the migration of fish. According to the most recent *NSW State of Environment Report*, 38 of 40 river valleys surveyed were in "moderate" condition or better⁹, although that assessment does not accord with the experiences of many who live along inland rivers and on the floodplains.

¹ List of rivers of Australia, Wikipedia, https://en.wikipedia.org/wiki/List_of_rivers_of_Australia

² NSW Environment Protection Authority 2018, *NSW State of the Environment*, report, <https://www.soe.epa.nsw.gov.au/all-themes/water-and-marine/river-health>.

³ Australian Bureau of Statistics (ABS) 2010, *1301.0 Year Book Australia*, <https://www.abs.gov.au/AUSSTATS/abs@.nsf/Lookup/1301.0Chapter3042009%E2%80%939310#:~:text=The%20Murray%20Darling%20Basin%20is,14%25%20of%20Australia's%20land%20area>.

⁴ Australian Human Rights Commission 2008, *Native Title Report*, https://humanrights.gov.au/sites/default/files/content/social_justice/nt_report/ntreport08/pdf/chap6.pdf.

⁵ Murray-Darling Basin Authority 2020, *Plants and Animals*, <https://www.mdba.gov.au/importance-murray-darling-basin/plants-animals>.

⁶ Murray-Darling Basin Authority 2020, *Plants and Animals*, <https://www.mdba.gov.au/importance-murray-darling-basin/plants-animals>.

⁷ NSW Department of Planning, Industry and Environment 2018, *About Estuaries*, <https://www.environment.nsw.gov.au/topics/water/estuaries/about-estuaries#:~:text=There%20are%20184%20estuaries%20in,%2C%20Richmond%2C%20Hawkesbury%20and%20Tweed>.

⁸ NSW Environment Protection Authority 2018, *NSW State of the Environment*, report, <https://www.soe.epa.nsw.gov.au/all-themes/water-and-marine/river-health>.

⁹ NSW Environment Protection Authority 2018, *NSW State of the Environment*, report, <https://www.soe.epa.nsw.gov.au/all-themes/water-and-marine/river-health>.

Nor does it seem consistent with another of the report's key finding, that native fish stocks in 80% of catchments are in "poor", "very poor" or "extremely poor" condition.¹⁰

The \$13 billion Murray-Darling Basin Plan, which the NSW Government signed in 2012, is the signature policy response of state, territory and commonwealth governments to the crisis facing the nation's biggest river system. The plan requires the return of at least 2,750 gigalitres a year (on average) for environmental flows, a large volume of water equivalent to almost six Sydney Harbours but well short of what ecologists and hydrologists advised governments when the Plan was being negotiated during the Millennium Drought. The Commonwealth Government has also committed to finding a further 450 gigalitres a year (on average), bringing the total to 3,200 gigalitres.

Water recovery, however, has stalled and is failing to fully deliver the environmental benefits promised, much less the improvements that are required to ensure the system is managed in an ecologically sustainable way. The Wentworth Group of Concerned Scientists found in 2020 that 20% of the water the Plan was supposed to have delivered did not reach most gauge sites, including the Ramsar wetlands of international significance at the top of the system along the Barwon and Upper Darling where water extraction for crops is highest.¹¹

The NSW Government must accept much of the blame for this failure as 75% of the Basin is within its borders and the government has actively obstructed full implementation of the Plan¹² for years. NSW is behind schedule in delivering catchment water resources plans and continues to oppose buying back water licences from willing sellers, a measure experts agree is critical for reaching environmental flow targets. To make matters worse, proposing to licence the diversion of large volumes of publicly owned water from floodplains by increasing the allowable levels of water take, rather than significantly reduce the volumes taken to fit under the allowable cap.¹³ If the government succeeds, it will constitute one of the largest transfers of public wealth into private hands in the state's history and will deny downstream communities and ecosystems billions of litres of vital water.

Overallocation of water for irrigation, floodplain harvesting and the failure of successive governments to return sufficient water to rivers, floodplains and wetlands is pushing many critical ecosystems to the brink of collapse, including internationally listed Ramsar wetlands

¹⁰ NSW Environment Protection Authority 2018, *NSW State of the Environment*, report, <https://www.soe.epa.nsw.gov.au/all-themes/water-and-marine/river-health>.

¹¹ Wentworth Group of Concerned Scientists 2020, *Assessment of river flows in the Murray-Darling Basin*, report, <https://wentworthgroup.org/wp-content/uploads/2020/08/MDB-flows.pdf>.

¹² Davies, A 2019, 'Water wars: will politics destroy the Murray-Darling Basin plan – and the river system itself?', *The Guardian*, 14 December, <https://www.theguardian.com/australia-news/2019/dec/14/water-wars-will-politics-destroy-the-murray-darling-basin-plan-and-the-river-system-itself>; Hannam, P 2021, 'NSW sought to beat Basin Plan water limit', *Sydney Morning Herald*, 20 September, <https://www.smh.com.au/environment/sustainability/nsw-sought-to-beat-basin-plan-water-limits-20210919-p58szi.html>.

