

THE OPPORTUNITIES BEFORE US*

C. G. R. CHAVASSE

Forestry is a new profession. People have not yet descried it. It is new enough to ensure that there is a world-wide brotherhood of foresters. I have met foresters from perhaps fifty or sixty countries. We all speak the same language; we all understand each other perfectly; we all want to share our understanding and indeed our enthusiasm. We are not concerned with national boundaries. It is therefore good that two sister organisations should meet together to consider the future of forestry — a future which is going to be of immense value to mankind.

The world has yet to appreciate the real importance of forests; nor does the public understand the part foresters play in forest management. Indeed, in most parts of the world foresters are a beleaguered species. Practically everything we do is wrong. We must not grow trees on "good" farm land. We must not log or manage native forests. We must not set up big industries lest they pollute the environment. We must not disrupt established social patterns. We are told that forestry depopulates the countryside, causes all sorts of social traumas and disruption, impoverishes the soil. We are told that forestry is un-natural; that monocultures are doomed to disaster. In our increasingly urban-oriented civilisation the rural landscape is thought of as the playground of the jaded city-dweller.

I do not want to dwell on this froth. All it means is that some city-dwellers have discovered conservation and an environment very different from that which they perforce endure. They cannot believe that foresters have known about it all along — that their training and experience give them an understanding of ecosystems and the application of science to the living world in order to meet the wide and diverse aspirations of people. With all the fervour of new converts, and with their lack of knowledge and understanding also, the "conservationists" proclaim their new-found gospel from the housetops with such enthusiasm that the media, and politicians, have been conned.

It will pass.

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Rather astonishingly, foresters, far from squaring their shoulders and fighting back, have tended to cringe before this onslaught. They show a strange apathy. The number of people eligible to become members of the N.Z. Institute of Foresters probably equals the number who belong, of whom the number who actively promote their beliefs and demonstrate their righteousness is small indeed.

And yet all foresters need to contribute to public enlightenment. If they do not do so, there are plenty of people bent on ensuring public obfuscation. Let me briefly enumerate a few fallacies dear to the public at present:

- Forestry is a threat to farming. Not true: forestry is complementary to farming and every fact that one can muster shows that the best land use for our pastoral country would be a nice combination of farming and forestry.
- Forests are the environment. Not true: the environment for most people consists of city streets, shops, factories, suburbs; the urban dweller goes to water for his holidays — beaches, lakes and rivers — not forests.
- Monocultures are un-natural. On the contrary, monospecific forests are common, especially in the temperate regions of the world, so why should monoculture of forests be un-natural?
- Ecosystems are immutable. Not true: ecosystems are continually changing, while catastrophe is the natural way for forests to be regenerated.
- Man has no part in ecosystems. Not true: cities are ecosystems. Man has played a part in forest ecosystems since time immemorial. Probably most forests in New Zealand have been modified by Maori use, apart from large areas destroyed by fires both before and after European settlement.
- *Natural forests should not be managed for wood production.* Not true: most of the managed forests of the world are natural forests; the exotic forests of New Zealand, Australia and a few other countries are exceptions.
- Multiple use is an untenable concept; forests must be preserved. Not true: people make multiple demands on forests, so forests must therefore be subject to multiple objectives and multiple use.
- Natural forests are healthy. Not true: natural forests are riddled with disease.

- Our exotic forests are ecological deserts. Not true: they contain large numbers of species of plants and birds.
- Logging destroys forests. Not true: the only forests being destroyed are those destined to become farm land. Logging is a major means of regenerating forests before they become subject to natural catastrophies.

These are the main misconceptions. Need I go on? They add up to a picture of the forester as a soulless bush-butcher bent on destroying the "environment". At the same time, the people do not understand that they use two tonnes of wood per annum — for every man, woman and child. They do not know where wood comes from. Nor have they any idea of what the future of wood holds for their own wellbeing.

