

Bitter harvest

A pine beetle infestation is ravaging B.C. forests. Evidence points to climate change as the catalyst

BY PAUL WEBSTER AND JOHN CATHRO

As boom towns go, Quesnel, a quiet community of 11,000 in central British Columbia, can lean on its history. It first made its mark during the Cariboo gold rush back in 1862. After the gold thinned out, the lumber industry moved in. Now, Quesnel has another boom on its hands. Vancouver-based West Fraser Mills Ltd., owner of the biggest mill in town, recently decided to invest \$105 million in a major expansion, expected to be operational next summer.

For the most part, local people seem delighted: the investment in new milling technology adds stability and jobs to an industry that has been rocked by trade tariffs, layoffs and a strengthening dollar. But here's the worrying part: the mill is expanding to salvage as much lodgepole pine as possible from a beetle infestation of unprecedented proportions throughout central B.C.'s legendary pine kingdom.

Alarmingly, the beetles are devastating the forests that have kept Quesnel humming since the gold boom faded. "Quesnel's got eight years to reinvent itself," says MLA Bob Simpson, who represents the town in the B.C. legislature.

The problem is not unique to Quesnel. B.C.'s pine beetle epidemic has already destroyed an estimated \$6 billion worth of trees. The provincial government warns that one-fifth of B.C.'s birthright of marketable timber faces near-certain ruin. In a

province home to almost 7% of the world's softwood, it's a disaster of titanic proportions. To cushion the coming blow, the B.C. government is pushing loggers to salvage what they can among the vast swath of dead and dying trees. Provincial officials have dramatically increased logging quotas and cut stumpage fees throughout the wide areas infested with beetles. "I don't know if I'd call it a bonanza," says Jim Snetsinger, chief forester for the B.C. government. "But there are a lot of opportunities. We want to get economic value out of these stands rather than letting them rot."

In Quesnel, West Fraser's chief forester, Bruce MacNicol, estimates the salvage boom has already pushed logging levels up 70%. "The opportunity is there to

make money now," MacNicol says of the mill expansion. But his enthusiasm dampens as he warns that logging levels will likely fall by more than 50% once the boom ends in eight to 10 years. And for

some local woodlot owners like Stephen Allen, who'd been hoping to pass along his once richly treed land under Crown licence to his two sons, the party is already over. "It started about six years ago when we started to see beetles on the woodlot," he explains. "And then [the infestation] doubled one year and quadrupled the next year. We just kept cutting, trying to keep ahead of it." In the end, Allen says, he had to harvest almost every pine tree on his lot. Although he's



replanted, Allen notes the new trees will take at least seven decades to mature. "There's nothing left," he murmurs.

B.C. foresters are deeply worried that stories like Allen's may prove prophetic across a deep swath of the entire \$17.7-billion provincial industry, which is already reeling from U.S. softwood duties. More than a few are wondering why this particular epidemic is spreading so much further and with so much greater economic impact than any in the past. The answer they're settling on has taken many by surprise: climate change.

In a series of studies tracking decades of annual temperature and precipitation patterns in various regions of central and southern B.C. now infested with pine beetles, Allan Carroll, a researcher with Natural Resources Canada's Pacific Forestry Centre in Victoria, has built a powerful case. He concludes a long run of warmer winters and hotter summers has vigorously encouraged beetle proliferation. "There's been a 25% increase in the traditional area extremely suitable as habitat for the beetles," Carroll says, after noting the insects didn't easily survive extremely cold winters or moist summers back when they were more often common in central B.C. "There's no question [their] range has expanded over the last 30 years due to ameliorating climate."

It's a thesis B.C. foresters—famously hard-headed regarding classic environmentalist arguments—have come to accept. "We didn't anticipate we were going to

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Stephen Allen on his decimated woodlot; aerial view of infested forest; B.C. Premier Gordon Campbell unveils plan to fight back

get kicked in the ass with climate change,” Carroll says, who warns that his research suggests the beetles, which have already breached the Rocky Mountains, are likely to emerge as a continent-wide problem. As the beetles keep spreading, he adds, attitudes are changing quickly. “All the scientists agree on this, but it’s surprised me how much policy-makers have embraced it,” says Carroll, whose research is funded through a \$140-million federal initiative to tackle the pine beetles.

