

KATELYN VLAHOS

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**Topic 1. Sustainability of current and future forestry operations in NSW**

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The sustainability of current and future forestry operations in NSW is severely compromised by the ongoing practice of native forest logging. Native forests play a crucial role in maintaining biodiversity, regulating climate, and providing essential ecosystem services such as carbon sequestration. However, logging these forests leads to significant environmental degradation, including increased carbon emissions, soil erosion, and habitat destruction, threatening the survival of endangered species like koalas and greater gliders. As biodiversity continues to decline due to habitat loss, the ecological health of NSW is increasingly at risk.

One critical issue is that replanting native forests after logging does not restore them to their original state. Evidence shows that many logged areas are never adequately replanted or regenerated. When native forests are logged, their complex ecosystems—comprising biodiversity, structural integrity, and ecological functions—are often irreversibly damaged. Even when replanting efforts occur, the newly planted forests typically lack the intricate biodiversity, age variation, and natural resilience found in original old-growth forests. These replanted areas often consist of monocultures or limited species diversity, failing to replicate the rich habitats that endangered species depend on for survival.

Moreover, there is compelling evidence that many areas logged for timber in NSW are left barren, with minimal or no efforts made to restore them. Reports indicate that extensive tracts of native land have been logged without subsequent reforestation or regeneration efforts, resulting in scarred landscapes and permanently degraded ecosystems. These practices not only neglect the environmental harm caused by logging but also exacerbate issues such as soil erosion, water pollution, and loss of biodiversity. Without genuine replanting efforts aimed at restoring ecological balance, the logging of native forests continues to inflict long-term environmental destruction that cannot be mitigated through simple reforestation alone.

This failure to adequately replant and restore logged lands underscores the unsustainability of native forest logging and highlights the urgent need to transition away from destructive practices toward more sustainable alternatives, such as plantation forestry and the use of renewable materials like hemp. By protecting intact native forests and investing in innovative, sustainable solutions, NSW can ensure the preservation of its natural landscapes and biodiversity for future generations.

In addition to the environmental concerns, native forest logging exacerbates climate change by releasing stored carbon and diminishing the forests' capacity to act as carbon sinks. Sustainable forestry operations should prioritize enhancing climate resilience; however, native forest logging is counterproductive to this goal. Furthermore, from an economic perspective, reliance on native forest logging is becoming increasingly unviable compared to more sustainable practices, such as plantation forestry and ecotourism. These alternatives not only safeguard natural ecosystems but also generate more sustainable job opportunities and long-term economic benefits.

Additionally, native forests hold profound cultural significance, particularly for First Nations communities, whose heritage and connection to the land are undermined by continued logging. To ensure a sustainable future for forestry in NSW, there must be a decisive shift away from

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native forest logging toward plantation forestry and forest restoration. This approach will help preserve biodiversity, mitigate climate change impacts, and foster an economy that respects both environmental integrity and cultural values.

By embracing these sustainable practices, NSW can work toward a balanced and resilient future for its forests and the communities that depend on them, ultimately creating a more equitable and sustainable environment for all.

## **Topic 2. Environmental and cultural values of forests, including threatened species and Aboriginal cultural heritage values**

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The environmental and cultural value of forests is immense, as they serve as critical ecosystems for both biodiversity and human heritage. Native forests in NSW are home to an extraordinary range of plant and animal species, many of which are threatened or endangered. These ecosystems provide essential services such as carbon storage, water filtration, and soil health. Forests support endangered species like the koala, greater glider, and a variety of bird species, all of which depend on the complex habitat structures and resources found in these forests. Logging and habitat destruction directly threaten the survival of these species, pushing them closer to extinction and undermining the overall health of the ecosystem.

In addition to their ecological importance, native forests hold profound cultural significance, particularly for Aboriginal communities. These forests are living archives of Indigenous cultural heritage, containing sacred sites, totemic species, and landscapes that are integral to Aboriginal identity, spirituality, and practices. The ongoing destruction of these forests disrupts the connection between First Nations people and their land, threatening the preservation of Aboriginal cultural heritage. Protecting forests is not only about safeguarding biodiversity but also about respecting and upholding Indigenous rights and traditional knowledge systems. In this way, the conservation of forests preserves both the environmental and cultural richness of NSW for future generations.

