

Who hates trees?

Who hates trees? Not many people. Trees are an intrinsic part of our world, and it is generally appreciated that they provide many benefits. In contrast, the antagonism towards intensive commercial forestry is deeply engrained throughout most of the Western world and in many developing countries. This hostility appears to be based on a perceived conflict between environmental values and commercial requirements.

On the one hand, there is the perception that a natural forest is a complex, resilient, unsullied ecosystem that provides the greatest range of benefits to wildlife, soil and water, and – sometimes indirectly – to humans. At the other extreme, monocultural exotic plantations are seen as a travesty of the natural model, with few redeeming features. In spiritual terms, a natural forest is said to be God's handiwork, whereas an exotic plantation is a mockery of this, as corrupted by mankind's greed. Forests hold a special place in the hearts of people, so that paradigms that refer to forestry tend to differ from those that relate to agriculture or medicine. For example, who would advocate "selective felling" in a crop of wheat? "mixed age classes and genetic diversity" in a Pinot Noir vineyard? or "greater biodiversity for the sake of ecological resilience" in a hospital?

Suffice to say that the distinction between natural and commercial forestry, even at the extremes, is considerably more complex than could be deduced from discussions in the popular media. Arguably, there is no "natural" forest remaining on this planet. Human occupation has altered every single hectare, if only by the introduction of alien weeds, pests and diseases. Furthermore, nearly all forests are "commercial" in that they are used by people, if only for tourism. Yet few exotic forestry plantations have reached the stage where the ecosystem is controlled to the same extent as is normal with grain or orchard crops. In the middle of the spectrum of management intensity, indigenous trees of local provenance can be established by planting or by seeding, and harvested in a way that approximates windthrow or natural senescence. The environmental effect of such forestry can be very similar to "undisturbed, natural" forests, although profitability is likely to be lower than that with more intensive practices.

When considering the sustainability of various forestry systems, it is common to focus on the risks from such things as fire and disease (perhaps, or perhaps not, enhanced by a tendency towards monocultures), and to assess changes that occur in soil nutrients. It is less common to consider "economic sustainability". For example, a high level of taxpayer subsidies is required to maintain the current forestry systems in many European countries. How long can this continue? Many European forests are not managed for maximum output of wood but primarily for wildlife and recreation, in the certainty that wealthy countries can overcome deficiencies in domestic wood

production by importing the balance from elsewhere. The exporting countries include Canada, Scandinavia, Russia and various tropical nations. If forestry in some tropical regions is unsustainable at its current rate of deforestation, and if the huge boreal forest is likely to be dwarfed by increasing world demand for wood, what does that imply about the sustainability of forestry in, say, Great Britain? The type of forestry associated with such economies does not necessarily take place on its own soil.

For a lover of trees, it is hard to view the felling of a healthy stand of trees, or even of a single tree, without some misgivings. The environmental disruption is obvious. There is noise from the chainsaws and the logging machinery, the surrounding vegetation is inevitably damaged and wildlife habitat temporarily disrupted. Less obvious, but arguably of far greater significance, is the environmental damage that would be created if the trees were not felled. Consumers will continue to demand shelter, furniture, packaging, writing materials, etc., and - in the absence of wood - they will substitute some alternative material. The manufacture and disposal of steel, aluminium, plastics, and concrete is not without environmental impacts. These impacts are the by-products of mines, smelters, factories and landfills. On the contrary, it could be argued that a commercial forest is an environmentally friendly way to combine a greenhouse gas and water into a wide variety of fibre and energy-rich products. It is not only a biological solar panel, it is also a biological battery - it retains the energy until required. Even the initial manufacture of this solar panel and battery occurs without great environmental cost.

In a less-populated world, we would enjoy the luxury of a landscape filled with "natural" forests, yielding sufficient wood for human needs but simultaneously providing the full spectrum of other benefits that we attribute to trees. But in this sad, overcrowded planet, we must be grateful that the vast majority of our goals can be attained from single-species plantation forestry grown on cycles of clearfelling and replanting. It is time that critics ceased their mindless comparisons with some hypothetical ideal, and fronted up with practical alternatives.

Piers Maclaren

Erratum

In Manley and Maclaren (Nov issue, page 26) the site index and 300 Index for an average New Zealand ex-farm site are both reported as 32.6. The correct values (and those applied in the analysis) are 30.2 m for site index and 29 m³/ha/year for 300 index.