

**Submission by John O'Donnell to Securing future innovation and global competitiveness in NSW Green  
Paper 24 May 2022**

## **Introduction**

It is understood that the NSW Green Paper explores a range of transformative forces driving structural economic change over the next 10 to 15 years will underpin industry policy reform in NSW. Examples of these forces include:

- Transition to net zero emissions by 2050.
- Building a circular economy.
- Shifting to an increasingly digital economy.
- Harnessing new opportunities and managing risks in global value chains; and
- Capitalising on growing consumer markets in Asia.

"We want to hear your views on what the most important challenges transforming how we work (our industries), how we live (our communities), and the NSW economy overall. To transform an industry sector and its key value chains takes time and coordination. In a competitive and dynamic environment, gains can be realised by accelerating this transition".

As also noted in the NSW Green Paper "Ultimately, industry policy seeks to lift productivity and promote industry competitiveness".

As also noted in the NSW Green Paper:

*"Ultimately, industry policy seeks to lift productivity and promote industry competitiveness".*

*The Australian Government's Industry Growth Centres Initiatives support six key growth industry sectors through a mixture of strategic planning and coordination, funding and co-funding for industry-led collaboration and commercialisation projects, advisory, market access and delivery support. 2 The six key growth industry sectors include **Advanced Manufacturing, Cyber Security, Food and Agribusiness, Medical Technologies and Pharmaceuticals, Mining Equipment, Technology and Services (METS) and Oil, Gas and Energy Resources.***

*GVCs are likely to undergo major changes over the next decade due to new technologies and the impact, but also uncertainty from, recent geopolitical events, **the pandemic and natural disasters. These changes will create opportunities for NSW businesses as well as risks that will have to be managed to increase resilience to demand and supply shocks.***

I have identified five industry opportunity areas for further consideration and have split each of these into three parts to assist your assessment of my submission proposals. These are:

- Critical constraints to the industry.
- Opportunity areas for the industry.
- Key required NSW government support.

I have used brevity in the submission, focussing on the key issues.

## **Industry opportunity 1. Submission comments in relation to the plantation forests timber and manufacturing industry**

Critical constraints to the industry.

1. The importance of plantation forestry isn't adequately recognised as an industry that can take NSW forward.
2. Inadequate plantation/ other timber supply as has happened over the last two years, with big impacts on building and construction.
3. Increasing imports of timber.
4. Plantation forestry isn't adequately protected from bushfires, putting long term assets at risk e.g. Tumbarumba and Batlow in 2019/ 20. There is inadequate bushfire protection across landscapes to protect plantations, communities and other assets.
5. Risk government will sell or lease NSW plantations, reducing advantages of state ownership and optimised supply to industry.
6. Not meeting the National Forest Industries Plan in NSW, which was launched in 2018 to support the forest industries to: meet the challenges of the future underpin growth in the renewable timber and wood-fibre industries innovate and use our forest resources smarter assist industry to realise its ambition to plant a billion new plantation trees during the decade to 2030. The plan reinforced the Australian Government's commitment to securing a strong, sustainable forestry industry.

7. There are legislation, policies and processes that may unintentionally restrict plantation expansion. NSW is way over regulated.
8. Inadequate plantation forest research with inadequate input from industry and land managers, in partnership with NSW and industry.

#### Opportunity areas for the industry.

1. Address the importance of plantation forestry is adequately recognised, and it is recommended that it be an additional Growth Industry sector due to its important in meeting net zero and timber supply constraints.
2. Expand the plantation estate, further increasing greenhouse gas capture. Utilise the economic and environmental advantages of lower embodied and operational emissions in timber buildings.
3. Ensure that plantation forestry is adequately protected from bushfires and is classed as critical infrastructure.
4. Undertake workshops and working groups including plantation growers, industry, industry groups, federal and state governments to explore all plantation opportunity areas. Then teasing out the key actions for actioning. It would be beneficial if this process takes into account trade issues, incentives, cross border opportunities and the current supply constraints review. The process could be similar to the successful Bob Hawke's government wage reform approach, getting key parties together.
5. Explore incentives and tax opportunities to optimise new timber industry investment.
6. Continue support for the timber industry through regional forestry hubs. Work with industry and state governments to allow regional forestry hubs to maximise their capacity to accommodate plantation expansion in the right places
7. Work with industry to help farmers explore opportunities for: expanding farm forestry creating future wood and fibre supplies, improving linkages with the forestry industries, increasing economic returns for farmers. Work with state/territory governments, private native forest owners and interested Indigenous communities to unlock potential timber supply, and to deliver economic returns to landowners
8. Undertake further review of the water requirements in the Emissions Reduction Fund (ERF) farm forestry and plantation methodologies to enable forestry to fully participate in the ERF
9. Review other legislation, policies and processes that may be unintentionally restricting plantation expansion.
10. Develop additional research centres of the National Institute for Forest Products Innovation (NIFPI), in partnership with industry. Work with Forest and Wood Products Australia to support ongoing research, development and extension activities associated with the forestry industries
11. Work with Austrade to increase and diversify timber markets and products from tree plantations across Australia, including export and value added export. Work with the Business Council of Australia to increase and diversify timber markets and products from tree plantations across Australia, noting the importance of the plantation timber industry in capturing greenhouse gases, regional development and regional development. Work with the Department of Industry, Innovation and Science Industry Growth Centres Initiative to increase and diversify timber markets and products from tree plantations across Australia, increasing innovation, productivity and opportunities for the plantation timber industry.
12. Consider potential opportunities to appoint forestry market and product development specialists within Australia and for export.
13. Increase science opportunities in reuse of timber plantation material after major bushfires, including increasing the life of stored/ salvaged timber, innovative timber treatment options to increase life/ reduce blue stain and increasing the range of potential timber products.
14. Increase forest research with input from industry and land managers, in partnership with NSW and industry.

