

Painting A DIFFERENT landscape

By Michael Bullen

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> In his novel *Eucalyptus*, Murray Bail wrote that 'every country has its own landscape which deposits itself in layers on the consciousness'. Growing up with a family of carpenters and builders on my mother's side, I have memories of school holidays with my cousins and uncle working on the old school at Mangopliah in the Riverina. The smell of the sawdust was absorbed and retained. As an adult, I encountered that same smell and realised it was cypress timber. Now I am involved in the management of native forests that produce timber such as cypress, it is interesting to see the connections, the layers that are deposited.

Perhaps this is the kernel that explains the core dilemma of forest management. People's views on forests come from a consciousness that is informed by experience. Each view leads to a perspective on how the forests should be managed. How, then, do we define sustainable forest management, and what of the future?

Australian forests have provided the majority of timber for domestic use since European settlement. The early years were about supply, with forest management starting in the early part of the 1900s. After World War II, there was a massive demand for timber in NSW, and this was supplied from the state's forests. Softwood plantations were also established to overcome the lack of native softwood timber.

The conflict over forest management was one of the major social forces in the last third of the 20th century. To resolve the conflict, governments undertook a host of investigations and tried to set policies that provided for sustainable forest management.

Biography

Michael Bullen is the director of native forest operations for Forests NSW.

> The challenge for forest managers lies in balancing conservation issues with the need for a sustainable timber supply <

Internationally, similar issues were being faced, and in Rio de Janeiro, the Convention on Biological Diversity was endorsed at the United Nations Conference on Environment and Development in 1992. The convention included the requirement that countries that signed it identify the components of biological diversity important for conservation and sustainable use, and monitor activities that could have an adverse impact on this diversity. It also called on them to develop national strategies, plans or programs for the conservation and sustainable use of biological diversity.

Beyond this, Australia contributed to the development of the Montreal Process - Criteria and Indicators for the Conservation and Sustainable Management of Temperate and Boreal Forests, which are listed below. These provide some principles for ecologically sustainable forest management.

- **Criterion 1**
Conservation of biological diversity.
- **Criterion 2**
Maintenance of the productive capacity of forest ecosystems.
- **Criterion 3**
Maintenance of forest ecosystem health and vitality.
- **Criterion 4**
Conservation and maintenance of soil and water resources.
- **Criterion 5**
Maintenance of forests' contribution to global carbon cycles.
- **Criterion 6**
Maintenance and enhancement of long-term multiple socio-economic benefits to meet the needs of societies. Indicators include production and consumption, recreation and tourism, investment in the forest sector, cultural, social and spiritual needs and values, employment and community needs.



Compare this with the Charter of The Global Greens concept of sustainability:

- **Protect and restore the integrity of the Earth's ecosystems, with special concern for biodiversity and the natural processes that sustain life.**
- **Acknowledge the interrelatedness of all ecological, social and economic processes.**
- **Balance individual interests with the common good.**
- **Harmonise freedom with responsibility.**
- **Welcome diversity within unity.**
- **Reconcile short-term objectives with long-term goals.**
- **Ensure that future generations have the same rights as the present generation to natural and cultural benefits.**

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The similarities are many, and both provide an idea of the scope of what is meant by 'sustainable forest management'. How, as forest managers, do we balance all these ideals, given those deposits on people's consciousness?

All Australian governments signed the National Forest Policy Statement of 1992, which had two key objectives: the development of a comprehensive, adequate and representative (CAR) reserve system to conserve biodiversity as well as a viable, value-adding timber industry. The NSW government began in 1995 to undertake comprehensive regional assessments to identify the CAR reserve system and promote an ecologically sustainable timber industry.

This process culminated in significant changes in areas of forest reserved both in national parks and state forests, prescriptions for the harvesting of areas to protect biodiversity, and considerable structural change within the timber industry. Across coastal and tableland New South Wales, the area of forest and woodland is about 27 million hectares. Of this, 4.6 million hectares is in national parks and 2.5 million hectares in state forests.

