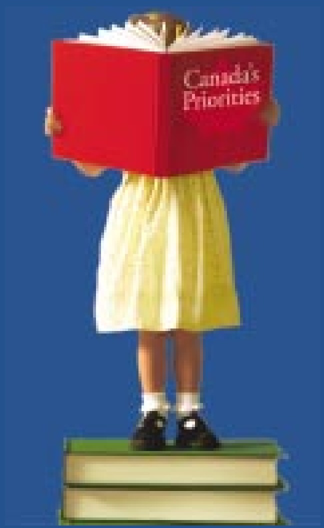
CANADA'S CAPITAL CHALLENGE

Nancy Olewiler

Canada is endowed with an abundance of capital — human capital and natural capital. But we have for too long "been living off our public capital and under-investing in it or investing ineffectively," writes Nancy Olewiler of Simon Fraser University. On natural capital, she notes that "we don't have good data on how much natural capital we have, let alone what we are losing." Human capital challenges include educating a workforce to meet the demands of the labour market, such as replacing retiring baby boomers, like nurses, who will eventually need nurses to care for them. Finally, she notes the imperative of rebuilding sound relations with the United States, without abandoning Canadian social policies. "Other foreign markets help," she concludes, "but cannot replace those of the US."



Canada is a country that has been blessed with an abundant endowment of capital: human capital — a healthy and educated population; natural capital — our stocks of natural resources in the form of forests, fresh water, wildlife, diverse ecosystems; physical capital — excellent public infrastructure, in for example, roads, ports, rail lines, water and sewage treatment, hospitals and schools; and social capital — a stable democracy and civil society.

We have been living off our public capital and under-investing in it or investing ineffectively. Public capital is defined as those components of human, physical, natural, and social capital that governments either provide directly or assist in providing due to their public good characteristics. Both the quantity and quality of our public capital have reached the state where more attention should be paid to capital reinvestment than has occurred in recent years. Without reinvestment, we risk reaching points where Canada's ability to provide its citizens with a sustainable high quality of life is threatened. This is Canada's capital challenge: to sustain effective investment in our nation's public capital.

Two factors contribute to our capital challenge: First, under-investment in public capital; and second, ineffective investment. Under-investment can arise when governments are squeezed by competitiveness (internal and external to the country), lack tax room or taxing authority (e.g., municipal governments), face demands from high profile areas (e.g., health care), and must cope with deficits and downturns in the business cycle. In these cases, the strategy may be to let investment in public capital decline, live off the capital for a while, then rebuild it when times are better. Ineffective investment occurs when governments allocate public expenditures to capital, but the programs don't perform as expected. Interest groups, short-term political opportunism, lack of scientific and technical knowledge, and throwing money at a problem without sufficient analysis may be responsible. Governments also succumb to policy paralysis — when they cannot implement a program. Paralysis may arise from stakeholders who can "hold up" a policy through legal or political means, federal-provincial wrangling, governance by the polls and lack of leadership.

I've chosen three policy issues that illustrate how Canadian capital is threatened. The three policy issues are related to many others because capital is an input into most everything we produce. For example, our state of health and health care is a function of hospitals, health care workers, people's income and education, and environmental stressors. Productivity depends on capital, labour, entrepreneurship, trade flows and natural capital. My policy issues are loss of natural capital, human capital challenges from insufficient and ineffective education and skills development, and addressing the poor state of Canada/United States relations.

The quantity and quality of Canada's natural capital has declined in many regions of the country to the extent that people's livelihoods are adversely affected, productivity in resource and other sectors is threatened, and we may be reaching tipping points where it will be either impossible or very costly to reverse the process. I polled my colleagues to find their top three list of policy issues. No one mentioned natural capital. But when I said it was on my list, one colleague responded, "You have a point. If we lose the environment's ability to sustain life, or a decent quality of life, nothing else on the list much matters."