#### Key required NSW government support.

1. The importance of plantation forestry is adequately recognised as an additional Growth Industry sector due to its importance in relation to productivity, competitiveness, regional development, employment, increased export/ reduced import, value adding and in meeting net zero and timber supply constraints.
2. Dramatically expand the plantation estate, further increasing greenhouse gas capture, meeting Australian government requirements for an expanded timber industry.
3. Address plantation supply constraints, currently under review.
4. Plantation forestry is adequately protected from bushfires as critical infrastructure.
5. Exploring incentives and tax opportunities to optimise new timber industry investment.
6. Completing the National Forest Industries Plan to secure a strong, sustainable forestry industry.
7. Continued support for the timber industry of regional forestry hubs. Working with industry and state governments to allow regional forestry hubs to maximise their capacity to accommodate plantation expansion in the right places
8. Working with industry to help farmers explore opportunities for: expanding farm forestry creating future wood and fibre supplies, improving linkages with the forestry industries, increasing economic returns for farmers. Working with state/territory governments, private native forest owners and interested Indigenous communities to unlock potential timber supply, and to deliver economic returns to landowners
9. Undertaking further review of the water requirements in the Emissions Reduction Fund (ERF) farm forestry and plantation methodologies to enable forestry to fully participate in the ERF
10. Reviewing other legislation, policies and processes that may be unintentionally restricting plantation expansion.

11. Undertaking workshops and working groups including plantation growers, industry, industry groups, federal and state governments to explore all plantation opportunity areas. Then teasing out the key actions for actioning. It would be beneficial if this process takes into account trade issues, incentives, cross border opportunities and the current supply constraints review. The process could be similar to the successful Bob Hawke's government wage reform approach, getting key parties together.
12. Working with Austrade to increase and diversify timber markets and products from tree plantations across Australia, including export and value added export. Working with the Business Council of Australia to increase and diversify timber markets and products from tree plantations across Australia, noting the importance of the plantation timber industry in capturing greenhouse gases, regional development and regional development. Working with the Department of Industry, Innovation and Science Industry Growth Centres Initiative to increase and diversify timber markets and products from tree plantations across Australia, increasing innovation, productivity and opportunities for the plantation timber industry.
13. Considering potential opportunities to appoint forestry market and product development specialists within Australia and for export.
14. Developing additional research centres of the National Institute for Forest Products Innovation (NIFPI), in partnership with industry. Work with Forest and Wood Products Australia to support ongoing research, development and extension activities associated with the forestry industries
15. Increasing science opportunities in reuse of timber plantation material after major bushfires, including increasing the life of stored/ salvaged timber, innovative timber treatment options to increase life/ reduce blue stain and increasing the range of potential timber products.

### **Industry opportunity 2. Submission comments in relation to the native forest timber harvesting, manufacturing and sale industry**

Native forest harvesting, manufacturing and sale is an industry in itself and should be classified as that.

Critical constraints to the industry.

1. Government pandering to the green vote in regards to native forests harvesting and revoking state forests.
2. Massive native forest timber reductions over time.
3. Bushfire impacts due to miniscule ecological maintenance and cultural burning over the landscapes, consequent bushfires and then applied total or partial restrictions on harvesting.
4. Inadequate timber supplies, restricting housing and projects and requiring greater imports.
5. Government listening to activists and some sectors of universities as opposed to land management/ fire experts. Anti-forestry activists in government agencies.

Opportunity areas for the industry.

1. Dedicate the remaining 2 M hectares of State Forests cannot be revoked to other lands and is locked in for timber production.
2. Expansion of biofuel industry using waste products, where industry has certainty of supply.
3. Reduce bushfire impacts across landscapes maximising ecological maintenance and cultural burning over the landscape, reducing consequent bushfires and reducing applied total or partial restrictions on harvesting.
4. Increase Government listening to land management/ fire experts.
5. Reduce fuel loads and understand and accept the principle that eucalypt forests are denser and also have a lot more fuel than at first contact due to miniscule ecological maintenance and cultural burning over the landscapes. Fuels include biomass, ground fuels and ladder fuels.
6. Use thinning is an important component of maintaining resilient forests as the US and US Forest Service have done.
7. Optimise low intensity ecological maintenance and cultural burning across landscapes as an important component of maintaining resilient and healthy forests, again as the US and US Forest Service have done. Application across all forest areas in NSW, increasing forest health and community safety.

