Forestry in Canada in 2020¹

by Yvan Hardy²

I was asked by the CIF to present my views on the role of the federal government in forestry in Canada in 2020. Such a prediction is not as easy as it may appear. To speculate on the roles of the federal government in forestry in 2020 would suppose that I have access to information surrounding a myriad of influencing factors which, frankly, neither I or anyone else has. So rather than attempting to speculate on the federal role in forestry in 20 years, I will share my thoughts and speculations on what the state of forestry might be like at that time.

One of the most reliable approaches to envisioning the future often is to look at the past—to the changes, and rates of change, that have occurred over a period and to extrapolate from these observations.

Recently, I found the slide rule I used while attending university in the early 1960s. At that time, it was the most technologically advanced instrument available to individual students. Today, the electronic agenda, or palm computer, is "de rigueur." Few students, or even foresters for that matter, are without one. For today's youth, the simple slide rule, indispensable as it was, is merely an alien toy. Granted, this comparison is a very simple benchmark of change during the past short while, but it is a visible indicator.

If there is one phenomenon related to change that is evident, it is that the rate of change over the years has been accelerating. Within most industrial "waves" during the past century—water power, steam, internal combustion, petro-chemical and now biotechnology—we can see that the duration of each "wave" has been shorter than the preceding one and that each wave has presented itself more quickly and has been more significant than the last. It is reasonable, therefore, to presume that this acceleration of change will continue into the future, at least to 2020, but likely beyond.

Even within the past four years, forestry has undergone immense change and has transcended many phases: it has progressed from the conservation ethic to a culture that embraces the concept of multiple use to what we now hear being called "global management"—that is, local forest management being influenced by the global population.

As a first-year forestry student in 1960, I experienced what I now refer to as "the real forest." At that time, people were cutting timber predominantly with axes and bucksaws. And also at that time, access to the forest was limited to only a few people—predominantly employees of the companies operating in the forest, or those who belonged to exclusive fishing or hunting clubs. A registration card or a badge was required to gain access to the forest.

Also at that time, DDT was the latest miracle: a discovery that was going to rescue the forest from the brink of natural destruction. And the concept of forest conservation and protection was ensconced in a network of 18- to 20-meter-high watchtowers

from which fires could be located using triangulation methods.

DDT quickly succumbed to changing concepts of forest protection and the growing use of biological agents such as *Bacillus thuringiensis*. Airplanes, satellites and GIS technology have rendered watchtowers obsolete. And the axes have been replaced by multi-function harvesters with sophisticated stereo sound systems and ergonomically-designed cabs that roam the forest in softer footprint patterns governed by

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multi-use, participatory management planning. When you consider the changes during the short-term past, projecting into the future becomes even more mind-boggling.

Clearly, we cannot predict the future with accuracy. But to refuse to speculate on it is irresponsible. So how should we approach planning for the future? We can look at current trends and attempt to predict where they might lead us.

One trend that is evident, and that can be expected to continue or even intensify is that, globally, forests are coming under tremendous, and somewhat opposing, pressures—pressure to conserve forests and growing pressure for increased wood supply. Add to this the fact that during the past decade, the world has been losing forest cover at the rate of 9 million hectares per year. These losses have been to agriculture, urbanization, and other uses. Not only are the prophets saying that this rate of loss will continue, but many are suggesting it, too, will increase.

Experts are predicting that by 2020, the world population will have grown from the current six billion people to eight billion. Experts also predict that this population increase will result in a 20–25% increase in demand for wood and wood products. Developing countries will continue to evolve and with that will also come increased demand for wood products.

Synonymous with this predicted increase in population, and the resulting demand for wood, will be an intensified global attraction to wilderness areas.

Since Canada is already home to much of the world's remaining wilderness areas, it stands to reason that our nation's forests will be increasingly regarded as a place of sanctuary in the years to come.

Global society, but especially North American society, will generally be more affluent in 2020. We will be an aged society with both the time and the money to pursue our leisure interests. North Americans are already looking at the forest with new eyes: as a place of recreation and as a resource to be strictly protected. And with these expectations intensifying, it is likely that society as a whole will lose sight of what the forest really is, and the ecology it represents. Demands for biodiversity conservation can be expected to become more forceful, as will many of the other multiple forest values that we are currently struggling to integrate into our management planning—water and air quality and carbon sequestration as examples. These will all be more integral components of the future big picture.

¹Presentation to the Canadian Institute of Forestry, Whistler, British Columbia, August 14, 2001.

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New markets for wood products will also have opened or become apparent by that time—markets in which Canada may not necessarily be currently active. For example, the huge Chinese and Indian markets have already begun increasing their demands for wood products.

