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Canada's Wasted Woodlands

Because of poor management, its most treasured resource could be gone in a century

By Douglas Martin

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1. For one last moment, the towering hemlock stands defiantly, as if unwilling to relinquish the idea of living after nearly three centuries of effort. Then, ever so slowly, it leans over Yellow Creek Mountain, about 80 miles north of here, and falls to earth with a flat thud.
2. It's one of about 130 trees that William Laplante - a French Canadian who has worked as a "faller" of trees for four decades - will saw down this sunny day. For him, the hemlock's death waltz is happily routine.
3. He makes more than \$160 for six and a half hours work each day; the labour is considerably easier than it used to be, and across the Pacific, there are plenty of eager buyers.
4. "The Japanese are crazy for that wood, eh?" Mr. Laplante said, pointing to the tree.
5. On the other side of the same mountain, his son Marcel, a faller for 17 years, is less sanguine.
6. "Pretty soon, all your big wood's going to be gone," he said in an emotionless voice.
7. In accord with many forestry experts, the younger man worries whether enough is being done to conserve Canada's biggest natural resource. But even if the woodlands are preserved, others fear that Canada's forests are proving uneconomical in a changing, more competitive world.
8. Essentially, the problem is that the industry wastes up to half of each tree it cuts; it also fails to replant much of what it harvests. Experts worry that, given present trends, the resource that in the nineteenth-century timber baron thought would last 700 years may disappear in less than a century.
9. At the same time, competitors are cropping up all over the globe - from the forests of Siberia to the jungles of Brazil. And these emerging industry rivals are, in some cases, producing new wood more quickly, more efficiently and more cheaply than their Canadian counterparts.

10. Awareness of the dilemma was first sparked by the migration of the environmental movement north of the 49th parallel; to politicians, expenditures for preservation and replanting, lagging far behind American outlays since Theodore Roosevelt's time, have now become as Canadian as Mounties and moose.

11. But the biggest impetus has come from the timber industry itself, which now finds it is using more costly fuel to carry trees to mills from increasingly remote cutting areas. Many now contend that if replanting had occurred as the trees were harvested, much of the current expense would have been avoided.

12. Moreover, the recession-wracked industry is enduring its fourth bad year in a row, and the effects are readily apparent in the country's unemployment and welfare rolls and in some corporate balance sheets. In fact, more than one-fifth of the timber industry's work force is unemployed; and in British Columbia alone, forest product companies lost \$300 million in 1982.

13. "Our forests are in a shambles, a mess," asserted Jack Walters, director of the University of British Columbia's big research forest: "It's a tragedy of the first dimension." And Michael Innes, manager of forestry for Abitibi-Price Inc., the world's largest producer of newsprint, said: "We're gradually running out of wood, and there's no more wood over the next hill."

14. This assessment is shared by Canada's chief forester, F.L.C. Reed: "Canada will run out of economically priced trees if it doesn't pull up its socks." He acknowledged that, as a result of poor management practices, "The next crop of trees is going to be smaller than the last one, and it's going to take longer to grow."

15. But the problem is not an obvious one - and with good reason. More than 40 percent of Canada is covered by trees - enough to build about 33 million houses. Flying across the country, it is almost impossible to avoid the impression that Canadians, in essence, live in the woods.

16. Indeed, one-tenth of the productive forest area in the world lies in Canada. The trees here on Vancouver Island represent one of the world's greatest exploitable supplies of mature large timber. Elsewhere in Canada, smaller spruce trees make excellent pulp and paper products.

17. The economic consequences are immense. Canada leads the world in forest exports, with the value of shipments in excess of \$12 billion. Some 300,000 Canadians work in the forestry industry, with indirect employment estimated at more than 1 million. Only the former Soviet Union has more trees, but so far has been unable to capitalize on its advantage.

18. But the United States, which now buys large quantities of timber from Canada, faces no threat of a wood shortage; and new supplies are popping up in its Southeast. Meanwhile, a growing number of wood substitutes abound. And Michael Newton, professor of forest ecology at Oregon State University, said that if the latest in forest-management procedures were employed in the United States, "We could export timber like we're exporting wheat."

19. It is Canada that has the chips on the table: forest products represent one-seventh of all manufactured goods, last year accounting for \$23 billion in sales. They make a bigger net contribution to the nation's balance of payments than metals, agriculture, fisheries and the automotive industries combined.

20. In the face of these economic realities, it is obviously a bad time for Canada to be running low on trees, but that is exactly what experts say is happening - albeit slowly. They say that in the past the size of the resource was vastly overestimated, and that Canada may have only half of the productive forest it thought it had.