Key required NSW government support.

1. Dedicate the remaining 2 M hectares of State Forests cannot be revoked to other lands and is locked in for timber production, reducing the need for timber imports.
2. Understand and accept the principle that eucalypt forests are denser and also have a lot more fuel than at first contact due to miniscule ecological maintenance and cultural burning over the landscapes. Fuels include biomass, ground fuels and ladder fuels.
3. Use forest thinning as an important component of maintaining resilient forests as the US and US Forest Service have done.
4. Optimise low intensity ecological maintenance and cultural burning across landscapes as an important component of maintaining resilient and healthy forests, again as the US and US Forest Service have done. Application across all forest areas in NSW, increasing forest health and community safety.

### **Industry opportunity 3. Submission comments in relation to the resilient native forests and ecological maintenance/ cultural burning industry, reducing mega bushfire risks and impacts**

Native resilient forests is industry in itself and should be classified as an industry using ecological maintenance/ cultural burning industry and reducing mega bushfire risks and impacts.

Critical constraints to the industry.

1. There is a current bushfire suppression focus in Australia and USA. Important information includes Adams et al (2020) Causes and consequences of Eastern Australia's 2019–20 season of mega-fires: A broader perspective First published: 16 April Mega-fires ; Science News, Reducing wildfire risks for better management and resource allocation December 10, 2019 Society for Risk Analysis; and Burrows (2018) Conflicting Evidence Prescribed Burning: When 'Evidence' Is Not the Reality, prescribed burning greatly assists fire suppression and synergises community preparedness.
2. There is inadequate low intensity burning across Australia and consequent bushfire impacts. There are massive impacts of intense and large intense bushfires across Australia due to the focus on suppression/ inadequate fire mitigation.
3. NSW is way underperforming compared to WA in regards to areas of prescribed burning and reducing bushfire impacts. Review of prescribed burning and wildfire burning across Australia: John O'Donnell I Australian Rural & Regional News dated 18 May highlights inadequate low intensity burning across Australia and consequent bushfire impacts.
4. There is miniscule low intensity ecological maintenance for maintaining resilient and healthy forests, as the US and US Forest Service have done across all forest areas in NSW, increasing forest health and community safety. There is also inadequate thinning to maintain resilient forests. There is limited funding and actioning for improving resilience in Australia's forests and protecting communities. There is generally very poor actioning in regards to forest health and the decline of forest health across Australia's forests, mild fire is an important component of improving forest health and setting up healthy and landscapes.
5. There are a large number of barriers to low intensity/ ecological maintenance burning and increasing major bushfire risks and impacts to communities, industry, infrastructure and assets. An interesting paper 'A review of contemporary Indigenous cultural fire management literature in southeast Australia' by McKemey et al. (2020) describes 22 types of barriers to contemporary cultural fire management in southeast Australia from assessing academic literature and 89 barriers. An article in ARRN titled "Effective low intensity burning – barriers and opportunities: John O'Donnell" dated 7 March 2022 reviews barriers and potential opportunities for effective low intensity/ ecological maintenance burning fire management of forest areas across southeast Australia. This described 12 barrier areas and 45 barriers to low intensity/ ecological maintenance burning fire management of forest areas across southeast Australia.
6. NSW is not meeting the national bushfire management policy 2014.
7. Government is often listening to activists and some sectors of universities as opposed to land management/ fire experts. Activists in government agencies.
8. There is a poor consideration of the fuel load issue across forests and actual forest fuel loads in forests, at very high levels, strata and heights and increasing. There is inadequate action addressing the fuel load issue and reducing community, infrastructure and fauna impacts from bushfires. There is totally inadequate funding, focus and commitment for reducing fuel loads, undertaking prescribed burning, forest thinning and community protection. There is inadequate state funding for prescribed burning and minor federal funding to increase prescribed burning, noting areas of prescribed burning are very small and decreasing and communities are at risk.
9. Many communities have very limited fire mitigation with inadequate bushfire protection.
10. There is little active community involvement in fire management across Australia, only in a small number of cases. The bushfire impacts on towns and cities across Australia has been large over long period. Major investment in avenues such as the fire adapted communities, firewise, local fire safe councils is important to increase community safety.
11. In a number of local government areas there has been limited funding and in some cases will to resolve fire issues and mitigation.
12. Risks at each location vary and solutions will vary depending on extent of the bushfire problem, extent of impacts, funding, extent of mitigation opportunities and community input to solutions.
13. Improved bushfire protection opportunities and approaches to protect communities need to be tabled for each town and city and discussed with each community and then at state and federal levels.
14. Focus on low intensity burning for protection of towns and cities at the expense of landscapes is increasing the bushfire problem with long run fires across landscapes.
15. Bushfire insurance costs are going up.
16. Infrastructure protection from bushfires is a sleeping disaster area.
17. There have been losses of bushfire skills over the last 30 years. This applies with bushfire control, backburning, prescribed burning and in some cases the use of aircraft in prescribed burning.

