

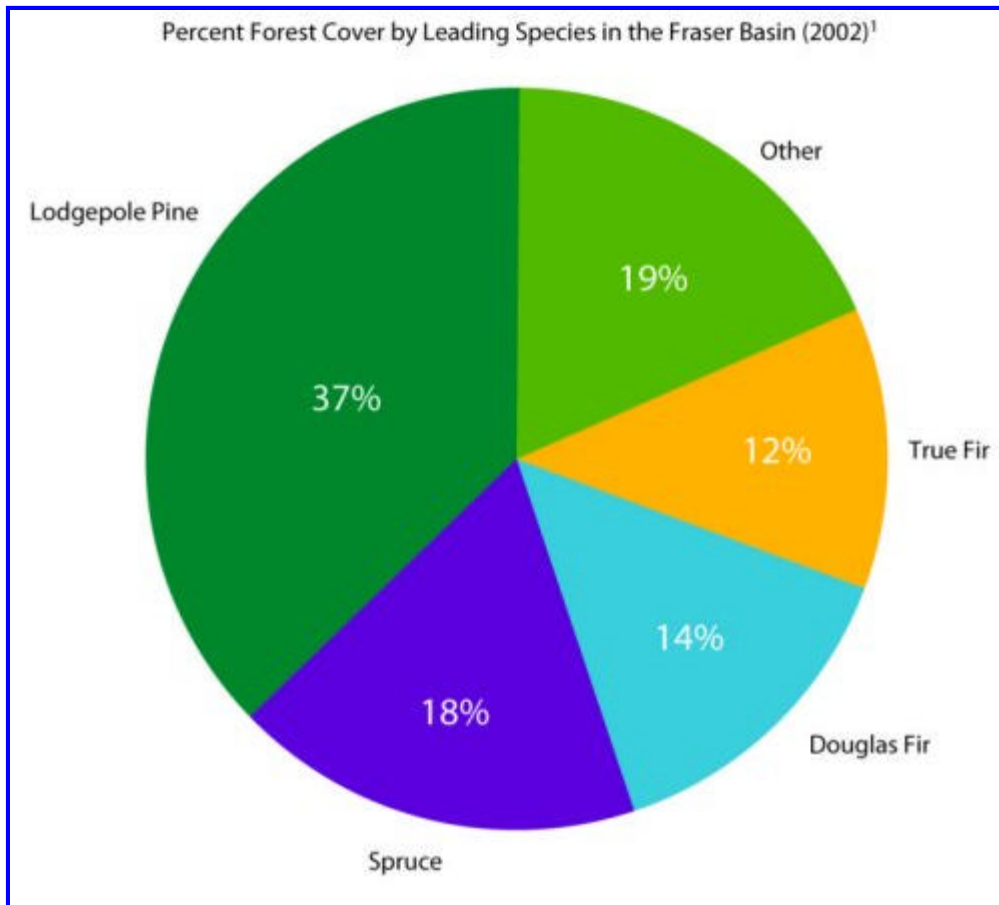
SUSTAINABILITY HIGHLIGHTS

Forest covers more than 17 million hectares (75%) of the Fraser Basin, providing many social, economic and environmental benefits, such as clean water, fish and wildlife habitat, employment and recreational opportunities, as well as aesthetic and cultural value. Forest sustainability issues include the long-term ecological health of forests, ensuring the biological diversity of forest stands, the diversification of forest product development and community involvement in forest management. Forest sustainability is very important as the economy of many regions in the Basin is heavily dependent on the forestry sector and, in some communities, the forestry sector provides more than 44% of the income. Fraser Basin forests include a mix of age classes and leading (dominant) tree species.

- As of 2000, 51% of Basin forests were between 21 and 140 years old, 37% older than 140 years, and 12% younger than 20 years. ¹
- Leading (dominant) species in the Fraser Basin include Lodgepole Pine, Spruce, Douglas Fir and True Fir. ¹

Extent of Mountain Pine Beetle outbreak in BC		GETTING WORSE - The area affected by MPB is 8.7 million ha, more than double the area in 2003.
Community Vulnerability to the Forest Sector in the Fraser Basin		MIXED RESULTS/POOR - Vulnerability is worst in the Upper Fraser and Cariboo-Chilcotin regions and is further compounded by Mountain Pine Beetle.
Forest Restocking in BC		FAIR/MIXED RESULTS - The area surveyed as restocked was less than the area disturbed in the 1980s, more than the area disturbed in the 1990s, and similar to the area disturbed since 2000.

