Professional Articles/ Articles Professionnels

The Challenge of Change¹

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We should try to arrange ourselves so that we will appear as plausible as possible to posterity.

R.D. Cumming, Canadian aphorist. 1915³

The outlook for the forests in many regions of the world is not encouraging. Presentations at the Twelfth Commonwealth Forestry Conference in Victoria last September revealed that, despite promising developments in some countries, vast regions of forests are being depleted, polluted, removed from timber production, and destroyed. At the same time, forestry must adapt to the shifting patterns of world trade for forest products, the emergence of new supply regions, barriers to trade, new production technologies, the changing needs of people, and new approaches to economic and social development.

Foresters are not well trained to deal with these kinds of changes. This presents a serious problem, because the guidance of foresters will be needed in making the required changes to policies and programs.

Crises in Forestry

A crisis, properly defined, is a turning point, a moment of danger when conditions are about to change, but in an uncertain direction. In this sense, there is a variety of crises in forestry because the critical problem differs in different parts of the Commonwealth and the world.

These crises are the result of converging trends that will force fundamental changes in the context of forestry. Among these, the most familiar is the depletion of original forests and the traditional sources of industrial timber. How long the remaining original stocks will last varies considerably, but the end is in sight. This means the forest industry will be forced to decline, or to adapt to different raw material, or both.

This trend does not necessarily portend a world crisis in industrial timber supply, because new sources are being developed, substitutes for raw wood are being found for many uses, and the growth in demand is likely to be modest. It does, however, present a major problem of adjustment in patterns of world trade and markets, in manufacturing technology, and in forest management.

At least as serious a crisis, in many developing countries especially, is the diminishing supply of forest products other than industrial timber. We have heard about the 500 million people who live in the forest and the many more who depend on forests for fuel, food, artisanal industry, and support for livestock. Increasing population and pressures on dwindling forests present staggering problems for economic and social development. The solutions to these problems are unclear, but they will certainly call for policies that go well beyond forest management.

In developed countries like Canada and the United Kingdom, the corresponding issue is more often the removal of forest land from timber production for purposes of wilderness preservation, environmental protection, and recreation.

The declining availability of wood is due, in some cases, to excessive harvesting or a transition from natural stocks to plantations and, in other cases, to the loss of forest land altogether. These are often related, of course, but I think it is useful to distinguish them because their policy implications are different. Not all losses of land from forest are undesirable. Clearing for agriculture can enhance economic and social opportunity in many cases. So can the reservation of a forest for a park or wildlife area. But of the millions of hectares being deforested each year, many are being destroyed through pollution, soil destruction, erosion, and desertification. The productivity of forests is primarily a problem of forest management; the removal of land from forest production is an issue of economic and social policy.

Instability and uncertainty invite governmental intervention. So we have recently seen an increasing inclination of governments to intervene in international trade in forest products, to manipulate forest industrial development, and to integrate forestry programs into strategic plans for economic and social development.

We should welcome this growing attention of governments. Indeed, during the Twelfth Commonwealth Conference we heard repeated pleas for more political understanding and priority in responding to forestry problems. Foresters, in turn, have a responsibility to contribute to this process by informing and guiding the policy-makers.

¹An earlier version of this paper was presented as the concluding address to the Twelfth Commonwealth Forestry Conference, Victoria, September 20, 1985. The author has had helpful comments and suggestions from several participants in that Conference, and especially from Mr. David Tan.

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³From *Skoolum Chuck Fables*. 1915.

Whether we will successfully cope with this changing environment will depend on the ability of foresters, producers, and policy makers to adopt different and broader approaches to forest management. This implies a vigorous but sensitive response in the way we perceive and value forests, in the way we plan and manage them, in the way we educate foresters, deal with governments and the public at large, and direct our research efforts.

To meet the challenges of the future, our traditional approaches to forestry must be modified: we must recognize a variety of forest uses, we must integrate forests into the broader economy, and we must ensure that institutional arrangements are suitable. I discuss each of these below.

1. Managing Forests for Various Purposes

At the most applied level, foresters must develop more systematic approaches to managing forests for a diversity of products and services. At the risk of some oversimplification, I think it can be said that most of our training is directed toward managing forests to produce industrial timber. But increasingly, forests must be managed for other purposes. In developing countries, the urgent need is often for domestic fuel, food products, and forage. In both developed and developing countries, forests must accommodate recreation and tourism, aesthetic and heritage values, settlement patterns and lifestyles.

Foresters tend to resist the demands of other uses of forest land. This is evidenced by the strain that typically exists between agencies responsible for agriculture and those responsible for forests, and by the tendency of foresters in developing countries to want to keep people out of forests and to manage them for industrial purposes without regard for local needs.

Here in British Columbia, foresters seem to object to the demands of environmentalists for wilderness and parks because they encroach on industrial uses of the land. Foresters should, of course, help in making enlightened decisions about land allocation, but beyond that they should try to avoid preoccupation with industrial uses and be ready to manage forests for whatever purposes the society deems most valuable.

