Research on Forests and Forest Management

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Abstract

Knowledge is required to create a sustainable supply of biological and material wealth from BC's forests. We must create that knowledge to maintain healthy forests providing ecosystem services to communities and raw materials for diverse industries through sound science and long-term monitoring. We can only do this through excellent basic and applied research built on a long-term vision.

British Columbia's (BC) forests are a public resource and must be managed in the best interests of the public. Ninety-five percent of provincial land is publicly owned and this natural heritage is relied upon to provide a full spectrum of goods and services, including a viable timber industry, tourism and recreation, non-timber forest products, conservation of critical cultural and environmental values, wildlife and fish habitat, and clean water. Managing these diverse resources to provide optimal outcomes for the majority of British Columbians requires that we understand these important ecosystems and be able to predict outcomes of natural and human disturbances. The research that underpins the policies and practices that guide forest management decisions is particularly important in the face of increased uncertainty about environmental change. The potential impacts of climate change, and increased dispersion and virulence of pests and pathogens are two of the most worrisome threats to our future forests.

Most developed nations with a substantial forest land base invest significant resources in forest research, and Canada is no exception. For a century our Provincial and Federal governments have directly and indirectly funded research concerning the growth and management of forests. They have created and funded institutions within government to carry out research, funded competitive research programs, supported research chairs in universities, and provided private forest enterprises with research funds or tax incentives.

The forest industry has also funded forest research directly, through companies or industry associations. However, compared to other forest nations (such as Sweden or the United States), the level of funding measured against the size of the national forest resource or the economic importance of the forest sector has always been low. In 2005, the latest year for which we have figures, national expenditures on forest research were estimated to be $260 million in current dollars. The BC total was $41 million in the same year. The Province was once the leader of forest research in Canada, but investment has lagged behind in recent years.

Forest research has a long history in BC, but provincial investment in forest research has resembled a roller coaster ride. Periods of optimism with bright people making important

progress have been followed by sloughs of layoffs and loss of creative and scientific talent. This pattern of boom and bust has been repeated several times over past decades, often following the economic fortunes of the Province. Valuable programs have often been cut only to be resurrected a few years later. Today is a new low - after a proud ninety-year history, the Province no longer has a Forest Research agency. The fluctuating fortunes of research programs are detrimental to the accumulation of knowledge supporting our claims of sustainably managed forests.

BC currently has diverse and powerful capability in forest and forest products research. However, provincial forest scientists have recently been separated into three ministries but continue to provide the capability for research to support sustainable use of BC forests. The federal government invests in research efforts through the Pacific Forestry Centre in Victoria, where scientists work throughout the Province on problems of national scope. FPInnovations, a national consortium of federal and provincial governments and industrial partners supporting the optimization of the forest sector value chain, has laboratory facilities in Vancouver. Competitively-funded research in all areas of forest ecology, management and utilization is also being conducted in the four major BC universities and many of the seven new universities created in the last decade. Operational research is conducted formally and informally by foresters in industry, and in some instances, as community-based research. Although scientists in each research community have distinct research priorities, motivations, funding sources and time horizons, BC forest research has a strong history of enthusiastic and productive collaboration among scientists from all institutions. The province has also benefited from dedicated knowledge exchange between users and suppliers (recently through FORREX), ensuring that research is targeted to current needs and shared with those who convert research results into practice and policy. This remarkable network of talent in forest research cannot be maintained without dedicated support.

Following are a few of the lessons learned from more than ninety years of successful forest research endeavours in BC, and from national and international research programs:

- Encourage multidisciplinary and broad regional scale research: Solutions to ecological and forest management issues seldom lie within the bounds of a single discipline.

- Foster a diversity of research approaches: Operational and applied research is needed to address immediate needs of forest land mangers and policy makers, but basic research is necessary to keep us at the forefront of innovation.

- Balance short- and long-term research: Long-term research is an essential component of any forest science program because the full results of forest management actions are not evident for many years.

- Create partnerships: Partnerships are essential. Researchers in BC have always engaged in highly productive partnerships, between government, university and industry. New partnerships are forming with First Nations and public groups.

- Attract and foster bright minds to work on priority issues: Bright minds require evidence of commitment to the values of scientific enquiry and continuity of research funding.

- Seek effective, informed leadership: Leaders need to look beyond provincial boundaries and be willing to work collaboratively with a highly engaged and knowledgeable research community.

There is a long history of inadequate investment in BC forests relative to the importance of the resource to the province. In 1956, the Commissioner of the Inquiry into the Forest Resources of British Columbia, Judge Gordon Sloan commented as follows:

"if the shareholders of a large company which controlled and was charged with the management of millions of acres of forested land of incalculable actual and potential value were advised that the company's research division was being starved of funds …. they would consider that their interests were being severely jeopardised".

The Province needs new public advocates to arrest and reverse the precipitous decline in forest research funding over the last three years. Sound and sustainable management of forest resources, an innovative and competitive forest industry, and enhancement of the many other benefits of the forests so prized by BC citizens cannot be maintained without adequate and sustained research funding.

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