21. The mounting concern about Canada's timberlands comes against the increasingly clear perception that elsewhere in the world, wood is plentiful. Accordingly, the Forest Industries Advisory Committee, a high-level business and labour panel, recently warned that Canada's forestry industry future hinges on its ability to compete in today's tough marketplace.

22. Even if much of Canada's softwoods are of a higher quality than wood elsewhere, "the world seems to have an infinite capacity for making do, if the price is right," the panel said in a report to the Ottawa government. The panel asked for far more assistance from Canadian taxpayers. Its justification was stark.

23. "If the industry fails, in the future there will be a helluva lot fewer taxpayers," James Buchanan, president of the Canadian Paperworkers Union, said last week.

24. "In Canada, we are no longer a dominant producer of a scarce resource - we're now a large owner of an abundant resource," observed C.C. Knudsen, chairman and chief executive of MacMillan Bloedel Ltd., Canada's largest forest product company and now a unit of Noranda Mines Ltd. "And we are beginning to price ourselves out of the market."

25. Indeed, MacMillan Bloedel Ltd., like many other Canadian companies, has already felt the pinch. Last year the company reported a \$57.3 million dollar loss, compared with a modest profit of \$3.3 million in 1981. But 1983's prospects have brightened a bit, with \$14.1 million in first-half profits, compared with a loss of \$21.5 million in last year's first half.

26. At the same time, Abitibi's fortunes have also declined sharply, as profits slipped to \$80.9 million in 1982, from \$117.6 million in 1981. Although the company reported a \$10.8 million profit in the first six months of 1983, this is well below the \$43.2 million it earned for the first half of 1982.

27. And it seems that the long-term outlook for many forest-product companies - both big and small - remains less than promising. The Science Council of Canada, a quasi-governmental organization that assesses scientific and technological resources, reports that about 6,000 square miles of forest land is destroyed or wasted annually. The council cites insufficient replanting, inability of some lands to regenerate naturally, and the effects of fire, insects, disease and wind.

28. "Natural regeneration is not keeping up with what you need," said Jack Munro, president of the International Woodworkers Union in Western Canada. "We're at a crossroads."

29. Apart from the timberland here in British Columbia - the last stop on the colourful westward trek of the loggers and saloonkeepers and painted ladies who followed them - the virgin forest is clearly gone. What is left is so scattered - or so remote and ecologically fragile - that it is not economical to exploit. New growths, in areas where the first generation of timber was long ago harvested, have fallen short of hopes.

30. Signs of diminishing resources are everywhere. Supplies near mills have been so depleted in some areas that it is necessary to transport logs hundreds of miles. Quebec and Ontario furniture-makers must import maple logs from the United States. And millions of acres of forest land in the Maritime provinces have been devastated by the spruce budworm.

31. The overall Government statistics are equally chilling. Each year Canada loses nearly 40,000 acres of forest land through lack of natural or artificial regeneration, one-fifth of what is harvested each year. And more than 30,000 acres fall prey annually to fires and disease. Still more is lost to parks, farms and subdivisions. The result has left Canada's backlog of wasted forest lands at somewhere between 11.5 million and 70 million acres - with most analysts leaning toward the higher figure.

32. The upshot has been the renewal of a debate as old as the Dominion itself. "We are recklessly destroying the timber of Canada and there is scarcely a possibility of replacing it," declared Sir John A. Macdonald, Canada's first Prime Minister, in 1871.

33. Canadians are also worried about dwindling demand for the wood they have left - although such slackening might conceivably buy some time to replenish the forests. In the 1960s and early 1970s, global wood products orders were growing at nearly 5 percent a year. Analysts now believe the industry will be lucky to see a 3 percent annual growth rate in demand, even with a strong economic recovery.

34. In part, the industry response has been to seek more government support. The advisory committee last week, for example, recommended to the federal government that it assist the timber industry with a mix of tax incentives, trade development and heightened reforestation measures.

35. The Canadian provincial and federal governments, which own more than 90 percent of Canada's forest land and lease logging rights to companies, are addressing the timber resource problem. It is estimated that by 1985, the federal and provincial governments and industry will increase their combined annual forest regeneration spending to \$330 million from \$250 million five years earlier.

36. But much remains to be done. Mr. Newton, for instance, believes that Canada must spend tens of millions of dollars killing the economically worthless stands of hardwood, principally aspen, now blanketing what were formerly rich spruce forests of Canada.

