

The Maxwell Ralph Jacobs Memorial Oration 2011

The Tragedy of the Forests

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Summary

Forest goods and services are global, common-pool resources. In Australia, forest land and trees may be held under private ownership but the associated forest values such as biodiversity remain as public resources. A failure to adequately resolve the rivalry between public and private rights has presented us with a 'tragedy of the forests'; a tragedy that is caused by individuals and groups within society pursuing their own self-interest to the detriment of the common good. The conflict over forest use and the management of public values is not resolved simply through land allocation decisions that result in forest management being polarised into either reserves or wood production zones. The resolution requires the effective management of the forests' values across all tenures, using a mix of reserves and management prescriptions, recognising both public and private rights.

Keywords: forest management; ownership; common property resources; common-pool resources; conflict; change; Australia

Introduction

It is a great honour for me to present this oration, which commemorates the contribution of Max Jacobs (1905–1979) to forestry research, policy and education in Australia.

Max Jacobs (Fig. 1) was a great advocate for wise forest use and he would be disappointed today to find that individuals throughout Australia and other parts of the world continue to be embroiled in bitter, unresolved rivalry over the use of forests; a conflict that can only be described as a 'tragedy of the forests'.

I will discuss this tragedy by drawing upon the philosophical connections between Jacobs, the ancient Greeks and the hippie movement of the 1970s.

Greek philosophy and the tragedy of the commons

In 1957 Jacobs condemned the overcutting and clearing of forests for agriculture and settlement as an 'abuse' of wooded lands. He cautioned that the sound use of forests would only be realised when people fully appreciated the importance of wood as a commodity and recognised what he termed the 'secondary benefits' of the forest (Jacobs 1957).

Public attitudes to forests are fundamentally a reflection of self-interest. The Greek historian Thucydides (ca. 460 BC – ca. 395 BC) observed that individuals 'devote a very small fraction of time to the consideration of any public object, most of it to the prosecution of their own objects ... and so, by the same notion being entertained by all separately, the common cause imperceptibly decays'. This aspect of human behaviour was highlighted by Hardin (1968) in his classic essay *The Tragedy of the Commons*, in which he argued that the self-interest of individuals had led to the over-use and ultimate failure of the medieval system of common lands. The subsequent enclosure movements resulted in the land being divided up and allocated for the exclusive use of individuals. Hardin suggested a similar approach was needed in the modern era to curb the over-use and degradation of common resources such as forests, fisheries and rivers. He suggested that these resources should be privatised or allocated through devices such as licences and quotas.

Jacobs's description of the over-cutting and clearing of Australia's forests is a classic example of the 'tragedy of the commons'. The traditional response of governments has been to create new 'enclosures' through a process of dividing up land and allocating it



Figure 1. Max Jacobs (1905–1979)

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for particular use by individuals or sections of society. In the case of forests this means the separation of the estate into categories such as state forests, national parks and private land. However, this simplistic process of allocating land has not fully resolved the rivalry between individuals over the use of forests because it does not address the manner in which the multiple values upon that land are allocated and managed. The resulting conflict within society over the management of these values presents us with a modern day 'tragedy of the forests', in which sections of society pursue their own self-interest to the detriment of the common good.

Hardin's concept of the 'commons' is central to the notion of how society can best allocate rights to the various goods and services provided by forests. Before we allocate these rights we must first address the question of ownership: who owns the forests? To answer this question I turn to the history of land ownership in Australia and to the link between Jacobs and the hippie movement of the 1970s.

Hippies and the rise of environmental awareness

The Aboriginal peoples' system of customary tribal lands was not recognised by the British colonists and in 1770, under the concept of *terra nullius* ('land belonging to no one'), Australia was declared as Crown land as part of the British Empire. Colonisation was followed by a period in which land was either rapidly alienated into private ownership or retained under governmental control for specific use such as state forests for wood production (Carron 1985) and reserves for 'the delight and recreation of the populace' (Dargavel 1995). The system of land allocation was primarily geared to fostering the settlement and agricultural development of Australia, largely at the expense of the forests and woodlands.

Jacobs's plea in the 1950s for the public to better appreciate the secondary benefits of wooded lands was eventually answered through the rise of environmental awareness and activism in the 1970s. The hippies were the vanguard of this movement, which heralded a fundamental change in how people thought about 'public land'. State forests were no longer seen as lands 'owned' by the Crown or the government, but as lands owned by the public. The hippies promoted the view that the non-wood values of the forest were more important than the traditional wood values. Their views were increasingly taken up by people within mainstream society who began to challenge the primacy of wood production and advocate a shift towards more ecologically and socially acceptable management of 'their' forests. By the 1990s the pendulum had swung so far that Drielsma (1993) observed that 'in the ongoing public debate we have focused almost single-mindedly on issues of environmental sustainability and lost sight of the basic criterion of wealth creation'.