Many examples of the loss of natural capital exist. Declines in renewable resources such as wild stocks of marine species, including important ones such as cod and salmon (as shown in figure 1); other wildlife; forests (figure

2); soil and fertility loss due to erosion, irrigation and paving over natural areas; and wetland conversion to other uses. Prime agricultural lands are lost to urban sprawl (figure 3). Environmental and natural resource capital is threatened by air and water pollution, loss of biodiversity and climate change. Our nonrenewable resources — fossil fuels and minerals — are ironically in better shape in terms of sustaining supply over time because the market more accurately prices their scarcity value (but not their externalities such as pollution).

The challenges are many. First, we don't have good data on how much natural capital we have, let alone what we are losing. Statistics Canada and other government agencies at the federal, provincial and local levels, in addition to a host of NGOs, have lately focused more attention on measurement of our natural capital. Our measurement of forest cover and mineral and energy stocks and flows is improving, but we are far from having a comprehensive database of what we've got, let alone how that is changing over time. Measurement of environmental capital is farther behind.

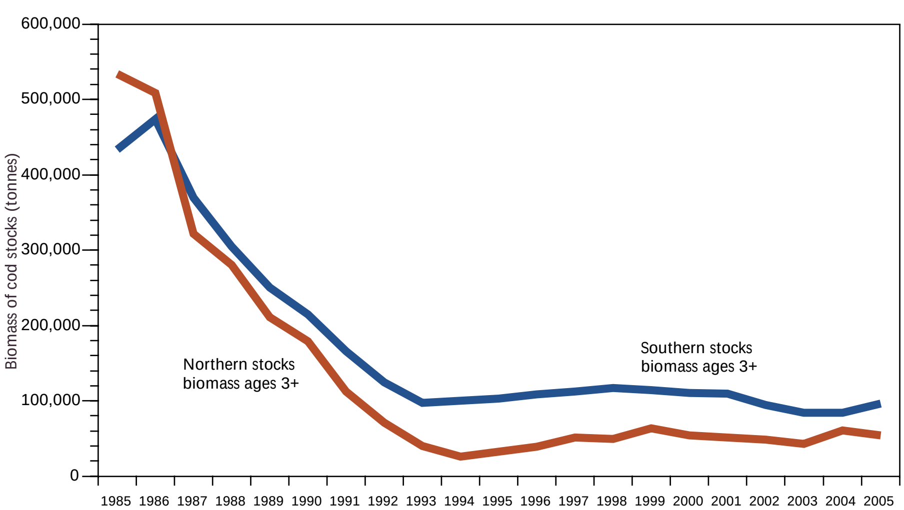
The challenges are many. First, we don't have good data on how much natural capital we have, let alone what we are losing. Statistics Canada and other government agencies at the federal, provincial and local levels, in addition to a host of NGOs, have lately focused more attention on measurement of our natural capital. Our measurement of forest cover and mineral and energy stocks and flows is improving, but we are far from having a comprehensive database of what we've got, let alone how that is changing over time. Measurement of environmental capital is farther behind.

Public policy responses to the loss of natural capital have been ineffective. The management of marine fisheries has led to non-sustainable harvests. The classic example is the cod fishery. Policies such as licensing vessels or operators, regulating fishing gear, imposing quotas on harvests or limiting the number of days for fishing have had limited success because they manage only some of the aspects of the open access problem, are not binding, not enforced or we don't know enough about the biological characteristics of the species to know how to manage them. Exogenous forces such as foreign fishing fleets, water temperatures and biological conditions play a role, but in case after case, domestic regulation is a significant factor contributing to loss of wild populations.