37. Part of the problem, critics say, is that politicians are in the habit of thinking from election to election, rather than in terms of the 60 years or so it may take to grow a mature tree. Another negative effect of the politicization of the forests, said Mr. Walters of the University of British Columbia, is that funds are not channelled to the best growing areas, but rather are apportioned among legislative members with trees in their districts.

38. A solution, Mr. Walters suggests, would be to put Canadian forests in private hands, as roughly three-fourths of the forest in the United States already are. But the Canadian public would probably never relinquish common ownership of its forests, observers say. Most companies believe the new provincial arrangements, which require more of companies but also give them a greater guarantee of tenure, protect long term investments.

39. Growing ecological awareness on the part of the general public has also added momentum. And the continuing spruce budworm epidemic in the East and several severe fires have underlined the limits of the already shrinking resource. Mr. Innes recalled a 300,000-acre fire in 1980 in Abitibi's forests near Thunder Bay, Ontario. He said that the company's board asked him, "If we ever had a second one of those things, what would happen?" His answer: "It would close three mills. Permanently."

40. In forestry, however, the answers are seldom simple. Experts agree that more forest land is better than less. However, proper management could cut in half the time needed to grow a commercial tree.

41. That might be impossible without vast resources of expertise and money. During the five years ending last year, the timber industry had capital outlays of \$15.3 billion, nearly twice the level of the preceding five-year period.

42. Although more money is needed to insure the continued productivity of Canada's forests, the question of how much more, the advisory panel said, may be less important than how new funds are used.

Reading 2

Exhausting the Inexhaustible

A century ago, Canadians thought they could never cut all the trees in the country. Now, as a freelance writer, M.L. Allen reports, our biggest industry is running out of raw material.

"The sight of immense masses of timber passing my windows every morning suggests to my mind the absolute necessity there is for looking into the future of this great trade. We are recklessly destroying the timber of Canada and there is scarcely a possibility of replacing it... It occurs to me that the subject should have been looked in the face and some efforts made for the preservation of our timber."

1. Those words were written by Sir John A. Macdonald in 1871 as he watched giant timber rafts move down the Ottawa River to the sawmills. He was certainly right that something needed to be done. However, it was 50 years before even the first small steps toward reforestation - planting new trees to replace what has been cut - were begun. It was another 50 years before many people started to think there might be a problem. It's only within the last few years that the full reality of the situation has sunk in - Canada is running out of trees.

2. That would seem to be impossible. Trees cover 70% of Canada's land area - 44 million km² of forests - an apparently inexhaustible supply. But, those figures are deceptive; the productive forest in Canada is only half as large as it appears to be.

3. A large portion of our trees are not the right kind of quality for harvesting. Of those that are suitable, many are not available; they are protected in parks and reserves, or they are in inaccessible areas such as mountains; or they are so remote as to make harvesting uneconomical. The situation is further complicated by the fact that many mills are built to handle only certain kinds of trees; thus, even if there are still other good trees close by, the mill might not be able to use them, and the mills that could use them might be too far away.

4. Our forests are also shrinking. A Science Council of Canada report states that "one-eighth of the country's productive forest area has deteriorated to the point where huge tracts of land lie devastated, unable to regenerate a saleable crop within the next 60 or 80 years." This amounts to a loss of over 200,000 km² each year. In practical terms, this means that in some areas, logs must be hauled hundreds of kilometres to mills; in other areas, even helicopters - at a cost of \$2,500 an hour - are used to get the trees. In some towns - Fort Nelson, B.C.; Dryden, Ontario; Noranda, Quebec; and Chatam, N.B. are examples - there isn't enough

timber to keep the mills operating.

5. The depletion of Canada's forests, however, is far from a merely local problem. The forest industry here is not just big business, it is our biggest business - bigger than oil, bigger than agriculture, bigger than minerals and fisheries. Directly, and indirectly, one in ten Canadian workers is involved in forestry, making it the country's largest employer after government. In 1981, the forest industry produced \$23 billion in goods, and paid more than \$3 billion in taxes. Forest products account for nearly 15% of all goods manufactured in Canada (in New Brunswick it's 30%, and 50% in British Columbia). More than 300 communities across Canada are one-industry towns, solely dependent on forestry, not just for their livelihoods but for their very existence.

6. Internationally, Canada produces 9% of the world's forest products, the third largest producer after the United States and the former Soviet Union. However, our country is the largest exporter of manufactured forest products; 90% of our newsprint, 70% of our lumber, and 60% of our chemical pulp are exported; in all, nearly 30% of the manufactured forest products that enter the world market come from Canada. This export of wood products contributes a net gain of \$12 billion to the Canadian economy, more than the combined exports of farm products, fish, metal and coal.

