

Myth of enduring plenty - oil prices are going to rise and why forestry must be prepared

Piers Maclaren

Even as our ancestors chomped their way through the last mammoth, moa or dodo, people assumed that Nature's bounty was unlimited. We have been slow to learn the lesson, with a long list of plants and animals driven to commercial or actual extinction. The most plentiful bird on Earth, the Passenger pigeon, once darkened the North American sky as billions flew overhead. A shotgun fired at random would bring down dozens. Now, not a single individual remains.

A recent ideology denies the very concept of extinction. Nothing ever runs out, the theory goes, market forces always ensure a just-in-time shift towards greater conservation. The new mandarins are called economists. When Thomas Carlyle in 1849 called economics "the Dismal Science", he was only half right. Economics is no more a 'science' than is Political Science, Domestic Science or Creation Science. Science is about refutability. Have you ever tried refuting an economist?

I often wonder about the blinkered approach of economists to the physical realities of the world we live in. They seem to regard their 'laws' as being woven into the very fabric of the universe, and that other sciences have only minor, technical details to contribute. My world-view is quite different: I regard Economics as being a superficial, even Mickey Mouse, tack-on to the solid structure provided by the hard sciences. It is sometimes useful, but has little authority or credibility.

Although economists deny that resources can be depleted, it is ironic that their very discipline is based on the scarcity of economic goods. If there were plenty of everything, there would be no need for economists. One of their common refrains is to bemoan the "tragedy of the commons" - the decline of the Passenger pigeon, they would argue, is because this resource was not privatised. But the world's oil-wells have indeed been privatised (in effect), and their decline is just as inevitable.

Thoughtful economists (and they do exist) will say that all the extinctions in history have been biological, and that there is no record of any mineral depletion. The 1972 'Club of Rome' report ("Limits to Growth") was spectacularly wrong, they crow. Reminds me of a teenage girl who gleefully reports, "doctors have been saying for months that I am going to have a baby, but it hasn't happened yet!"

There are good reasons, based on solid science, why all previous extinctions have been biological, not mineral. The 92 natural elements in the universe were mostly formed in the Big Bang, in supernovae, or in stars much bigger than the Sun. Except during nuclear reactions, elements cannot be created or destroyed. They mostly cannot escape from

Earth's gravity. By the miracles of inorganic chemistry, they can be combined to yield the full range of non-biological materials used by mankind. They never become exhausted, they are merely dissipated. After decades of washing dishes, your gold wedding ring may have dissolved into a zillion tiny atoms floating freely in the ocean. Is that a problem? Not if you have sufficient cheap energy.

The First Law of Thermodynamics states that matter (and energy) are always conserved. It seems to confirm the economists' world-view. But the Second Law states that any use of energy will result in an increase in entropy (ie disorder). Your gold ring in the Pacific is in a state of high entropy. But, with a lot of external energy, you can evaporate seawater and recreate that ring. The twentieth century has seen an abundance of cheap oil, and this explains why there has been no shortage of non-biological resources.

Economists extrapolate their 'laws' to include energy itself: "the price of crude oil will correct itself eventually". A standing joke among petroleum geologists is that management should sack them all and replace them with economists - who are the only ones convinced that there is plenty more oil left to find.

A test for my hypothesis? If the economists are right, world oil prices should soon fall to about half of their present levels - say, to US\$25 a barrel - and fluctuate around that figure. If I am right, and world oil production is about to peak, we should see prices double to about US\$100 per barrel. This is a long-term ceiling price imposed by alternatives, such as coal liquefaction and extraction of oil from shale, perhaps equating to about NZ\$5/litre at the petrol pump. If the price stays the same, we are both wrong, and you should feel free to remind us of that fact.

What has all of this got to do with forestry? At the risk of becoming repetitive and boring, I suggest that oil prices have everything to do with forestry - and with the rest of the world economy for that matter. To use one small example, the costs of resin (from natural gas) now exceed the costs of wood in MDF manufacture. In financial terms, MDF is a way of processing fossil fuels before it is a way of processing wood.

When oil prices surge, and New Zealand is caught with its pants down, I will blame the arrogance and ignorance of those doctrinaire ideologues - the economists.

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