Let me turn back to 1949. In that year Egon Glesinger, then a senior officer in the forestry side of the Food and Agriculture Organization, published a book called *The Coming Age of Wood*. Glesinger's thesis was "How to win the peace by providing plenty" for all mankind. He stated that: "It is my honest belief that freedom from want, if it is ever to be achieved and no matter when it arrives, can come only in a new age of wood." But he admitted that, "of course, the new age of wood is still far away". We may note, in passing, that the world's population was then some 2000 million people, and no one had felt anxious about the "population explosion"; but it was clear then that the world's resources were insufficient to meet the needs of everyone at a modestly affluent level.

The initial reaction to Glesinger's thesis was ridicule. The world had just arrived at the Atomic Age, and people fervently believed that the power in the nucleus of the atom would provide plenty for all mankind.

Glesinger, in fairly simple fashion, traced the relationship of the rise and fall of civilisations to the use those civilisations made of the forests. It is a melancholy tale. In every case the forests were treated as a mine which provided the wealth to sustain the growth of civilisation. When the forests had eventually been destroyed, the country became subject to erosion, flooding, siltation of good farm land and general and frequent natural calamities. (For "natural" read "man-induced".) No ancient civilisation looked upon the forests as a source of continuous well-being, or attempted to manage them for sustained yield. As the forest disappeared, so the civilisation decayed. Glesinger was convinced that "Civilisation can best develop . . . by cultivating the forest".

Describing the possibilities of the vast, and then untapped, tropical forest resource, Glesinger wrote: "The time has come . . . to attack the world's last and largest frontier—and to attack it properly. It was hitherto the privilege of pioneers to be wasteful and destructive. Clearing the land with axe and fire, they regarded the forests as an obstacle to progress, not as a source of wealth. The day of this kind of pioneer is past." He pointed out that people are complacent about wood supplies, which are taken for granted. "Wood is usually considered one of the few raw materials about which Europe need not worry," he notes, but then observes, "This is not supported by the facts". "Progress . . . has come to be identified with the replacement of wood by stronger, lighter, more durable, or glamorous materials. To predict an age of wood is to predict a reversal of progress itself." On the contrary, the truth is that standards of living in many countries can be gauged by studying the *per capita* consumption of wood. "It is no accident that present wood-consumption rates reflect the welfare of countries, because all through history forests have exercised a decisive influence on the fate of nations." In this connection it was interesting that the Nazi administration in Germany saw this clearly and attempted to corner the world's wood trade. They saw wood as the basic and vital raw material for the manufacture of fuels, rubber and ligno-chemicals, as well as more conventional artefacts.

Glesinger then gives a description of the Swedish wood-based economy throughout the war. "By 1944 the forests of Sweden were producing . . . practically everything that Sweden had previously imported." The driving force was a forester, Eric Lundh. For example, fuelwood production was trebled to thirty million tons and used for homes and industries in place of imported coal. Some 70 000 vehicles, 15 000 farm tractors, and thousands of stationary machines and fishing boats were run on wood-gas generators. Large amounts of fuels and lubricants were produced from wood distillation. Farm animals were fed with a million tons a year of wood-derived cellulose feed supplemented by high-protein yeast grown on waste liquors from the sulphite pulping process. Large quantities of clothes were made from wood-derived rayon and cell-wool; many new fibres, and synthetic leather, were made from wood. Swedish ingenuity developed building components, panel products, insulating material and prefabricated housing — all from wood. Other wood-derived products were soaps, oils, glycerin, glues, explosives, synthetic rubber, plastics, lacquers,

resins, paints, cosmetics, pharmaceutical products, dyes and a wide variety of other chemicals.

At the war's end, much of this impressive achievement was dismantled. Egon Glesinger's thesis disappeared under the impetus of the decreasing real price, and vastly increased production, of mineral oil. And the richer countries continued to obtain their wood supplies by destructively exploiting his "last frontier" — the tropical forests. According to current FAO figures, they are disappearing at a rate close to 16 million hectares per annum. Man is, in a word, back at his old game, hastening the time of retribution.