Environmental policy suffers from similar inadequacies. Does anyone seriously think that the "One tonne challenge" — exhorting Canadians to reduce their fossil fuel consumption, invest in energy saving technologies and take public transit — will do much to reduce greenhouse gas emissions unless we also get the price of energy to reflect environmental degradation? Markets rarely price pollution, and regulatory bodies such as utility commissions have shown a reluctance to allow conservation measures or pricing of environmental degradation into the rate base for natural gas or electricity. Canada, especially at the federal level, depends heavily on non-binding environmental guidelines (e.g., air quality and toxic releases). Academic studies find that systems of voluntary compliance with environmental targets make people feel good and may be good business strategy, but don't lead to significant and lasting reductions in environmental stressors unless prices reinforce moral suasion policies.

Regulators can be paralyzed by the competing demands of self-interested parties. Fisheries managers tends to bow to the short-term interests of those in the fishery to sustain their livelihood, when the only policy that might ensure the long-term survival of a species is a lengthy and enforced

FIGURE 1. CANADIAN COD STOCKS, 1985-2005



Sources: G. A. Chouinard et al. (2005), "Assessment of the Southern Gulf of St. Lawrence Cod Stock," Department of Fisheries and Oceans, Canadian Science Advisory Secretariat, 2005/007, February 2005; A. Fréchet et al. (2005), "The Status of Cod in Northern Gulf of St. Lawrence, 3Pn,4RS, in 2004," Department of Fisheries and Oceans, Canadian Science Advisory Secretariat, 2005/060ds.

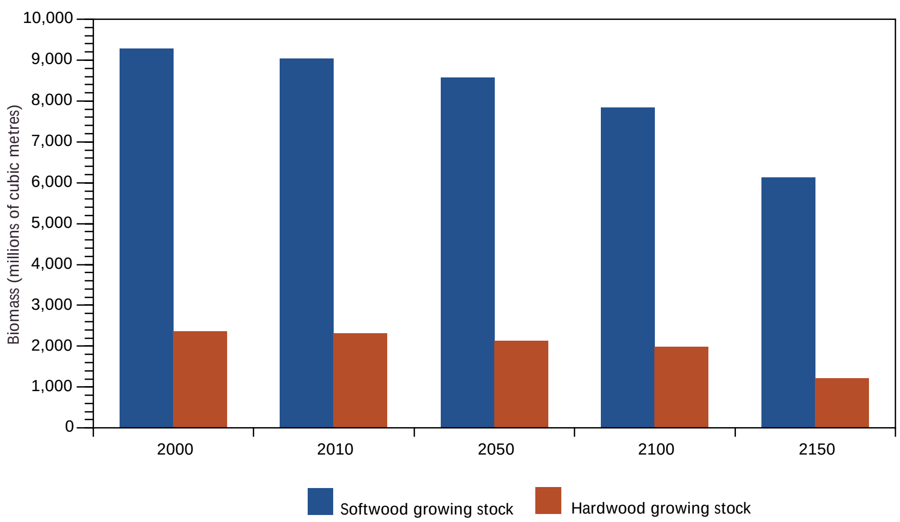
moratorium on any fishing or the creation of protected areas. Requirements to reforest after timber harvests have been inconsistently applied by provincial regulators over time due to pressures to "cut and run." It takes decades to re-grow valuable timber species, so flawed decision-making from years past haunts us into the future. If governments allow the conversion of unique and ecologically valuable lands to development for low-density residential use and its attendant roads and services due to the need for local property tax revenues, the loss of the environmental goods and services is likely irreversible.

The potential costs to society of decisions to allow the deterioration and destruction of natural capital are large. The decline of rural areas of Canada is a policy problem worthy of attention, and a major factor in that decline is loss of the regions' natural capital base. Some loss in inevitable — mines run out of ore. Others, like the loss of harvestable timber or fish stock, are preventable. The decline is both economic and social. People lose their jobs and good incomes, communities lose their way of life and identity and those who are mobile leave the community. Social dislocation is particularly acute for Aboriginal communities and those whose cultures are closely united with their lands. Costs are incurred when we have to substitute physical capital for the loss of natural capital. A waste treatment plant can substitute for the loss of water purification attributes of wetlands and forests, but at a cost of millions of dollars in annual operating costs in addition to many millions in capital construction costs. The alternative use of the wetlands for housing may generate far lower returns to society. Adaptation to climate change is going to cost society trillions of dollars and threaten communities. The mountain pine beetle is destroying Western Canada's boreal forests, and with them, people's livelihoods. The Biosphere II experiment that tried to recreate nature at a cost of $83 million per acre failed. Replacing nature is thus neither cheap nor easy.