## **Topic 3. Demand for timber products, particularly as relates to NSW housing, construction, mining, transport and retail**

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The demand for timber products in NSW is heavily driven by key industries such as housing, construction, mining, transport, and retail. Timber is a critical material used in building homes, infrastructure, and transportation networks, as well as in various commercial and retail applications. However, the growing demand for timber has placed immense pressure on NSW's native forests, contributing to unsustainable logging practices. This demand is not only linked to the need for construction materials but is also deeply intertwined with broader economic and social issues, such as housing affordability.

One of the most pressing challenges is the role that property investors play in driving the demand for housing, which in turn fuels the demand for timber. In NSW, a significant portion of housing stock has been acquired by investors, particularly in urban areas. This has led to inflated property prices, locking younger generations out of the housing market and creating a greater need for new construction projects to meet demand. These construction projects, often focused on rapid development, increase the demand for timber and other resources, further straining native forests. To address the housing crisis, there needs to be a rethinking of how housing is supplied and consumed, focusing on affordability, sustainable construction practices, and alternatives to traditional building materials.

One of the most promising alternatives to traditional timber is hemp. Hemp offers several environmental and economic benefits compared to native forest logging. Hemp grows quickly, typically reaching maturity in just four to six months, and can be harvested multiple times a year. This makes it a far more renewable and efficient source of raw material compared to slow-

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growing native trees. In terms of yield, hemp produces significantly more biomass per acre than traditional forests, making it an ideal source for a range of building materials. Hemp can be processed into wood-like products such as fiberboards, insulation, and even structural components for buildings. These materials are not only renewable but also more energy-efficient in their production, further reducing the carbon footprint of construction projects.

The mining and transport sectors, which also rely heavily on timber for applications such as railway sleepers, scaffolding, and support structures, would benefit from the adoption of hemp-based products. Hemp's versatility and strength make it suitable for a wide range of industrial uses, potentially replacing timber in sectors that contribute to deforestation and forest degradation. Moreover, the shift toward using hemp could help stimulate new industries and job creation in NSW, particularly in rural areas, where hemp farming and processing could become economically viable alternatives to traditional forestry.

By promoting sustainable materials like hemp and reducing the reliance on native timber, NSW can take significant steps toward addressing environmental concerns while meeting the demand for housing and construction materials. In addition, transitioning to more sustainable building practices would align with global efforts to combat climate change and protect biodiversity.

Addressing the root causes of the timber demand crisis also requires tackling the housing affordability issue head-on. As long as property investors continue to dominate the housing market, there will be relentless pressure to build more homes at the expense of the environment. Policies that prioritise affordable housing, encourage sustainable development, and limit speculative property investment would not only help to alleviate the housing crisis but also reduce the over-reliance on native timber resources. In this way, NSW can work towards a future where housing, economic development, and environmental protection are balanced in a more sustainable and equitable manner.

In conclusion, the demand for timber in NSW, driven by industries such as housing, construction, mining, and transport, is unsustainable under current practices. By adopting alternative materials like hemp and addressing broader issues such as property speculation and housing affordability, NSW can create a more sustainable and resilient future. This approach would help protect native forests, promote biodiversity, and offer economic opportunities in emerging industries while ensuring that future generations have access to both affordable housing and a healthy environment.

#### **Topic 4. The future of softwood and hardwood plantations and the continuation of Private Native Forestry in helping meet timber supply needs**

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The future of softwood and hardwood plantations plays a crucial role in meeting NSW's timber supply needs in a sustainable manner. As demand for timber continues to grow across industries such as housing, construction, mining, and transport, plantation forestry offers a more environmentally responsible alternative to native forest logging. Softwood plantations, in particular, are already widely used for timber production, and their fast growth rates make them a reliable source of materials for various industries. Expanding both softwood and hardwood plantations can help alleviate the pressure on native forests while ensuring a consistent timber supply.

Hardwood plantations, though slower growing than softwoods, produce high-quality timber suited for furniture, flooring, and other durable applications. They also have the potential to meet demand without contributing to the degradation of native ecosystems. By investing in hardwood plantations, NSW can create a sustainable timber industry that supports local economies, reduces the need for logging native forests, and protects biodiversity. In addition, well-managed plantations can promote soil health, improve water retention, and create habitats for wildlife, making them a key part of sustainable forestry practices.

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Private Native Forestry (PNF), which involves the management of native forests on private land, has also played a role in meeting timber supply needs. However, while PNF can offer a source of timber, it must be carefully regulated to ensure that sustainable practices are followed. Without stringent oversight, PNF can lead to the over-exploitation of native forests, similar to the impacts of logging in public lands. To ensure PNF contributes positively, landowners must be incentivised and supported to manage their forests sustainably, with practices that prioritise forest regeneration, biodiversity protection, and long-term ecological health.