7. Given the importance of forests to Canada, their depletion could have devastating consequences. It has been estimated that within the next ten years, 250,000 Canadians dependent on forestry could be out of work. At the same time, world demand for wood products is rapidly rising; it's expected to increase by 50% between 1975 and 2000. Thus, not only will existing jobs be lost, but new jobs and new revenue (perhaps as much as \$12 billion a year) will also be lost if Canada is unable to respond to the growing demand.

8. In part, the loss of our forests is due to natural causes. Each year, fire, insects and disease claim about 100 million m of wood. In 1980, for instance, the worst year in five decades for forest fires in Canada, five times more timber burned than was harvested. In 1981, spruce budworm infestation covered 350,000 km² of forest in eastern Canada, severely affecting Newfoundland and Cape Breton; in Quebec, losses to the spruce budworm may end up totalling 150 million m of wood.

9. More than fire and insects, though, the depletion of Canada's forest resources is the result of mistaken attitudes and perceptions. For example, in the middle of the 19th century, a government survey estimated that the pine forests of the Ottawa Valley were sufficient to supply its mills for the next 600 years. Seventy-five years later, the forests were gone and most of the mills had closed down. Still, despite this and other examples to the contrary, the myth of the inexhaustibility of Canada's forests persisted for a very long time.

10. If the forest is thought to be inexhaustible - if you only have to go over the next hill to get more trees - it's not necessary to do much to preserve the woodlands. And that's exactly what's been done to this point - not much. The two levels of government receive huge tax revenues from forestry. However, only about 5 cents on the dollar goes back into the forestry management programs that help to ensure the continued health of the industry. In Canada today, there is one forester for every 800 km² of forest; the international standard is one for every 120 km², and in the United States there is one forester for every 80 km² of forest. Likewise, in Canada in 1978 only 0.6% of forestry sales were spent on research and development, compared to 1.5% of sales in the United States. By far, though, the most damaging aspect of the neglect has been insufficient reforestation. Canada's forest companies cut about 8,000 km² a year, and plant or reseed about a quarter of that area. About 2,000 to 3,000 km² of the rest will restock reasonably well on its own. But that still leaves 3,000 to 4,000 km² that lie idle, or produce unusable scrub. Hence, the disappearance of the forests. The problem is not so much exploitation by the industry, which has been central to Canada's economy for 150 years. The real failure is that of government, which hasn't made sure that the trees are replaced, that our forest supplies - and the revenue that they generate - will continue into the future.

11. The federal government has not provided much leadership, and even cut the Canadian Forestry Service staff and research funds in half during the 1970s. The provincial governments, which control 90% of Canada's forests, have either ignored the issue of reforestation, or failed to come up with sensible plans for the forest industry.

12. Even where intentions are good, execution has fallen short. In 1977, Premier William Davis promised that Ontario would plant at least two trees for every one cut; in fact, in recent years, only 38% of land cut has been replanted, and foresters think that only one third of the trees planted will survive. What should have been a great renewable resource is starting to look like an unrenovable one. As Les Reed, former assistant deputy minister in charge of the Canadian Forestry Service put it, "We have mined our forest when we should have been managing it."

13. Because trees are such a slow-growing crop, usually taking 60 to 100 years to reach harvestable size, our current problems have been a long time developing. "In this kind of situation, you don't fall off a cliff," Les Reed says, "you slide down a slippery slope." But eventually you'll get to the edge, and for the first time in the history of Canadian forestry, that edge is in sight still distant, perhaps, but very definitely there. "As we know it today, the forest industry is dying," John Walters, a University of British Columbia forestry professor says, "Action is urgently required if the forestry industry is to survive."

14. Blunt talk, but maybe - 113 years after Macdonald suggested it - that's what is needed to get the subject

of preserving Canada's forests "looked in the face." People in the forest industry are speaking out about the problems. The federal government is getting more actively involved. Ontario is making agreements with the forest industry about reforestation programs. Research is developing faster-growing, stronger trees, and new ways to reduce waste and utilize trees that until now have not been useable.

15. So, some things are finally starting to be done. Whether it's enough won't be known for a while. Unfortunately, if it turns out that it's not enough, it will already be too late to make amends. Billions of dollars and hundreds of thousands of jobs are at stake. Meanwhile, the chainsaws are working. In the time it took to read this article, about three hectares of productive forest have been lost.