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Implications of the Brundtland Commission Report for Canadian Forest Management

by

Patrick Duffy

Introduction

In April, 1987 the report of the World Commission on Environment and Development (Brundtland Commission) was published under the title "Our Common Future". The report serves notice — an urgent notice based on the latest and best scientific evidence — that the time has come to make decisions needed to secure the resources to sustain this and coming generations. A cornerstone of the recommendations in Our Common Future is the concept of sustainable development "development that meets the needs of the present without compromising the ability of future generations to meet their own needs".

Shortly after Our Common Future appeared, a Canadian response was published as the "Report of the National Task Force on Environment and Economy" under the auspices of the Canadian Council of Resource and Environment Ministers. This report endorses the findings in Our Common Future and focusses on a number of strategies tailored to the Canadian condition.

Because of the importance of these two reports to the Canadian economy and environment (see book review and editorial in the April, 1988 issue of *The Forestry Chronicle*), the Economics and Policy Working Group examined their implications to Canadian forest management at the 1988 Annual Meeting at Prince Albert. The main speakers were Dr. J.J. Stan Rowe, Professor Emeritus, Plant Ecology, University of Saskatchewan and Dale F. Stewart, Assistant Deputy Minister, Department of Natural Resources, Government of Manitoba. Their presentations follow.

References

Our Common Future: The World Commission on Environment and Development. Oxford University Press, Toronto, xv + 383 p. 1987. ISBN0-19-282080-X.

Report of the National Task Force on Environment and Economy. Canadian Council of Resource and Environment Ministers. 4905 Dufferin Street, Downsview, Ontario M3H 5T4. 18 p.

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by

Stan Rowe

The order of the words in the United Nations-sponsored "World Commission on *Environment and Development*" wisely imply that environment precedes development and is the latter's prerequisite. No environment, no development.

Nevertheless, somewhere along the line when the Brundtland Report, *Our Common Future*, was being written this bit of wisdom got lost. Instead, the Commission adopted Sustainable Development as its centerpiece, and in its follow-up the Canadian Task Force — mindful that commerce rules the world — further refined the goal toward which all should strive as *Sustainable Economic Development*. Whatever happened to *Sustainable Environment*?

Perhaps the elusiveness of the concept accounts for its slipping through the cracks. Environment is a vague word with built-in wooliness. It is unique in being its own put-down, its own pejorative, for it means that which surrounds something else of greater interest. It diffidently declares itself to be peripheral, unimportant, not to be taken seriously. Thus the Law Reform Commission in its exploration of the question as to whether crimes against the environment should be recognized, concluded yes, if people suffer!

The greatest boon of the NASA space flights was the revelation that yes Virginia, there is a real environment. No longer a fairy tale it has at last been seen, photographed, revealed as the cloud-swathed skin of the planet: air layer

above and water/earth layer below with organisms the bacon bits in the sandwich. The two thin life-filled layers together comprise an ancient, evolving ecological system — the ecosphere; literally, the Home-Sphere. People, ourselves, are submerged in it, born from it, sustained by it, along with millions of companion organisms. The ecosphere is the global environment incarnate.

The view from the moon put a new face on all human activities. Clearly everything humans do, all economic activities involving use of energy and the moving around and processing of material things is done within and often at the expense of the enveloping and supporting ecosphere and its sectoral ecosystems. Humans are in the same relationship with the ecosphere as a fetus in its mother. If sustainable development is ignored by the dependent member within, if growth and more growth is its selfish goal, then sooner or later it will cause the death of the larger ecological system and then everything goes.

Human economic pursuits hitherto considered praiseworthy are revealed as potentially destructive. Steadily increasing the GNP year after year, growing more food, cutting more wood, mining more metals, and burning more fossil and atomic fuels can no longer be considered innocent business. Spurred on by exponentially increasing industry and booming populations (another billion people every 11 years) such growth-and-development activities knock out essential functional parts of the ecosphere while causing chemical changes and deterioration in air, soil, water, and food.

The realization is slowly dawning that if the ecosphere is weakened by human demands in excess of its renewal capacity, or sickened from excessive pollutant wastes beyond its detoxifying capacity, why so will all dependent economic systems by which people are fed, clothed, and sheltered. In short, if the global environment deteriorates, life deteriorates with it, for life is a property of the ecosphere and not just of smart replicating protein molecules bundled up in protoplasm.

An earth-shaking corollary is that the ecosphere whole, the integrated three-dimensional film at the planet's surface, is more important than the air, the water, the soil, and the organisms that are functional parts of it. In four and a half billion years of evolution the ecosphere produced people and continues to reproduce them. People on the other hand haven't a clue as to how to invent a working ecological system, short of borrowing it and the necessary spare parts from nature.

Clearly the sectoral parts of the world ecosphere, the various terrestrial and aquatic ecosystems, are invaluable. As the World Conservation Strategy declares, their genetic wealth and diverse ecological processes must be safeguarded. Is this a priority of forest managers?

The idea that forests are ecosystems is old hat in Canada. Four decades of ecological and forest land study have converged on the idea that forests are more than trees; that trees are simply one important component of landscape ecosystems. In the National Forest Sector Strategy for Canada the sixth recommendation (that should surely come first) advises that forest management "focus on maintaining the long-term dynamics of healthy, stable, and well balanced forest ecosystems." To this should be added, setting forest

ecosystems in their proper context, "as healthy functional parts of the ecosphere."