The continuation of PNF must be balanced with environmental safeguards to prevent the loss of native species and habitats. Moving forward, the focus should be on increasing plantation forestry, particularly hardwood plantations, while ensuring PNF is regulated and sustainable. This dual approach will help meet timber supply needs without further harming NSW's remaining native forests. Expanding plantations and transitioning to sustainable forestry practices, alongside alternative materials like hemp, will be critical to protecting native ecosystems and ensuring the long-term viability of the timber industry.

#### **Topic 5. The role of State Forests in maximising the delivery of a range of environmental, economic and social outcomes and options for diverse management, including Aboriginal forest management models**

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State Forests play a pivotal role in balancing the delivery of environmental, economic, and social outcomes, making them key assets in NSW's broader natural resource management strategy. These forests have traditionally been managed for timber production, but as environmental awareness grows, the need for a more holistic and sustainable approach has become clear. State Forests must now be managed in ways that go beyond timber supply, emphasising biodiversity conservation, carbon sequestration, water catchment protection, and community recreation. By maximizing their ecological, cultural, and economic values, State Forests can contribute to a more sustainable future while supporting local communities and economies.

**Environmental Outcomes:** State Forests provide critical habitats for wildlife, including many endangered species. They act as natural carbon sinks, mitigating climate change by storing carbon dioxide. Moreover, they help regulate water cycles and maintain soil health, reducing the risks of flooding and erosion. To maximize environmental benefits, forest management must prioritise conservation efforts, allowing large sections of State Forests to remain untouched or subject to minimal impact. Active restoration projects, such as rewilding and controlled reforestation with native species, should be key components of this strategy to enhance biodiversity and ecological resilience.

**Economic Outcomes:** Economically, State Forests have long been a source of timber and other natural resources. However, the traditional model of logging must evolve to prioritise sustainable practices that reduce environmental degradation while still providing economic benefits. A key opportunity lies in expanding plantation forestry on previously cleared or degraded land within State Forests, thus meeting timber demands without resorting to native forest logging.

Furthermore, diversifying the economic use of State Forests through ecotourism, recreation, and carbon credits can generate income while preserving the forests' ecological integrity. These alternative economic models not only reduce reliance on timber but also create long-term, stable jobs in rural communities.

**Social Outcomes:** State Forests are valuable cultural and recreational spaces for local communities. They offer opportunities for hiking, camping, and other forms of nature-based recreation, promoting mental and physical well-being. Additionally, State Forests hold deep significance for Aboriginal communities, serving as important cultural landscapes that are interwoven with Indigenous heritage, knowledge, and spiritual practices. To maximize the social benefits, forest management should focus on improving public access, supporting recreational

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activities, and creating educational programs that foster environmental stewardship and cultural appreciation.

**Aboriginal Forest Management Models:** One of the most promising options for diverse forest management is the incorporation of Aboriginal forest management models. These models are rooted in thousands of years of Indigenous knowledge and emphasise a deep connection to the land, using traditional ecological practices to sustainably manage forests. Aboriginal forest management includes practices such as cultural burning, which reduces wildfire risk while promoting biodiversity and healthy forest regrowth. It also involves the protection of sacred sites and the management of species that hold cultural significance.

By integrating Aboriginal leadership and knowledge into forest management, NSW can not only enhance the sustainability of State Forests but also honor the cultural heritage of First Nations people. This can be achieved through co-management agreements, where Aboriginal communities play an active role in decision-making and day-to-day management of State Forests. These partnerships offer an opportunity to restore the land while strengthening the cultural and spiritual connection Indigenous people have with the forests.

In conclusion, the role of State Forests must evolve to maximise a range of environmental, economic, and social outcomes. This requires diverse management strategies, including the integration of Aboriginal forest management models, to ensure forests are sustainably used, protected, and valued. By balancing conservation with sustainable economic development and respecting Indigenous knowledge, State Forests can contribute to a more resilient and prosperous future for both the environment and communities in NSW.