At the British Columbia Ministry of Forests and Range, Snetsinger says climate change has now become part of the conventional mix of issues facing Canadian foresters and the industry as a whole. To underline this, Snetsinger insisted on including the issue of climate change at a conference on the future of the forest industry he organized in Prince George in December. “This is the first time the ministry has organized a major meeting with climate change on the agenda,” he says. The ministry also established a team to investigate climate change and identify research needs, and ultimately incorporated climate-change issues into forest industry plans. In a province where government ownership of almost all harvestable forests gives bureaucrats enormous power over the industry, moves like this are important because, in an industry where harvest timelines span decades—even centuries—the potential for climate-change impacts on maturing forests and

saplings are likely to be significant. “We need to build this awareness into our policies and plans,” says Snetsinger.

The message that climate change matters now permeates the entire Canadian forest industry, which exports a whopping \$40 billion annually. A new study from U.S. forest economists predicts climate change will generate substantial advantages for foresters in tropical regions while

Canadian foresters may suffer substantial production losses in the century ahead.

Sean Curry, who manages forestry planning and long-term timber supply for U.S.-based Weyerhaeuser’s B.C. operations, says climate-change issues must be factored into operational decision-making. “The issues arising from climate change mostly regard the regeneration of trees on harvested land, and the appropriate selection of planting stock,” explains Curry. “We worry that trees grown in nurseries for planting in harvested areas may not adapt well to climate change.”

Concerns like this are starting to take hold. Peter Baird, strategic planning manager at softwood lumber giant Canfor Corp. in Prince George, notes that warmer winters could mean shorter cutting seasons and bigger inventory buildups to keep mills operating through the coldest months, leading to higher costs. Greg Adams, director of silviculture at J. D. Irving Ltd., which manages 2.5 million hectares in New Brunswick, Nova Scotia and Maine, says climate warming is also a concern in his region. Partly with a view to that, Adams says Irving has begun planting more white pine, a species found in a broader range of climates, and less Jack pine and black spruce, species found primarily in the northern boreal forest.

Not everyone is convinced industry and government are doing enough. At the

Sierra Club of Canada in Victoria, resource economist Lisa Matthaus worries that by fuelling a salvaging boom, the pine beetle disaster has perversely encouraged short-term appreciation for climate change. “Many companies are doing well by it; they’re building on the back of the epidemic,” she says. “But what follows is going to be dire.” Matthaus warns that as climate change fuels pest infestations, raises fire threats and retards tree growth, more communities across Canada are likely to feel the impacts.

In a recent report, the Sierra Club noted that B.C. has cut its forest research by 40%, rather than bolstering capacity to help identify climate-change risks and develop responses. Will Horter, director of the Dogwood Initiative, a resource-reform advocacy group in Victoria, complains that lower stumpage fees in beetle-affected areas subsidize forestry firms while choking revenues that are needed to help communities adjust to the long-term impacts of climate-change-related problems. If the government handles the disaster by encouraging the short-term boom while cutting its own capacity to respond, Horter asks, “Where is the incentive to change?”

The national picture isn’t much brighter, according to forest industry analysts with Innovest, an international consultancy specializing in identifying companies’ environmental and social risks for institutional investors. “We view the forest industry as a sector where climate change impacts will be high,” says analyst Doug Morrow. Although Morrow notes Canadian forestry firms have taken steps to reduce greenhouse-gas emissions, he and his colleagues say they seldom see much action in terms of preparations for climate change.

Avrim Lazar, president of the Forest Products Association of Canada, which represents 22 companies, knows a good deal about climate change: he served as Canada’s top international emissary on the issue when the Kyoto Protocol was first negotiated. Lazar says he’d like to see a lot more leadership from the federal government on how Canadian foresters should adapt. “Climate change poses a risk; the immediate example is the pine beetle,” acknowledges Lazar. “We’re deeply concerned. All of my member companies are asking questions about this. But none I know are acting yet.”

\$6
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