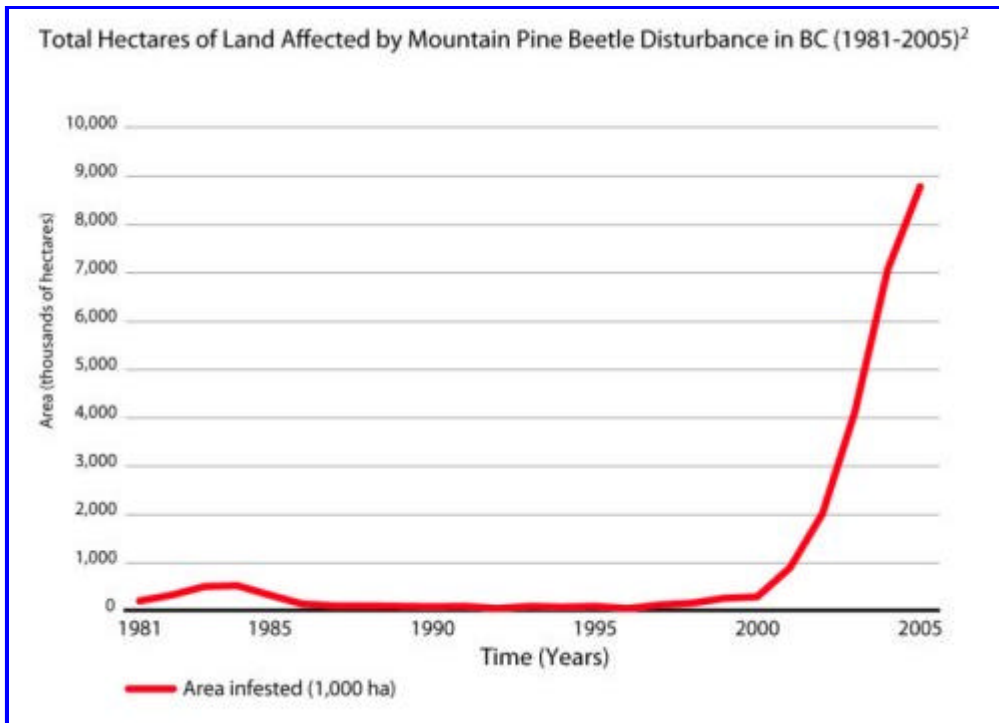
ISSUES AND TRENDS



Mountain Pine Beetle in BC (1981-2005) [2.3](#)

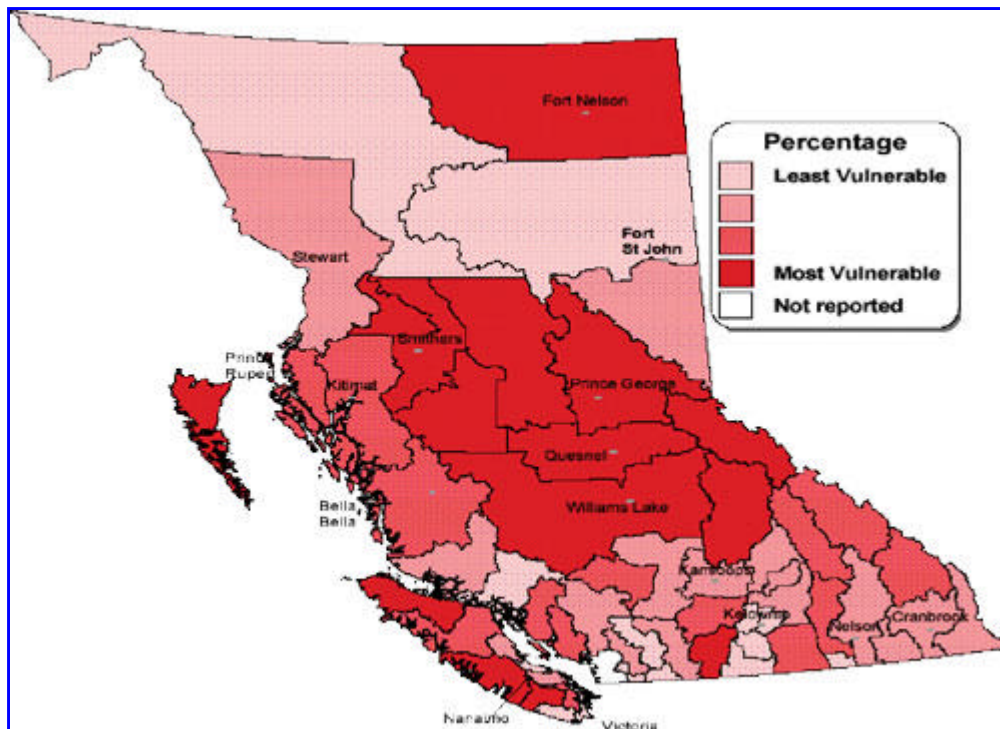
The area of BC forest affected by the Mountain Pine Beetle (MPB) has more than doubled, from 4 million hectares in 2003 to 8.7 million hectares in 2006, with much of this in the Fraser Basin. The MPB reduces trees' nutrient and water uptake, resulting in defoliation and tree mortality. The large areas of dead trees can increase the intensity of forest fires, change water runoff patterns and water temperature, affect soil and stream bank erosion and degrade fish habitat. The commercial value of wood is significantly reduced if affected trees are not harvested within two to five+ years of infestation. In an attempt to reduce the spread of the MPB and salvage commercially valuable wood, the Chief Forester has increased the allowable annual cut (AAC) in a number of Fraser Basin Timber Supply Areas.