#### **Topic 6. Opportunities to realise carbon and biodiversity benefits and support carbon and biodiversity markets, and mitigate and adapt to climate change risks, including the greenhouse gas emission impacts of different uses of forests and assessment of climate change risks to forests**

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Forests play a vital role in mitigating climate change, offering both carbon sequestration and biodiversity benefits. Protecting and sustainably managing forests, particularly in NSW, presents significant opportunities to realise carbon and biodiversity gains while supporting emerging carbon and biodiversity markets. As global and local economies transition to low-carbon futures, forests can serve as both economic assets and climate buffers, making their conservation and management increasingly valuable. In NSW, prioritising the protection of native forests, expanding plantations, and leveraging forest ecosystems for carbon credits and biodiversity markets are essential steps in addressing climate change risks and capitalising on the environmental and economic opportunities forests provide.

**Carbon Sequestration and Biodiversity Benefits:** Forests are among the most effective natural systems for capturing and storing carbon dioxide, a critical process for mitigating greenhouse gas emissions. Native forests, especially older and undisturbed ecosystems, are highly efficient carbon sinks. The preservation of these forests is crucial in the global effort to reduce atmospheric carbon levels. Protecting mature native forests prevents the release of stored carbon into the atmosphere, which would otherwise occur through logging or land clearing. In addition, these forests harbor rich biodiversity, providing habitats for countless species and supporting ecosystem health. By conserving native forests, NSW can simultaneously reduce emissions and preserve biodiversity, delivering both environmental and economic value.

**Supporting Carbon and Biodiversity Markets:** The growing carbon market presents an opportunity to financially incentivise forest protection. Forest landholders can participate in carbon offset schemes, selling carbon credits generated by the carbon sequestration capabilities of their land. These credits can be traded in carbon markets, providing a financial return for conserving forests rather than exploiting them for timber. Biodiversity markets, still developing, offer similar

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opportunities, where landholders and managers can receive compensation for maintaining or enhancing biodiversity on their land. These markets can provide economic incentives for the protection and restoration of ecosystems, turning forests into valuable financial assets that contribute to environmental health and carbon reduction.

**Climate Change Mitigation and Adaptation:** Forests also serve as critical buffers against the impacts of climate change. In addition to sequestering carbon, they help regulate local climates, stabilise soil, protect water resources, and reduce the severity of natural disasters such as floods and droughts. Sustainable management practices, such as reforestation and afforestation with diverse native species, can further enhance these ecosystem services while contributing to long-term climate resilience. Forest management strategies should prioritize the resilience of forests to future climate change risks, including shifts in temperature, rainfall, and fire frequency. By enhancing forest ecosystems' natural adaptability, NSW can protect them from the detrimental impacts of climate change.

**Greenhouse Gas Emission Impacts of Different Forest Uses:** The greenhouse gas (GHG) emissions associated with various uses of forests must be carefully considered in forest management strategies. Logging and deforestation release large quantities of stored carbon back into the atmosphere, significantly contributing to global GHG emissions. The degradation of forests also reduces their ability to act as carbon sinks, further exacerbating climate change. Conversely, maintaining intact forests not only keeps carbon stored but also allows them to continue absorbing CO<sub>2</sub> from the atmosphere. Reforestation and afforestation efforts, if carried out with native species and ecologically sound practices, can help offset emissions from other sectors and promote carbon sequestration.

Plantation forestry, while a renewable source of timber, often falls short in comparison to native forests in terms of biodiversity and carbon sequestration. However, it still plays a role in reducing pressure on native forests for timber production. Shifting toward plantation-based forestry on already cleared or degraded lands could help reduce deforestation rates and the associated emissions while maintaining a timber supply.

**Assessing Climate Change Risks to Forests:** Forest ecosystems are highly vulnerable to the impacts of climate change, including increased temperatures, changing rainfall patterns, and more frequent and intense wildfires. These risks must be assessed and incorporated into long-term forest management strategies. For example, rising temperatures and prolonged droughts increase the risk of forest dieback and wildfires, which can devastate carbon stores and biodiversity.

Adapting forest management to these risks may involve diversifying tree species, improving fire management practices, and prioritising forest areas that offer greater climate resilience.

**Conclusion:** The future of forest management in NSW offers tremendous potential to mitigate climate change and realise the benefits of both carbon sequestration and biodiversity protection. By prioritising the conservation of native forests, expanding sustainable plantation forestry, and leveraging carbon and biodiversity markets, NSW can maximize the environmental, social, and economic value of its forests. At the same time, addressing the greenhouse gas emission impacts of logging and deforestation, and implementing adaptation strategies for climate change risks, will be essential to ensuring the long-term health and resilience of forests. In this way, forests can play a central role in NSW's efforts to combat climate change while supporting a sustainable economy.