Foresters lost an important opportunity to work more closely with the environment movement during these formative years. As a young forester, I found that hippies and the early environmentalists were naïve and idealistic but very keen to learn and engage. In 1977 I attended a hippie fair in northern NSW and came across a collection of second-hand books, which to my surprise included a copy of Jacobs's classic text *Growth Habits of the Eucalypts*. I acquired the book for the princely sum of \$1.50 and was left wondering whether the science of forestry had helped or hindered the previous owner's journey towards

transcendental enlightenment. Either way, it was disappointing to see the discussion over forest use quickly descend from 'peace and love' into adversarial conflict. This trend reflected a growing public distrust of government agencies and resource professionals (Cullen 1986) that persists to this day.

By the 1990s the concept of private ownership of forests was also being challenged. Under Anglo-Australian law the ownership of land has generally included the trees and grasslands that occur upon the land. Such private rights, however, have been increasingly constrained through governmental regulations affecting land clearing and forestry (Wilkinson 2006). In addition, it has become apparent that the private ownership of land and trees does not necessarily extend to other values such as water and biodiversity over which governments may assert controls (Sheehan and Small 2005).

The question of who owns the forests is therefore not the same as who owns the land. In economic terminology the various values contained within forests are collectively known as 'common-pool resources'. Common-pool resources are rival (the use of the resource by individuals collectively diminishes the availability of the resource for others) and excludable (some individuals or groups may be excluded from using the resource). Some common-pool resources such as timber are converted into private goods through the allocation of land or timber rights. Others, such as biodiversity, are not converted into private goods and they remain under public 'ownership' by way of governmental regulation. This has created a conflict of ownership; governments have created private rights over land and timber but they have not privatised the associated common-pool resources such as biodiversity. Increasingly, the public has asserted that these common-pool resources should not be lost or degraded through the exercise of private rights over land or timber resources. Picture an endangered eagle that has nested in a tree on private



Figure 2. Who owns this tree? The land and tree may be private goods but the endangered eagle and its habitat are public, common-pool resources. Photo: L. Walters.

land (Fig. 2). The landowner may wish to assert his or her right to harvest the tree but the public through governmental regulation wishes to protect the eagle. Protecting the eagle means not only protecting the individual bird, but also protecting its nest, the tree that provides the nesting site and the surrounding forest that provides the foraging habitat for the species.

The rivalry between private and public rights is further complicated by the reality that many common-pool resources occur at local, regional, national and global scales. The protection of a scenic view may be regarded primarily as a local issue, whilst the conservation of biodiversity has implications at all scales. However, the views of affluent urban societies concerning the protection of biodiversity are often very different from the views of local forest owners who need an economic return from their land. Values such as forest carbon have become very much part of the global commons, with major implications at local, regional and national scales.

Resolving the rival use of forests

The conflict over rival use of forests cannot be resolved simply by allocating land or private rights because this approach fails to adequately address the over-arching public interest in the management of common-pool resources. Recognising this, Australia's National Forest Policy Statement of 1992 (Commonwealth of Australia 1992) established three tiers for managing the range of private and public uses of the forests:

- a permanent native forest estate
- a reserve system that is comprehensive, adequate and representative
- the complementary management of forests outside reserves through regulation and codes of practice.

This approach is systematic and sound but it has failed to fully resolve the rivalry between self-interested groups within society, especially environmental non-government organisations and the timber industry. Both sides have argued that they are acting for the common good, but in pursuing their own self-interest they have narrowed the extent of the public debate to one of 'forests or jobs', which implies that these are mutually exclusive and that by protecting one you destroy the other. Misinformation and ideology have been used purposely by both sides to polarise the views of the community. Foresters have tried to encourage more informed debate, but we have often responded with either passive acceptance ('the public knows best') or professional arrogance ('we know best'). We have been frustrated that the public has failed to appreciate our science and economics, yet at the same time have been guilty of failing to appreciate that some of our management practices were past their social use-by date.