In the absence of extreme cold periods that historically have controlled MPB populations, it has been projected that, by 2013, 80% of BC's central and southern interior mature pine forest could be killed by MPB. This will have significant repercussions for forestry-dependent communities, forest ecosystem health and the provincial economy ([See Economy](#)).



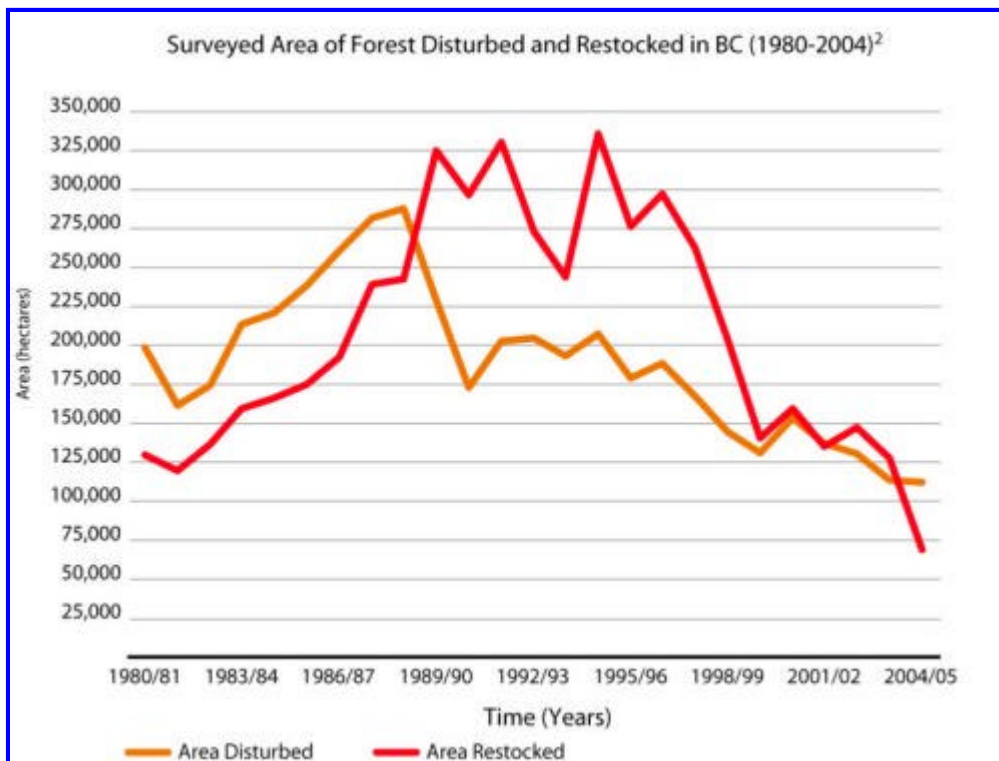
Community Vulnerability to the Forest Economy (2001) ⁴

The economy of many communities in the Fraser Basin is heavily dependent on the forest sector. This is particularly true in the Upper Fraser and Cariboo-Chilcotin regions, where Vanderhoof and Quesnel have very high Forest Vulnerability Index values (81 and 78 respectively), while the GVSS and Fraser Valley regions have relatively low levels of direct income dependence on forestry, although economic multipliers benefit all regions of the Basin. As the current MPB epidemic spreads, the economic and social impact will be greatest on communities with a high level of dependence on the forestry sector.