Opportunity areas for the industry.

1. Reducing the bushfire disaster impacts, including reduced ecosystem impacts from bushfires, less disruption from bushfires, reduced fauna deaths and reduced greenhouse impacts from bushfires. Optimised infrastructure protection from bushfires.

2. Government policy focussed on reducing the major focus on bushfire suppression and extent of large and intense bushfires across Australia using ecological maintenance and cultural burning, taking into account the experience of WA. Reduced the bushfire suppression focus in Australia and NSW.
3. Set up and management of resilient, low fuel and healthy landscapes, considering the USA Bipartisan legislation, optimising forest health using EMB and where required thinning opportunities.
4. Barriers to low intensity burning are identified and removed to ecological maintenance and cultural burning across Australia.
5. NSW leads the way in regards to areas of prescribed burning and reduced bushfire impacts.
6. A targeted focus is adopted in NSW on optimum ecological maintenance and cultural burning mitigation to reduce bushfire risks, impacts to communities, assets and infrastructure and losses, in particular the Natural Recovery and Resilience Agency, state resilience departments and Infrastructure Australia. The use of set minimum targets for ecological maintenance and cultural burning and provision of state annual ecological maintenance and cultural burning data to federal agencies by mid-July each year needs consideration.
7. Understand that an asset fire mitigation protection focus only is doomed to failure and to prioritise increased ecological maintenance and cultural burning across landscapes.
8. Improve forest health and the reduce decline of forest health across Australia's forests, mild fire is an important component of improving forest health.
9. Increase federal and state government incentives and tax breaks for undertaking sound and preferably cooperative ecological maintenance and cultural burning across landscapes, increasing ecological maintenance and cultural burning on state, freehold and leasehold lands.
10. Increased establishment of small plane, helicopter and drone fleets and operators for ecological maintenance and cultural burning in order to achieve safe and healthy landscapes. reducing large aircraft needs in bushfire years.
11. Low intensity ecological maintenance and cultural burning is an important component of maintaining resilient and healthy forests, again as the US and US Forest Service have done. Application across all forest areas in NSW, increasing forest health and community safety.
12. Removed fuel build up issues across southern Australia/ NSW to optimise the safety of communities, infrastructure, forests, water quality, waterways, fauna, fish, air quality and heritage sites from intense bushfires.
13. Thinnings utilised as an important component of maintaining resilient forests as the US and US Forest Service have done. Expanded biofuel and bioenergy industry using thinnings for resilient forests and waste products, where industry has certainty of supply.
14. Focussed fire research of adaptive ecological maintenance and cultural burning programs and on what is needed/ determined by fire managers in consultation with researchers.
15. NSW meets the national bushfire management policy 2014.
16. Dramatically increase of the current estimated 3 % of natural disaster incident funding spent on fire mitigation and reduce the 97 % spent on suppression.
17. Reduced insurance premiums, governments at all levels/ communities/ businesses working with the insurance industry on ways to achieve this.
18. Increase of active community involvement in fire management across Australia, only in a small number of cases.
19. Improved bushfire protection opportunities and approaches to protect communities are tabled for each town and city and discussed with each community and then at state and federal levels. Focus on low intensity burning for protection of towns and cities across landscapes.
20. NSW is listening to land management/ fire experts, both current and retired
21. Increased bushfire skills in NSW. This applies with bushfire control, backburning, prescribed burning and in some cases the use of aircraft in prescribed burning.

#### Key required NSW government support.

1. Reduced bushfire disaster impacts, including reduced ecosystem impacts from bushfires, less disruption from bushfires, reduced fauna deaths and reduced greenhouse impacts from bushfires. Optimised infrastructure protection from bushfires.
2. Commit government policy to reducing the major focus on bushfire suppression and extent of large and intense bushfires across Australia using ecological maintenance and cultural burning, taking into account the experience of WA. Reduce the current bushfire suppression focus in Australia and USA.
3. Set up and manage resilient, low fuel and healthy landscapes, and consider the USA Bipartisan legislation, optimising forest health using EMB and where required thinning opportunities.
4. Remove barriers to ecological maintenance and cultural burning across Australia. Undertake an Australian government audit of barriers to prescribed burning and cultural burning across Australia and states by an experienced bushfire professional and cultural burning professional and address identified deficiencies with the states and federally.
5. NSW to lead the way in regards to areas of prescribed burning and reducing bushfire impacts. Review of prescribed burning and wildfire burning across Australia: John O'Donnell I Australian Rural & Regional News dated 18 May highlights inadequate low intensity burning across Australia and consequent bushfire impacts.
6. Adopt a targeted focus on optimum ecological maintenance and cultural burning mitigation to reduce bushfire risks, impacts to communities, assets and infrastructure and losses, in particular the Natural Recovery and

Resilience Agency, state resilience departments and Infrastructure Australia. The use of set minimum targets for ecological maintenance and cultural burning and provision of state annual ecological maintenance and cultural burning data to federal agencies by mid-July each year needs consideration.