Remember that each sector of the ecosphere, each forest ecosystem, influences and is influenced by the whole of which it is a part. Slightly less than half the weight of the biomass in every forest is carbon, so forests are carbon sinks just as they are sinks for nitrogen and sulfur. Hence every major change in the organic content of forest ecosystems has its effects on the chemistry of the atmosphere. Since 1860 forest clearing has contributed 90 to 180 billion tons of carbon to the atmosphere compared with 150 to 190 billion tons from burning coal, oil, and gas, according to a recent Worldwatch report discussing the greenhouse effect and global warming. Only the terrestrial ecosystems of Europe and possibly of Japan and Korea are storing more carbon than they are releasing. Thus the rapid reconstitution of forests in Canada as well as world-wide has virtues that go beyond increasing the allowable cut.

A study of the likely effects of climatic change on the boreal forest of the Prairie Provinces and the Northwest Territories states that, from the perspective of climatic change, the greatest value of the western boreal forest may simply be its existence as a carbon sink. What a repugnant thought, that the greatest value of a forest is just being a forest, rather than potential pulp and 2 x 4's.

This is not an argument for doing nothing with forests. It is an argument for a different perspective on humanity's place in the world and on what has unthinkingly been done to it by traditional exploitation urged on by such unecologic concepts as maximum production, efficient extraction, and maintaining "market share". Sustainable development, sustainable economic development, depends on a sustained ecosphere, and we had better start asking the growth promoters and not a few forestry professionals, "How much is enough?"

Gordon Baskerville has reminded us that sustainability means nothing until defined in terms of specific goals for quantity (yield), desired quality of the sustained yield, the size of the system that is to be the sustained unit, and the time over which sustainability is to be maintained. From a global perspective, the last two are easy; the ecosphere is the important unit system to be sustained and the time horizon is forever. What then of yield quantity and quality? Which one leads most surely toward sustainability?

The maverick economist E.E. Schumacher is credited with the insight that going for quantity, for high yield and high production, is a recipe for disaster. The safe and constructive path is pursuit of quality. In his words, look after the health, beauty, and permanency of the land, of ecosystems, and productivity will look after itself.

Note the suggestion that priorities are wrong when high forest yield is the foremost goal, the bottom line. The top line, the route to sustainability, is the diverse, healthy, beautiful forest ecosystem. The push for high-yield silviculture that does not respect diversity and health can only be justified by the large number of forest entomologists and pathologists that it keeps employed. As R.E. Balch once said, if the spruce budworm is successful in teaching this lesson it must be reclassified as a beneficial insect.

Use of biocides in the forest is another questionable practice, justified as an efficient means of promoting productivity of preferred species by doing away with others. This is plantation management headed for monoculture, not forest ecosystem management, and it is the result of foresters being unduly influenced by agriculturists, like the cowboy in the song who fell in with evil companions. Biocides and quality ecosystems cannot coexist.

The entire philosophy and history of conservation is a lesson in teaching people to take less from the earth's ecosystems now so that a continuing supply can be gleaned in the future. Conservation is an appeal to protect diversity and resiliency in ecosystems today so that they will be able to

stand up to future shocks and keep producing tomorrow. Forestry no less than agriculture needs to take this lesson to heart, for it is the soul of sustainability.

In conclusion, the Brundtland Report's message for forest management is henceforth to make judgments about forest ecosystems in the context of an awareness of the overarching importance of the Ecosphere and its health. In the words of René Dubos, think globally while acting locally. The implications go far beyond the Report's prescriptions, to considerations of forest quality rather than quantity, of forest diversity before yield, and even of forestry esthetics as a guide to decisions whose cumulative effects will perpetuate or destroy this marvelous planet.

Sustainable Development

by

Dale F. Stewart

The forestry community has recognized the need to sustain the yield from forest land for several centuries. Once again the challenge has come forward under a different cloak, "Sustainable Development." There is a revived awareness that will carry us into the next decade — a wave that has emerged from the Brundtland Commission admonition to beware of our direction. The perils of disregarding the consequences of an indiscriminate path are well illustrated.

It is clearly prudent to join a winner and this recent interest in recognizing jeopardy and opportunity by both government and business is a major breakthrough.

What then does it mean to be a manager of resources at this particular time? What are the challenges, the possibilities that lie ahead? Most managers have seen us caught up in the spin of new buzz words and this must raise the spectre of another fad. I suggest that this time there is likely to be longevity as we see strong global support both from business and government as well as the various interest or lobby groups. There appears to be unusual support between parties as overall the concept of recognizing that sustaining what we have, yet ensuring new development is essential; in reality it is critical. One can sense a stronger mood of concern, understanding and commitment to those generations who follow.

It is important that we not get bound by definitional problems, yet it is equally necessary that we have clarity of intent. One point that needs to be established is that sustainable development means use not complete preservation.

There is wisdom in considering what is in place now, as I would judge the forestry world has advanced a long way toward the concept compared with some of its neighbour

disciplines. Thus, when we consider our programs and projects, it will be reassuring to note that good work has been done and the recent generation of renewal agreements has set the right direction.

As we examine the current thrust particularly in government, it might be useful to continue questioning who might perceive or be perceived as winners and who as losers? Over the years there have been suspicions when the new words arrive that there may be more restrictions, additional rules and ultimately more cost to the producers.

The political world has seized with enthusiasm upon a report and has made its contents into a cause. This may be one of those unique opportunities to meet the concern of the environmentalist, yet clearly speak to maintaining the productivity of industry and business.

How then do we package existing and future programming to meet this sustainable development thrust? The challenge from an agency viewpoint will be to favourably match the global perspective of the Brundtland Report yet maintain that individual uniqueness that sets a jurisdiction or political identity apart. When money is short and lists of demands long innovative efforts need be called into play to redesign or even rename existing programs to fit under the new umbrella.

Names matter. One can recall times when words such as silviculture, planting and thinning were the language of foresters. Today, we see the new wave that suits new agreements such as forest renewal and stand tending. Given the different ways of doing business and the complexity of the technology it probably is appropriate.