Consumer dynamics can also be expected to evolve rapidly during the coming years. As already evident in the Asian market, demands with regard to the types and quality of wood products will be much more refined and forceful. Wood will not be regarded as simply a commodity to be purchased blindly but, buyers will universally want to know the origin of the wood product they are buying and they will want assurances that the source is being sustainably managed. But by 2020, society will be beyond the simple certification of source—they will be demanding complete life cycle analyses of the products they are purchasing.

The markets themselves will also look very different come 2020. Many more countries will be in the wood products marketplace, including what were once traditional Canadian markets. For example, the European Union has already made moves into the Japanese and American markets. There will also be greater competition from low-cost producers. Plantation forestry will be more prevalent—we can see that trend beginning already. Three million hectares of new plantation forests are being established around the world each year and that, too, is accelerating.

In a World Bank Study, Gary Bull and John Spears project that by year 2050, approximately 40% of global forest land will be set aside for conservation values. They also suggest that the bulk of forest products, close to 1.25 billion cubic meters, will come from a very small portion, about 17%, of natural forests that will be managed intensively as second-growth forest. Finally, they argue that about 3–4% of forest land will be comprised of fast-growing plantations, yielding, on average, about 1.25 billion cubic meters per year. The study also indicates that another 40% of the global forest land, often managed at the community level and for a variety of uses, will yield close to 0.5 billion cubic meters of timber.

The triple bottom line—economic, social and environmental—will be the guiding principle and companies or industries that do not adhere to that principle will likely be out of business.

Also on the social front, there will likely be “community” forces pulling in opposing directions: on the one hand, communities will have a greater say in the management of their surrounding forests. On the other hand, the global community will be influencing local decisions through mechanisms such as conventions, certification schemes, and perhaps an international forest convention. I believe that by the time we reach 2020 we will have witnessed the introduction of a fourth level of government—the global government.

Third party monitoring will be the name of the game. Organizations like the World Resources Institute, among others, will have become very sophisticated in collecting and analyzing their own data, which will position them to more effectively and authoritatively challenge governments.

Increasing urbanization will also be an influential factor in decision-making. Forest management decisions will be more driven by the urban population despite the fact that the urban population will be farther removed from the resource itself. In effect, decisions regarding the management of the resource will be increasingly impacted by those farthest removed from the resource.

The current debates about genetically-modified organisms will have subsided—GMOs will be accepted as a biotechnological fact of life. The threats posed by alien and invasive species will be a continuing challenge as the globalization of trade intensifies. In summary, we will have a smaller forest land base on which we will have to balance not only the need to produce a greater volume of wood fibre but also to manage for an increasing number of values. It will be a complex and difficult management challenge and it will take all the talent we can muster to make it happen. Highly trained foresters will be in great demand.

The role of the federal government in matters relating to forests will likely be much the same as it is now: to anticipate well in advance the next wave(s) of change and to make the adjustments necessary to address these forthcoming changes. To do that, government will have to remain ahead of the curve and will have to be very focussed in its investments in research and development in order to ensure that the technology needed to deal with these “waves” is developed and deployed. And similar to its current role, government will have to continue to foster partnerships.

Research and development in the years to come will be very focussed on ecosystem dynamics. The need to manage smaller forest areas much more intensively, in order to produce the quantity of wood fibre needed to meet the growing demand, will be the rule of the day. And this intensive management regime will require an intimate understanding of the ecosystem in which we are working and will have an over-arching conservation management approach. But this conservation management will create an entire new set of challenges: how do you manage and protect in a conservation context? How will we deal with natural disturbances or even natural disasters such as wildfires and insect epidemics since conservation implies minimal intervention, but protection from these disturbances contradicts that “hands off” notion?

Examples of governments’ need to anticipate the next waves and to focus investments and build partnerships are already very evident. As I speak, a concept is being discussed by the federal and provincial governments across Canada to fundamentally change the forestry paradigm in Canada—a concept that could enable us to produce more wood fibre on less land. The concept has been tagged Forest 2020.

Historically, most forest-related organizations across Canada, including the Canadian Forest Service, have worked somewhat independently and in isolation. As a present-day example, a number of national agencies are already dealing with transparency issues as they relate to information on Canada’s forests. Although the intentions of each are good, this independence could be our demise—the issues are becoming too complex and the number of players is increasing too rapidly for it to continue. In order to keep Canada at the top, we must work as a team toward common goals.

In September of 2003, at the World Forest Congress in Quebec City, Canada will have an opportunity to showcase to the world the advances we’ve made in sustainable forestry. We have good stories to tell and we have a lot to be proud of—how we’ve dealt with protection against alien species, our advances in biotechnology, our advances in applied silviculture, and so on. And we will have the opportunity to show the world that, in Canada, we’re ready for the future.