Forest Restocking (1980-2005) ^{2,i}

During the 1980s, the amount of forest disturbed by harvesting, or losses due to pests or fire was greater than the area restocked. During the 1990s, the area restocked exceeded the area disturbed/harvested as there was significant government support for replanting programs. This helped to address the shortfall in the 1980s. Since 1997 the areas surveyed as satisfactorily restocked have declined. This may be related to the increased allowable annual cut in an attempt to control the spread of MPB and salvage commercially valuable wood or perhaps reduced resources to survey restocked areas.



INSPIRED ACTION

What is being done?

→ Sustainable forest management (SFM) certification⁵ is a voluntary approach to promote and implement sustainability practices in the forest sector that is intended to assure buyers that the products are from sustainably managed forests. The three certification systems applied in BC are the Canadian Standards Association (CSA Z809); Sustainable Forestry Initiative (SFI); and Forest Stewardship Council (FSC): www.certificationcanada.org. Considerable increases have occurred between 2003 and 2006, with CSA certified areas more than doubling from 2.2 to 5.2 million ha, and increases in SFI certified areas from 4.4 to 7.6 million ha.

→ The Mountain Pine Beetle Action Plan for 2006-2011 outlines seven key objectives for adapting to, and coping with, the impacts of the MPB outbreak in BC. The plan recognizes the significant and ongoing impacts of the outbreak on forestry-dependent communities, and identifies medium and long-term economic sustainability for communities as the number one objective: www.gov.bc.ca/pinebeetle.

→ The Forests for Tomorrow program was set up by the provincial government in 2005 in response to the wildfires of 2003 and the MPB epidemic. The program aims to improve future timber supply and address risks to other forest values through the re-establishment of young forests on land that would otherwise remain under-productive: www.for.gov.bc.ca/hfp/fft.

→ BC Hydro's Bridge-Coastal Restoration Program (BCRP) has funded over 100 projects addressing footprint impacts to fish and wildlife and their habitat. In accordance with BCRP watershed restoration objectives, these projects reduce impacts by maintaining or restoring natural habitat-forming processes. BCRP also supports research to fill information gaps in strategic planning, identify limiting factors and define restoration objectives and conservation measures.

What else can be done?

→ Consumers can support local and regional forest economies by buying local, as well as SFM-certified wood products.

→ Forest companies can involve community advisory committees to incorporate local interests and issues into their forest planning and management.

→ Governments, research institutions, forest companies and community groups can continue to commit to long-term planning and research for the proactive management of MPB and its impacts on the environment and communities.

→ Forest companies and certification bodies can implement rigorous monitoring, evaluation and reporting procedures for planning and management practices.

Mountain Pine Beetle

Few stories rival BC's near-epic battle with mountain pine beetle. Under BC's 2006-2011 Mountain Pine Beetle Action Plan, efforts are now underway to harvest and use the wood of trees affected by MPB, and economic strategies are in development to stabilize communities in the longer term. The BC First Nations Leadership Council and the Cariboo-Chilcotin Beetle Action Coalition (CCBAC) are two coalitions tackling economic, social, and conservation issues. FORREX (www.forrex.org) has worked with the forest industry on management practices and operations, hydrological issues, ecosystem restoration and harvesting strategies.



PHOTO: MPB-affected forest (red-brown area) near 100 Mile House, Cariboo-Chilcotin.

REFERENCES

1. Ministry of Sustainable Resource Management Forest Inventory Database (2002).
2. Ministry of Forests, Forest Practices Branch. 2006: www.for.gov.bc.ca/hfp/index.htm.
3. BC Ministry of Forests and Range, Forest Practices Branch. 2005 Summary of Forest Health Conditions in British Columbia.
4. BC Stats, British Columbia Heartland at the Dawn of the 21st Century (2003).
5. Canadian Sustainable Forestry Certification Coalition. Certification Status Report British Columbia. June 2006. (and communication with various forestry companies to verify regional data).

FOOTNOTES:

- i. Not Satisfactorily Restocked (NSR) refers to forest lands that are not growing to their full potential due to an insufficient stocking of acceptable commercial tree species following disturbance (MOF Forest Practices Branch website).