¹³ Davies, A 2021, 'Failure to regulate flood plain harvesting 'a real embarrassment', Bret Walker tells NSW inquiry', *The Guardian*, 27 September, <https://www.theguardian.com/australia-news/2021/sep/24/failure-to-regulate-flood-plain-harvesting-a-real-embarrassment-bret-walker-tells-nsw-inquiry>.

such as the Macquarie Marshes and Gwydir Wetlands, and other systems such as the Menindee Lakes in the Far West.¹⁴

The increasing impacts of climate change on rivers and wetlands are now clear and are multiplying the threats posed by overextraction and invasive species. The Millennium Drought of 2000 to 2010, longer and more frequent “no-flow” events along the Barwon-Darling-Baaka River and its tributaries, and the massive fish kills of January 2020 have all had significant negative impacts on river and floodplain health biodiversity, river communities, especially in the Lower Darling, and the Traditional Owners who are still being denied genuine water rights or a meaningful say in the management of a resource they once wholly owned.

The Coalition Government has consistently given the water portfolio to the National Party, even though two previous Water Ministers faced ICAC investigations. The irrigation industry is a key support base of the National Party demonstrating a significant conflict of interest in the management of water policy.

The NSW Independent Commission Against Corruption (ICAC) found in 2020 that “the evidence established that the rights of productive water users were given priority over the rights of other stakeholders and that there was a clear alignment between the department’s strategies and goals and those of the irrigation industry”.¹⁵

In simple terms, too much water in NSW is still being allocated for irrigation and water-use monitoring and compliance regimes are still patchy at best.¹⁶ However, with the sufficient political will and guided by the best available science, it is within the power of governments to restore our rivers to health.

RECENT DEVELOPMENTS

Statewide Water Strategy . Government consulted on and finalised a State Water Strategy¹⁷ to 2040 during 2021, mainly in response to the 2018 –2020 drought. The strategy will be complemented by 12 regional water strategies yet to be developed.

The strategy concentrates on infrastructure and engineering solutions, giving further precedence to industry over all other water users rather than sustainable water use and

¹⁴ Hannam, P 2020, ‘The fish and bird species at risk from Australia’s failure to manage wetlands’, *Sydney Morning Herald*, 31 May, <https://www.smh.com.au/environment/conservation/the-fish-and-bird-species-at-risk-from-our-failure-to-manage-wetlands-20210528-p57w78.html>.

¹⁵ NSW Independent Commission Against Corruption 2020, *Investigation into Complaints of Corruption in the Management of Water in NSW and Systemic Non-Compliance with the Water Management Act 2000*, report, https://www.icac.nsw.gov.au/ArticleDocuments/973/Investigation-into-complaints-of-corruption-in-the-management-of-water-in-nsw-and-systemic-non-compliance-with-the-water-management-act-2000-Avon_Nov2020.pdf.aspx.

¹⁶ Davies, A 2021, ‘NSW exceeds Barwon-Darling water allocations in first year of compliance after regime overhaul’, *The Guardian*, 3 August, <https://www.theguardian.com/australia-news/2021/aug/03/nsw-exceeds-barwon-darling-water-allocations-in-first-year-of-compliance-after-regime-overhaul>.

¹⁷ NSW Department of Planning, Industry and Environment 2021, *NSW Water Strategy*, <https://dpie.nsw.gov.au/water/plans-and-programs/nsw-water-strategy>.

improved outcomes for river health and First Nations rights. The strategies that will sit underneath the NSW Water Strategy do not address the concerns outlined above.

Flood plain harvesting. The NSW Government intends to introduce a system regulating and licensing of floodplain harvesting that will grant new compensable, private property rights to landholders. It plans to issue these licences before requiring the removal of illegal and environmentally damaging structures from floodplains, and before all necessary data is available to guide decision making. A thorough assessment of the cumulative environmental impact floodplain harvesting has had on the ecosystems of the Murray-Darling Basin must be completed before licences are issued.

New dams and weirs. Plans to increase Warragamba and Wyangala dam walls, extend the Dungowan Creek dam, construct a new dam on the Mole River, an enormous re-regulating weir in the Mid-Macquarie River, as well as plans to regulate the Darling-Baaka River through the Western Weirs project have been announced before business cases have been developed and the full environmental, social, cultural and economic impacts are understood. In the spirit of the NSW Government's first stated priority their NSW Water Strategy – transparency – the business cases for all these projects must be released.

EMERGING THREATS AND OPPORTUNITIES

Water Resource Plans. Water Resource Plans will be finalised with new rules in Water Sharing Plans over the coming months. Regional Water Strategies that prioritise investment in water infrastructure and encourage development of water dependent industry will soon be complete. The environmental impact statements for proposed dams and weirs are due for release.

ESSENTIAL REFORMS

To improve the health of our rivers, river dependent ecosystems and communities, we must:

1. Build no new dams or weirs or project expansions.
2. Improve drought management strategies.
3. Invest in water recycling for agriculture, industry and human consumption.
4. Implement the 'no meter no take' policy.
5. Rule out issuing flood plain harvesting licences.
6. Implement Water Sharing Plans that grant cultural water rights and rules to protect river health and integrity of groundwater sources.