When FAO was formed, its objective was freedom from want for all mankind — a truly noble concept. Glesinger predicted that, "The world stands on the threshold of developments in the use of wood as revolutionary as the invention of the steam engine or the introduction of technology on the farm . . . The world's forests and the raw material they yield could become one of the most significant features of the new age."

His enthusiasm was not ill-founded. He pointed out that: "Wood will become the characteristic raw material of our civilisation because it has three attributes which make it unique among all raw materials . . . Wood is universal . . . wood is abundant . . . wood is inexhaustible" if forests are purposely managed for sustained yield.

In Part III of the book Glesinger lists the uses of wood. At the head of the list is wood as a source of energy, followed by the potentialities of a ligno-chemical industry. He was a prophet, without a doubt, for like all prophets he was before his time and everyone ignored him. Let us then look at our present world scene.

The oil is running out and continuously rising crude oil prices fan the fires of inflation. The end of natural gas is only just over the horizon. There is said to be "plenty of coal" at present levels of consumption, but getting it will become more costly and difficult as time goes by. There are enormous reserves of oil shales, but extraction is colossally expensive. There is growing fear of, and opposition to, nuclear power.

What, then, of world wood supplies? All is not well. Europe is now a large net importer. Sweden, a major producer, has found that its national inventories have shown figures well above recoverable yields. Swedish companies are looking for other lands where they can grow the additional wood to keep their factories

in business; their world-renowned social welfare system is in doubt. Finland imports large quantities of raw wood from the U.S.S.R. The U.S.S.R.'s much-vaunted timber reserves appear to be a chimaera. Germany has been put in a tizzy by serious blow-down of forests in 1973, which will lead to curtailed wood harvests for 40 years or more. Britain is only just beginning to harvest forests which were initiated from 1920 onwards, and their planting programme is now seen to have been woefully inadequate. Italy, Spain, France, Greece, Yugoslavia — you name it — are trying to catch up with wood demand by massive injections of capital for forest development and improved yield.

Japan imports enormous quantities of both hardwoods and softwoods. China is desperately short of wood. The U.S.A. imports huge quantities of forest products from Canada, where the remaining accessible wood resources are becoming alarmingly attenuated, while growth of the meagre new forests is often painfully slow. World-wide commercial and state interests are conniving in munching huge swathes out of the tropical forests, reckless of the long-term consequences. The Brazilian "miracle" will be short-lived. The Philippines forests have been all but obliterated. In Malaya, Borneo, Sarawak, Indonesia, Papua New Guinea, the forests are disappearing at an accelerating rate in order to provide capital for development. There is a dire shortage of wood in India . . .

In other words, the world is just beginning to get Egon Glesinger's message. It is no wonder, then, that several countries consider New Zealand a "good risk" and are eager to lend us money. We are growing lots of wood, and we have reserves of power to process it for a multitude of human uses.

The choice, as Egon Glesinger points out, is between Cain and Abel. The Biblical allegory defines the clash between the nomad and the settled agriculturist. The great-great-great-grandson of Cain was Tubal-Cain, the metal worker. The metal workers, the engineers, the restless seekers and adventurers, born of the industrial revolution, are still with us and still have the inside running. They rely on mining, and they still have the ear of those who exercise authority in the corridors of power.

As yet, our rulers find it hard to look at the sun as the ultimate source of power and wealth. Nor can they see that the final achievement of the engineers and the miners will be the wasteland. It is up to the sons of Abel to make the forest to flourish and so bring in the age of sustainable plenty. Abel is the settled

man who husbands the earth's resources. That ancient word "husband" has precisely the meaning of the modern word "conservation". We foresters are the husbandmen of the forests. We can look forward with eager confidence to the immense challenges and opportunities that lie before us. We shall be called upon to meet the needs of all people—the needs of those who seek re-creation in the forests, as well as those who need the more material products of the forest. We shall be called upon to provide an ever-burgeoning harvest of man's most useful and versatile raw material and so ensure man's increasing well-being.

We gladly accept those challenges and those opportunities.