7. Understand that an asset fire mitigation protection focus only is doomed to failure and to prioritise increased ecological maintenance and cultural burning across landscapes.
8. Increase urgent NSW actioning in regards to forest health and the decline of forest health across Australia's forests, mild fire is an important component of improving forest health. Completed research work by a number of researchers clearly shows this, including Jurskis (2016), Jurskis and Walmsley (2012), Jurskis (2005), Jurskis and Turner (2005), Turner et al (2008), Turner and Lambert (2005).
9. Increase federal and state government incentives and tax breaks for undertaking sound and preferably cooperative ecological maintenance and cultural burning across landscapes, increasing ecological maintenance and cultural burning on state, freehold and leasehold lands. Assessment would be on proven areas of Ecological maintenance and cultural burning, meeting minimum targets and undertaking ongoing programs.
10. Increase establishment of small plane, helicopter and drone fleets and operators for ecological maintenance and cultural burning in order to achieve safe and healthy landscapes. reducing large aircraft needs in bushfire years. Greater use of this technology using ignition capsules on a set grid spacing / ridgetops provides for low intensity fire that join up in the evening cool.
11. Accept low intensity ecological maintenance and cultural burning is an important component of maintaining resilient and healthy forests, again as the US and US Forest Service have done. Application across all forest areas in NSW, increasing forest health and community safety.
12. Resolve fuel build up issues across southern Australia to optimise the safety of communities, infrastructure, forests, water quality, waterways, fauna, fish, air quality and heritage sites. Increase consideration of the fuel load issue across NSW forested landscapes and actual forest fuel loads in forests, at very high levels, strata and heights and increasing. There is inadequate action addressing the fuel load issue and reducing community, infrastructure and fauna impacts from bushfires. There is totally inadequate funding, focus and commitment for reducing fuel loads, undertaking prescribed burning, forest thinning and community protection. There is inadequate state funding for prescribed burning and minor federal funding to increase prescribed burning, noting areas of prescribed burning are very small and decreasing and communities are at risk.
13. Accept thinning is an important component of maintaining resilient forests as the US and US Forest Service have done. Expand biofuel and bioenergy industry using thinnings for resilient forests and waste products, where industry has certainty of supply. Understand and accept the principle than eucalypt forests are denser and have a lot more fuel than at first contact.
14. Focus fire research optimisation of adaptive ecological maintenance and cultural burning programs and on what is needed/ determined by fire managers in consultation with researchers. Focus research on optimising safe fuel loads/ strata and systems, fire fighter and community safety, learnings and innovations in safe and improved firefighting, across landscape protection and on investigation of major bushfires/ capturing learnings.
15. NSW meets the national bushfire management policy 2014.
16. Dramatically increase the current estimated 3 % of natural disaster incident funding spent on fire mitigation and reduce the 97 % spent on suppression. Increased efforts in mitigation worked in WA, dramatically reducing bushfire areas, suppression costs and a consequence need for recovery funding. As noted "The United States Forest Service (USFS) asserts that for every one dollar increase in preparedness funding there is a decrease of \$1.70 in suppression costs (USFS 2018).
17. Reduce insurance premiums, governments at all levels/ communities/ businesses working with the insurance industry on ways to achieve this.
18. Increase active community involvement in fire management across Australia, only in a small number of cases. Many communities have very limited fire mitigation with inadequate bushfire protection. The bushfire impacts on towns and cities across Australia has been large over long period. Major investment in avenues such as the fire adapted communities, firewise, local fire safe councils is important to increase community safety. Support cooperative community action and involvement such as currently occurring in the Kangaroo valley and a small number of other areas in Australia but in a large number of other areas in the USA, such as Fire Adapted Communities and Firewise USA.
19. Improved bushfire protection opportunities and approaches to protect communities are tabled for each town and city and discussed with each community and then at state and federal levels. Focus on low intensity burning for protection of towns and cities across landscapes.
20. Listen to land management/ fire experts, both current and retired
21. Increase bushfire skills in NSW. This applies with bushfire control, backburning, prescribed burning and in some cases the use of aircraft in prescribed burning.

#### **Industry opportunity 4. Submission comments in relation to the disaster mitigation and asset/ industry/ infrastructure protection**

Disaster mitigation and asset/ industry/ infrastructure protection is critical to protect industry and communities, but is really an industry in itself and should be considered as that. This takes into account construction works, machinery usage, employment, regional development, risk management, safer firefighting, safer communities and meeting net zero.

