omy. We have not developed a way to fund the planting and care of major forests and we have no entrenched policies that encompass the time horizons necessary for forestry development. We have confused the nature of forest funding by trying to use inappropriate investment criteria, and we have (particularly since 1972) failed to establish priorities for land use.

These have been our failures. How incredible it is, that because of an unfore-seen boom in export log prices our domestic saw log supply is under pressure and there is a possible shortage of wood fibre for processing. The reason for this is that as a nation we have not been serious about planting forests. In the present situation we have a risk that our forests will be overcut. We could be left with a mess in our forests when the Japanese decide they are paying too much for wood.

Some of our major and debt-ridden corporates may not be thinking beyond the next financial year balance date. The 1993 log price spike situation was nothing more than an unseemly lolly scramble and the results could have been serious for our

mature forests. After 60 years of modern forestry we have come to be spot suppliers in a spot market. We are simply price takers and looking more like the NZ Dairy Board every day. Our forests are too small for us to be significant players. Our lack of effective long-term plans and philosophies leaves us still in the same position we were 20 years ago. If we overcut again this time we will have another 20 years to deplore the lack of a national forest policy.

There is not time to develop the proposal of doubling or trebling our forests. Like many of you I have seen exotic forests in other countries, in particular, pines and *Eucalyptus*. I have seen no significant example of a forest established without the assistance of funding directly or indirectly by Central Government.

We have to be bold surely. If we sort out some of our land-use inhibitions we could establish vast forests in the right places. Why should Government not fund a 60-year forestry programme, contracting out the services required? This is the only way the barrier posed by conventional economic criteria can be overcome. Cross

subsidies from other government expenditure (e.g. Welfare) might be utilised. A world-scale forest established with public money means that future taxpayers receive the benefits of ownership. Surely this is an elegant solution to the philosophical objections to such a course, and the trees will be planted.

Why can we not have a forest policy aimed initially at a sustained yield of 40 million m<sup>3</sup>? A clever forest policy would fund the first rotation, sell mature unprocessed wood to fund the second rotation and finance the capital expenditure required for "added-value" processing at an appropriate level.

Gordon Gecko and Reg Smythe were both correct. Trees are good, trees work. If you want trees you won't get them in vast volumes by orthodox financing. If we are not to rely upon future lolly scrambles we need a long-term forest policy that transcends Governments and produces real market power. Why should we not have say 35% of our GDP based on forests?

And why have we wasted the last 20 years literally doing nothing about it?

# Which road to take? Enforced regulations or voluntary compliance? A view from the Southeast, USA

Andrew W. Ezell\*

In the Southeastern United States, forest land managers have arrived at a critical crossroads. The management activities of the future will be conducted in such a manner as to reduce and/or eliminate water pollution. There are US federal and state laws that require maintenance of water quality, and pressure from active "preservationist" groups is increasing.

The concept of clean water is fully supported by the forest land owners and managers in the region. The "end" is not in question; it is the "means" that is focusing the minds. Of major concern to this group is the concept of enforced regulations as opposed to voluntary compliance.

To promote the voluntary solution and avoid the prospect of enforcement, Best Management Practices (BMPs) have been formulated as guidelines to control nonpoint source water pollution originating

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from forest activities. Currently, less than five per cent of all water pollution in the Southeast results from forestry operations, but the ultimate goal is zero pollution.

## **Options**

In reviewing this situation, one cannot help but think of the classic poem "The Road Not Taken" by Robert Frost. Forestry management is poised at a point of divergence, with two distinct options, and a choice must be made: in Frost's language, one well worn (the status quo), the other overgrown from lack of use. Unlike the traveller in Frost's poem, foresters know where both roads lead, and to most observers, the choice should be quite easy.

If we travel down the "old and well-worn trail", the first part of the journey will be much the same as our prevailing conditions. However, conditions will change; soon, and drastically, and the journey risks becoming a highly regulated undertaking, as is occurring in the Pacific Northwest. We might be told where to travel, when to travel, and how we may

proceed. In many cases, it is quite probable that travel may even be stopped. There are residents along that way who do not like forest managers (as a group) and our journey will meet with an uncomfortable or even hostile reception.

Hopefully, the industry will proceed like the traveller in Frost's poem and take "the one less travelled by" of voluntary compliance. Down this less-used way will be new experiences and different ways of travel. We may find the route difficult and cumbersome at first, and we undoubtedly shall have to be adaptable and make changes: such is normally the case with new and different modes of activity. However, this "means" is both more flexible and more pleasant.

For forest managers in the Southeast, our choice is to either adopt and implement Best Management Practices or not. Incorporating these guidelines into our management strategies should result in better maintenance of site productivity, less negative impact on water quality, reduced social opposition to managing

forest land, and, hopefully, avoidance of strenuous regulation of our management. That path is "less used", but it is a good road for us.

We have only to look to the West Coast of the United States to see the result of taking the old, well-worn trail. They have shown us what happens to forest managers who choose that way. A recent visitor from Oregon reported that he "now lives in the largest US national park south of Alaska". Intensive forest management has ceased in many parts of that region.

### Costs and Returns

Since the introduction of BMPs, a major concern has been the cost versus the benefits of operating under these guidelines. To answer that question, the cost of various BMP practices, the amount of sedimentation prevented, and value of water quality benefits have all been reported from scientific investigation. Using that basic information, the cost of implementing BMPs, and value of the benefits, can be calculated. While the specific results vary slightly from one state to another, the overall results are the same for the entire region. Voluntary BMP programmes will result in positive values of millions of dollars each year with an overall benefit/cost ratio of c. 1.1:1. By comparison, regulatory programmes will result in negative values of millions of dollars each year with an overall benefit/cost ratio of c. 0.6:1. Overall, enforced regulation is both undesirable and uneconomic for forest management in the Southeastern states of the

Very rarely are travellers afforded an opportunity to be able to see so far down a choice of roads. Unlike Frost's traveller, I am not "sorry I could not travel both". I can only hope that the new and less travelled route will be appealing to the vast majority of our profession and that we may improve our management of forest land – and not be regulated and prohibited from continued effort.

BMPs are our divergence, and our future is down one of these two roads. Our choice will make all the difference.

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Well-planned road systems reduce water quality problems and can be used during harvest, regeneration, and throughout the rotation. Photo: Langley and Hammons, USDA, Forest Service.



Stream Management Zones (SMZs) provide a variety of benefits including stream protection, wildlife habitat, and aesthetics. Photo: Langley and Hammons, USDA, Forest Service.

# New Zealand Forestry

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