Faced with complexity and challenge, the socio-political response has been a simplistic return to enclosures through land allocation decisions that increasingly result in forest management being polarised into either 'reserves' or 'wood production zones'. This approach entrenches the myth that natural and cultural values can only be protected if forests are reserved and that the values will be lost if harvesting occurs. Far from resolving conflict, the polarisation of forest management can exacerbate rather than resolve the rivalry between individuals over the management

of forest values. This is because increased levels of reservation transfer the burden of wood production to other forests, leading to an intensification of wood production in those forests in the absence of any commensurate decrease in the public's demand for wood products. The ensuing intensification of wood production gives rise to public concern about the impacts on non-wood values, fuelling further calls for more forests to be protected in reserves (Fig. 3).

Successive cycles of reservation create more, not less, uncertainty about the longer-term future of the native forestry sector, which can result in the conversion of native forests to other forms of land use including intensively-managed tree plantations and agricultural crops. In Tasmania over the last 15 years the large-scale reservation of public forest has been accompanied by the loss of 10% of privately owned native forests to other forms of land use (FPA 1996–2010). At the same time, it is ironic that whilst the public may generally support the notion of more reserves this does not necessarily translate into support for paying increased taxes or entry fees to cover the cost of managing the reserves. As a result, the expansion of the reserve system in Australia has not been accompanied by a commensurate increase in the funding of reserve management, leading to concerns about the degradation of values through wildfire, weeds, illegal activities and poorly maintained roads and tracks (McAlpine *et al.* 2007).

Sustainable forest management is based on the principle that forest values need to be managed within the landscape mosaic across all tenures at multiple temporal and spatial scales. Reserves and wood production zones are part of the mix but forest managers need some flexibility if they are to optimise the delivery of goods and services across the forest estate and adapt to changes in new information and societal values over time. Reserves cannot capture all conservation values, and non-reserved native forests and plantations cannot be used for intensive wood production without constraints to cater for non-wood values. Plantations should not be regarded as 'industrial ghettos' (Fig. 4) as one plantation manager suggested to me some years ago! We also have to acknowledge that for historical reasons, including poor investment decisions, some plantations are on sites where intensive wood production is not a sustainable form of land use for various environmental, economic or social reasons. As a matter of principle, we must question the implications of abandoning ecologically benign forms of silviculture across an extensive forest estate in favour of more intensive systems of wood production that are often

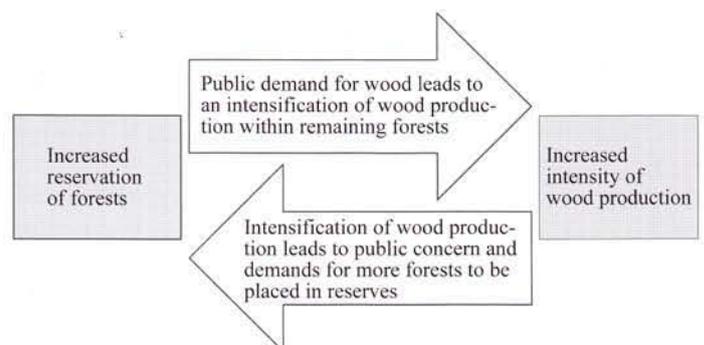


Figure 3. The polarisation dilemma



Figure 4. Industrial ghetto? Intensive wood production zones have an important economic role to play in meeting society's demand for wood, but production must be environmentally and socially sustainable.

dependent upon the application of chemicals and have far greater impact on soils, hydrology, biodiversity and scenic values.

Forest goods and services are global, common-pool resources. If we are to avoid the degradation of these values we need to adopt a global perspective that recognises Jacobs's maxim that people need to appreciate all of the benefits of the forests. What we do to resolve the rivalry between sections of society over the management of forest values in Australia has broader implication for the region, particularly if it simply results in Australia transferring the burden of wood production to countries that have less capacity to sustainably manage their forests.

Conclusion

Land and trees have traditionally been allocated as private goods, but—

- other values (biodiversity, water, amenity) are public, common-pool resources at local, national and global scales
- over-simplification and polarisation of forest management into either reserves or wood production zones can exacerbate rather than resolve the rivalry between individuals over the management of forest values.

The tragedy of the forests has arisen because of a failure to adequately resolve the rivalry between individuals over the use of forests. This rivalry will not be resolved simply through the allocation of land for specific purposes: the resolution lies in the effective management of the forests' values across all tenures using a mix of reserves and management prescriptions, recognising both public and private rights. This approach is both complex and challenging, but it is one that deserves our advocacy and perseverance!

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