## Critical constraints to the industry.

1. There is inadequate investment in disaster resilience and safer communities. The Australian Business Roundtable for Disaster Resilience and Safer Communities report "We cannot prevent weather events, but that does not make disasters inevitable" November 2017 considered the total economic cost of natural disasters in each state and territory, finding that the forecast cost of natural disasters will reach \$39 billion annually by 2050 noted the following: *This report considers challenges for disaster resilience in the states and territories, and the role of each government in collaboration with other jurisdictions, community and business. The report: Confirms that further investment in disaster resilience – in both physical and community preparedness – is essential to lessen the forecast increase in costs. Finds that investment in disaster resilience yields a double dividend. First, in the avoided impacts of disasters when they occur. And second, in the broader co-benefits that arise even in the absence of a disaster. Shows that state and territory governments have several levels to directly build resilience.*
2. Investment in disaster resilience and safer communities the wrong way around. Deloitte Access Economics report "Economic reality check Adapting Australia for climate-resilient growth" from January 2022 notes: **Australia's disaster relief strategies are underpinned by a cycle of underinvestment in resilience and adaptation. It's been estimated by the Productivity Commission that 97 per cent of all-natural disaster funding in Australia is spent after an event, with just 3 per cent invested prior to an event to reduce the impact of future disasters.** The investment of just 3 per cent of all-natural disaster funding in Australia prior to disaster events to reduce the impact of future disasters is staggering. And considering that investment in disaster resilience yields a double dividend, avoided impacts of disasters when they occur and also the broader co-benefits that arise even in the absence of a disaster, major and increased investment in flood mitigation is essential.
3. Disaster mitigation is not adequately considered in the "Securing future innovation and global competitiveness in NSW" green paper, in relation to industry development, innovation, productivity, product availability, regional development, risk management and net zero, surprising considering the extent of bushfire, flood, Covid and other disasters that have hit NSW and Australia. Obviously these disasters have a huge impact on productivity and funding available for further investment.
4. Many communities have limited flood mitigation with inadequate protection. Look at the north coast of NSW.
5. Other communities have moderately sound flood mitigation, however it is at its maximum limit.
6. In many cases there has been limited funding and in some cases will to resolve flooding issues and flood mitigation. Preparation of shovel ready projects is an issue that needs massive community and government input across states.
7. Costs of flooding is huge and increasing.
8. Flood insurance costs are going up.
9. The Insurance Council of Australia is calling on state and federal governments to commit to spending \$2 billion over the next five years on infrastructure to make communities more resilient to floods.
10. Risks at each location vary and solutions will vary depending on extent of the flood problem, extent of impacts, funding, extent of mitigation opportunities and community input to solutions.
11. In many LGA there is inadequate interest in bushfire and flood mitigation. Options to protect communities from bushfires and floods need to be tabled for each town and city and discussed with each community and then at state and federal levels.
12. As a society we need to be careful where mitigation of flood risks occurs at one location and then downstream increased development of floodplains doesn't increase overall flood risks further.

## Opportunity areas for the industry.

1. Adopt a greatly increased focus on fire mitigation across states and the undertake a detailed review of the barriers and rules restricting low intensity burning and aim to achieve a minimum of 8 % low intensity burning of forested areas annually across landscapes. This will save the government, businesses and communities a large amount of money in reduced bushfire impacts and costs.
2. Adopt a major focus on increased flood mitigation works across states, with state and federal governments working actively with local governments and getting shovel ready projects for funding and installation. There is some funding available from Infrastructure Australia and in some states for flood mitigation projects. The Insurance Council of Australia is calling on state and federal governments to commit to spending \$2 billion over the next five years on infrastructure to make communities more resilient to floods. It may be time to reduce state and federal funding of rail and road projects to catch up with urgent flood mitigation needs.
3. Work closely with the Insurance Council of Australia to increase fire and flood mitigation and reduce insurance risks and costs to communities.
4. Review the 3 per cent all-natural disaster funding in Australia invested prior to an event/ 97 per cent of spend after an event, focussing where post disaster savings in disaster savings can be made by judicious fire and flood mitigation installation. And considering that investment in disaster resilience yields a double dividend, avoided impacts of disasters when they occur and also the broader co-benefits that arise even in the absence of a disaster, major and increased investment in flood mitigation is essential.
5. Prepare for each affected local government area and each town/ city in that LGA an initial set of fire and flood mitigation proposals, with guidance and assistance from the states and progressive funding of optimum solutions.

6. Undertake major bushfire investment in avenues such as the fire adapted communities, firewise, local fire safe councils, would be beneficial.
7. Review federal and state policies and actioning for fire and flood mitigation.
8. Complete a totally independent review of both fire and flood risk assessment approaches across individual states by on the ground experienced fire and flood personnel and preferably from another state.
9. Move the focus away from centralised fire, flooding and resilience control to greater regional/ local control, with the state and federal governments focussed on optimising assistance in funding mitigation and disasters where they occur.
10. Undertake set 2-3 yearly reviews/ audits of mitigation, management of disaster events and recovery for fire, flood and resilience management across each south eastern Australian state, assessing each local government area.