Though we have made advances in understanding the technical aspects of producing various products, we have hardly begun to develop systems for integrated management. Unless foresters develop this capability, decisions about what the forests will be managed for will continue to be made on the basis of the relative power and influence of conflicting interests, prejudice, and experience. And foresters will be caught in the middle of abrasive conflicts without the means to assist in resolving them.

The problem of identifying the most valuable forms of forest production is not technically difficult: the allocation of resources to their most productive uses is the central concern of economics. But we have yet to apply these techniques in a way that will enable foresters to provide guidance in this important area.

2. Integrating Forestry into the Economy

Forestry must be integrated into the broader economy. The forest sector is, of course, only one component of any country's economy, and it is linked at every stage to other

economic activities. Its dependence on land constrains and is constrained by other land uses; its demand for capital and labour for forest management and manufacturing competes with the demand for these resources in other sectors; the trade in forest products and their prices influence incomes, regional development, foreign exchange balances, and so on.

But traditionally, particularly in North America, foresters have resisted the application of conventional economic criteria to forestry. They have rejected the relevance of interest rates and standard evaluation criteria to forest investments, the principles of inventory management, and so on. This defensiveness is unhelpful to policy making. And because of it, crucial economic decisions such as how fast to deplete existing stocks, how long to grow new crops before harvesting them, and how to select priorities for investment in forest enhancement are often devoid of economic content.

Foresters must also overcome their traditional reluctance to adopt conventional techniques of investment analysis and project evaluation; they must embrace them as the means to compete more effectively for scarce financial resources. I would go further and argue that, while these techniques for determining investment priorities are basically appropriate, they need to be elaborated to adequately deal with the special features of forestry projects relating to long investment periods, non-marketed benefits and costs, risk assessment, and so on. And foresters have a responsibility to assist with these needed improvements in evaluation techniques.

Foresters understand the urgency of increased investment in forest development and the opportunities it presents. They also have the best understanding of what forest land is capable of producing and what can be accomplished at a given cost. Their challenge is to articulate these needs and opportunities in a way that is understandable and convincing to ministers, treasury boards, corporate executives, and officials of aid agencies.

Policy makers, too, must change their traditional approaches. They must be able to understand and to assess the impact of forestry programs on regional and national economies in terms of income levels, employment, and social and economic stability. In Canada, among other industrial countries, the presumption that regulated harvests of timber will stabilize communities is now being recognized as faulty. So we clearly must pay more attention to assessment techniques that take explicit account of the economic and geographic linkages between forest-based activities and other sectors, multiplier effects, and the connections between rural and industrial economies.

3. Ensuring Suitable Institutional Arrangements

We must ensure the suitability of institutional arrangements, that is, systems of land tenure, organizations of producers, marketing structures, and regulatory arrangements. These organizational systems influence incentives and behaviour in fundamental ways and determine, to a considerable extent, success in achieving forestry objectives.⁴

⁴Arnold, J.E.M. and E.M. Mnzava. 1985. Forests for people — The developing country case. Paper prepared for the Twelfth Commonwealth Forestry Conference. Victoria. September 1985. 25p.

Experience suggests that we have hitherto relied too simplistically on governments to initiate, organize, and carry out forestry programs, without sufficient attention to the institutional framework that governs the incentives of the people involved to conserve, invest for the future, use resources efficiently, and comply with regulations.⁵ As a result, governments have found themselves pushing on a string. In Canada, where we rely heavily on government ownership of land and resources but almost entirely on private corporations to use and manufacture timber, there is plenty of evidence that the form of land tenure and licensing that links the public owners to the private producers is a major influence on investment and the quality of forest management.

Among the greatest obstacles to improving forestry in both developed and developing countries are land tenure systems and other institutional structures. Reforming these arrangements is often politically sensitive, but the economic cost is low and the benefits, substantial. Foresters can assist in this process by evaluating the available experience, identifying the needs and opportunities, and thereby reducing the barriers to reform.

⁵See *Business Week*, Aug. 12, 1985, p. 36.

⁶South, P.M. 1985. Making the best use of investment resources. Paper prepared for the Twelfth Commonwealth Forestry Conference, Victoria, September 1985. 22p.

Summary

I have suggested a number of ways our approach to forest management and development must change to respond to new needs and opportunities. My remarks can be interpreted as a call for a broader approach, integrating forestry with the mainstream of economic and social policy.

Forestry is now a well-established profession. Its deep historical roots give it maturity and identity. But its professional vitality depends on its ability to respond to new and different problems and opportunities. The current unprecedented pace of change will test this ability as never before.

We have made impressive advances in our technical understanding of forests. But many of our perceptions about how forests should be regulated and used are still based on classical models that originated in Europe centuries ago. We should not recklessly abandon these traditions, but we must recognize their inappropriateness to modern circumstances and modify or replace them with more suitable concepts.

More importantly, we must recognize that forestry is not an end in itself; it is a means of achieving economic, social, and environmental objectives.⁶ These objectives vary in different places and times, and so forestry must be approached flexibly, with continuing reference to these objectives and the impact of forestry on them. We must look on forestry not as an activity in isolation, but as an integral part of the environment, the economy, and social organization. Forestry is for people.

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