Within the state forest areas, a further one million hectares is statutorily protected from harvesting. These protected areas include all rainforest and high-conservation-value old-growth forest, drainage lines for soil and water, and threatened species protection.

Forest management now involves, much more explicitly than in the past, consideration of all the values of the forest. As well as the threatened-species requirements mentioned, considerations include soil and water, Aboriginal cultural heritage, feral animal and weed control, recreation and the need for timber production.



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So, what of the future? Following the regional assessments, the demand for timber continues, and people's deposits of consciousness around sustainable forest management remain. Forest managers have had to change over the past 30 years to explicitly recognise and manage for the range of forest values. The community now needs to consider how the balance of forest values can be provided for in the future.

The conservation policies of the past 30 years have focused on developing the CAR reserve system from public land. New South Wales has 27 million hectares of forest and woodland, with almost 20 million hectares of this on private or leasehold land.

The challenge for the future must be to integrate conservation management across the landscape to protect priority conservation values in conjunction with sustainable natural resource production. Private landholders will be the key, because conservation and natural resource production cannot be addressed on public land in isolation. This could be approached by planning across tenures at the landscape scale, with priorities and actions implemented at the local scale. Such an approach will require partnerships between local communities, industries and government, as no single organisation has the resources to execute such a landscape plan.

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This approach of landscape conservation has been developing within the scientific ecological community in recent decades. It comes from the recognition that reservation alone is not enough.

The conservation reserves created through the regional assessment process provide the foundation stones upon which to build conservation outcomes with the reserves, state forests and private land managed in an integrated, complementary manner.

The 4.6 million hectares of national park and nature reserve in New South Wales and the one million-plus hectares protected in state forests will not be harvested. With appropriate protection from wildfire, this will have the characteristics of old growth in a 20- to 30-year period, and provide ecological benefits. Complementing that will be areas managed for sustainable timber production in state forests, as well as private land either passively managed or earmarked for timber production.

To achieve this, change will be required. And to effect that change requires the collection of new information and knowledge, as well as a willingness to make the change. For sustainable forest management, this involves ongoing research and monitoring to gather information which can then be used to guide altered management practices. The development of cost-effective monitoring across the landscape is a key component in integrating private and public land management.

An excellent example of research and greater knowledge changing management is provided by three large forest owls: the powerful, sooty and masked owls. Little was known about these species, with few records of the species until the late 1980s. Management within production forests took a precautionary approach, with large areas - a 1.5-kilometre radius - being reserved around each record. The development of an efficient survey technique and research greatly increased the number of records and enabled a landscape approach to the management of the species.

The impact of climate change on future forest management cannot be underestimated. The vagaries of the Australian climate are well known, with the recent widespread drought in New South Wales a prime example. With the potential for major climate change to alter the pattern of summer and winter rainfall, and to extend the summer dry periods, there will be an impact on the distribution of species and forest productivity. Perhaps the major change will be in fire regimes and consequential forest health problems.

Fortunately, the basic building blocks across the landscape are in place. There are reserves and state forests running north and south along the coast and tablelands, as well as key linkages east and west. Therefore, the development of monitoring across the landscape to determine possible changes will be necessary.

Finally, what of the future for timber? The plantation estates and native forests provide a complementary supply. The softwood plantations provide the bulk of construction timber and residue for paper and panel boards. The shift over the past decade has been to markets where the unique features of native forest timbers are valued rather than in competition with softwood timber in the construction market. For example, the ability of turpentine logs to be placed in saltwater, as piles to support the jetties of Sydney Harbour for more than 100 years, is a feature no other natural product can match.

As I recall the smell of cypress sawdust, and as others do when they see beautiful timber, I feel it is likely that this demand for high-quality, beautiful native timber products will continue.

New South Wales has adopted a unique approach to balancing the differing layers of consciousness of, and therefore varied perspectives on, forest management. Professor Jerry Franklin, a North American forest ecologist who has been dubbed the 'father of new forestry', says he tells his students every day that forestry is a social science. The challenge for forest managers, as it probably has always been, is to look at forestry as a social science so that this balancing act can evolve.