Key required NSW government support.

1. Increased funding provided for bushfire mitigation, reducing economic and social impacts of bushfires. Adopt a greatly increased focus on fire mitigation across states and the undertake a detailed review of the barriers and rules restricting low intensity burning and aim to achieve a minimum of 8 % low intensity burning of forested areas annually across landscapes. This will save the government, businesses and communities a large amount of money in reduced
2. Expand disaster mitigation than in the “Securing future innovation and global competitiveness in NSW” green paper, in relation to industry development, innovation, productivity, net zero, product availability, regional development, risk management and net zero, surprising considering the extent of bushfire, flood, Covid and other disasters that have hit NSW and Australia. Obviously these disasters have a huge impact on productivity and funding available for further investment.
3. Increased investment in disaster resilience and safer communities. The 97 per cent of all-natural disaster funding in Australia spent after an event, and just 3 per cent invested prior to an event to reduce the impact of future disasters needs to be turned around to much more spending as mitigation before an event.
4. Increase interest in bushfire and flood mitigation as in many LGAs there is inadequate interest in bushfire and flood mitigation. Options to protect communities from bushfires and floods need to be tabled for each town and city and discussed with each community and then at state and federal levels. Prepare for each affected local government area and each town/ city in that LGA an initial set of fire and flood mitigation proposals, with guidance and assistance from the states and progressive funding of optimum solutions.
5. Review federal and state policies and actioning for fire and flood mitigation, including at election time.
6. Complete a totally independent review of both fire and flood risk assessment approaches across NSW by on the ground experienced fire and flood personnel and preferably from another state.
7. Move the focus away from centralised fire, flooding and resilience control to greater regional/ local control, with the state and federal governments focussed on optimising assistance in funding mitigation and disasters where they occur.
8. Undertake set 2-3 yearly reviews of mitigation, management of disaster events and recovery for fire, flood and resilience management across each south eastern Australian state, assessing each local government area.
9. Prepare shovel ready projects is an issue that needs massive community and government input across NSW.
10. Flood insurance costs are going up and it is important for the NSW Government work with ICA to reduce these costs and maximise mitigation approaches for bushfires and flooding.

#### **Industry opportunity 5. Submission comments in relation to the infrastructure industry**

Infrastructure is a critical industry for increasing productivity in NSW and Australia. Road, rail, flood and other infrastructure plays a critical part is optimising productivity in NSW and Australia. It results in increased productivity, competitiveness, assists in regional reduces social, environmental and economic risks, reduces disasters (floods) and increases employment.

Critical constraints to the industry.

1. Infrastructure isn't inadequately considered as an industry, I do note that there are 45 references to infrastructure. Infrastructure is a critical industry for increasing productivity in NSW and Australia. Road, rail, flood and other infrastructure plays a critical part is optimising productivity in NSW and Australia. I suggest that the report needs to infrastructure as a growth industry. It results in increased productivity, competitiveness, assists in regional reduces social, environmental and economic risks, reduces disasters (floods) and increases employment.

Opportunity areas for the industry.

1. Infrastructure is considered as an growth industry, I do note that there are 45 references to infrastructure in the Green Paper. Infrastructure is a critical industry for increasing productivity in NSW and Australia. Road, rail, flood and other infrastructure plays a critical part is optimising productivity in NSW and Australia. It results in increased productivity, competitiveness, assists in regional reduces social, environmental and economic risks, reduces disasters (floods) and increases employment.



Key required NSW government support.

1. Infrastructure is included as an growth industry, I do note that there are 45 references to infrastructure. Infrastructure is a critical industry for increasing productivity in NSW and Australia. Road, rail, flood and other infrastructure plays a critical part in optimising productivity in NSW and Australia. It results in increased productivity, competitiveness, assists in regional reduces social, environmental and economic risks, reduces disasters (floods) and increases employment.
2. Increased funding provided for flood mitigation, reducing economic and social impacts of flooding.

**Other. Suggested improvements in the NSW Innovation and Productivity Council 2022, 2022 NSW Innovation and Productivity Scorecard: Benchmarking our performance**

There are potential improvements to the NSW Innovation and Productivity Council 2022, 2022 NSW Innovation and Productivity Scorecard: Benchmarking our performance, Council Research Paper, Sydney in the Newsletter. Considering the opportunities above and the scorecard, there are opportunities to improve industry productivity and better assess performance. Some comments on the document are outlined below:

**Missed important productivity and innovation opportunity areas**

1. Agriculture is poorly covered in this report, there are only 4 references in the report and none really get into innovation and productivity areas nor productivity opportunities. I use the number of references as a partial indicator to the emphasis placed on an issue in the report. I suggest that the report needs to address this matter.
2. Forestry and the timber industry is poorly covered, there are only 4 references in the report and none really get into innovation and productivity areas nor productivity opportunities. I suggest that the report needs to address this matter.
3. Inadequate supply of timber in NSW and Australian markets has been a big issue in Australia and is only going to get worse. The and this is getting worse. issue greatly affects productivity. I suggest that the report needs to address this matter.
4. The Commonwealth and State governments are trying to increase timber plantation areas, this is happening slowly. This issue is restricting the economy and I suggest that the report needs to address this matter.
5. Manufacturing and industry I believe are inadequately covered. I suggest that the report needs to address this matter.
6. Regional development doesn't appear to be adequately addressed in the report. I suggest that the report needs to address this matter.
7. The same applies to hubs such as for forestry, an important mechanism in relation to innovation and productivity. I suggest that the report needs to address this matter.

**Other missed important productivity and innovation opportunity areas, including infrastructure, disaster and resilience management**

1. Infrastructure is inadequately addressed, the report only has 2 references in Australia both in relation to net zero. This is a critical component for increasing productivity in NSW and Australia. Road, rail, flood and other infrastructure plays a critical part in optimising productivity in NSW and Australia. I suggest that the report needs to address this matter.
2. Disaster is not mentioned once in the report, surprising considering the extent of bushfire, flood, Covid and other disasters that have hit NSW and Australia. Obviously these disasters have a huge impact on productivity and funding available for further investment. I suggest that the report needs to address this matter.
3. The importance of adequate investment in disaster resilience and safer communities doesn't appear to be addressed in the report. The Australian Business Roundtable for Disaster Resilience and Safer Communities report "We cannot prevent weather events, but that does not make disasters inevitable" November 2017 considered the total economic cost of natural disasters in each state and territory, finding that the forecast cost of natural disasters will reach \$39 billion annually by 2050 noted the following: This report considers challenges for disaster resilience in the states and territories, and the role of each government in collaboration with other jurisdictions, community and business. The report: confirms that further investment in disaster resilience – in both physical and community preparedness – is essential to lessen the forecast increase in costs; finds that investment in disaster resilience yields a double dividend. First, in the avoided impacts of disasters when they occur. And second, in the broader co-benefits that arise even in the absence of a disaster and shows that state and territory governments have several levels to directly build resilience. Deloitte Access Economics report "Economic reality check Adapting Australia for climate-resilient growth" from January 2022 notes: Australia's disaster relief strategies are underpinned by a cycle of underinvestment in resilience and adaptation. It's been estimated by the Productivity Commission that 97 per cent of all-natural disaster funding in Australia is spent after an event, with just 3 per cent invested prior to an event to reduce the impact of future disasters. The investment of just 3 per cent of all-natural disaster funding in Australia prior to disaster events to reduce the impact of future disasters is staggering. And considering that investment in disaster resilience yields a double dividend, avoided impacts of disasters when they occur and also the

broader co-benefits that arise even in the absence of a disaster, major and increased investment in flood and other mitigation is essential to reduce impacts and continue to increase productivity.

Current report and research.

1. There is a large focus on the university sector/ research, missing many important areas as identified above. Research is mentioned 101 times in the report. Many of the above are opportunity areas.
2. There is little reference to industry and specific sector innovation and research.
3. Research effectiveness isn't really addressed, it is my belief that much of current research wouldn't pass a national interest test. A lot of research doesn't assist either innovation or productivity. There is an opportunity to increase research effectiveness in NSW having a state research effectiveness/ national interest test.

Current report and net zero.

1. Note net zero has been added (16 references), this is good, but agriculture and forestry combined receive 7 references in the report and these don't really relate to innovation nor productivity.

## Conclusions.

The information above is further assessed in table form below in relation to industry benefit:

Y = Productive industry benefit.

YY = Highly productive industry benefit.

YYY = Highly significant productive industry benefit with NSW, Australian and international benefits.

Industry benefit	Industry opportunity 1 Plantation	Industry opportunity 2 Native forest harvesting+manuf	Industry opportunity 3 landscape burning	Industry opportunity 4 Disaster mgt	Industry opportunity 5 Infrastructure
1 Productivity	YY	Y	Y	Y	Y
2 Competitiveness	YYY	Y	Y	YY	YY
3 Regional development	YYY	Y	Y	Y	YY
4 Employment	YY	Y	Y	Y	YY
5 Increased export/ reduced import	YY	Y	Y		
6 Value adding	YYY	Y			Y
7 Managing a reducing risk	Y	Y	Y	YY	Y
8 Protection	Y	Y	Y	Y	Y
9 Net zero gains	YYY	Y	Y	Y	Y
10 Supply benefits	YYY	Y	Y	Y	Y
11 Healthy resilient forests	Y	Y	YY	Y	
12 Productive use and salvage	Y	Y	Y	Y	

Considering the constraints, opportunities and key required NSW government support areas above, there are big opportunities for NSW for all five industry opportunities.

The importance of plantation forestry should be recognised as an additional Growth Industry sector due to its importance in relation to productivity, competitiveness, regional development, employment, increased export/ reduced import, value adding and in meeting net zero and timber supply constraints.

John O'Donnell

23 May 2022.