Canada invests billions of dollars a year in education and skills training programs; we are among the leaders in the OECD in per capita spending, but we continue to have a number of problem areas that affect productivity, people's quality of life and social capital. Our education mix — proportions spent on university-based post-secondary education (PSE) versus skilled trade education both in PSE and kindergarten to 12 — has been out of step with pressures in the market and demographic changes. Language training and policies to assist in integration with Canadian social norms will increasingly be needed if our current immigration policies endure. Aboriginal peoples both on and off-reserve have yet to feel significant benefits from current and past education and skills policies; significant policy reform is needed to address their situation.

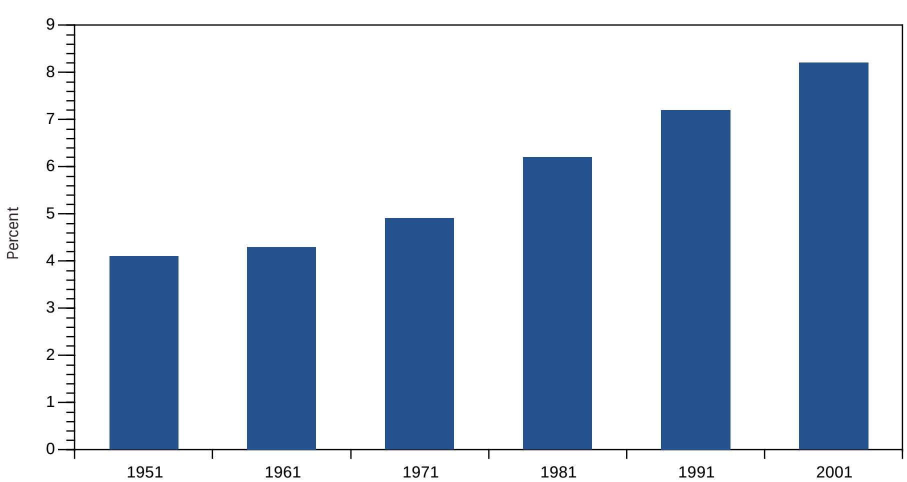
Despite very high per capita expenditures on education, Canada managed to spend too little at a time

FIGURE 2. CANADIAN WOOD SUPPLY INDICATORS



Source: Canadian Council of Forest Ministers (2005); *Wood Supply in Canada, 2005 Report* http://nfdp.ccfm.org/wood/2005_report_wood_supply_e.pdf

FIGURE 3. DEPENDABLE AGRICULTURAL LAND DEVOTED TO OTHER USES, 1951-2001



Source: Statistics Canada, Cat. No. 21-006-XIE.

"The best part of winning Gold is showing kids the way to make their dreams come true."

Lori-Ann Muenzer, Olympic Gold Medalist

Gold medal cyclist Lori-Ann Muenzer is helping inspire a new generation on their journey towards an Olympic dream. Each year, the Road to Champions program provides financial support to amateur athletes from five sports federations and helps Olympians like Lori-Ann visit schools and communities to share their stories. EPCOR is proud to recognize the role of sport in our community and its importance inencouraging youth to strive for excellence.

EPCOR

To learn more, visit epcor.ca

when the demand for education was very high and the demand for particular skills was growing. Real per capita expenditures on PSE declined across Canada in the 1990s — this at a time when university enrollments were expanding beyond the system's capacity to absorb students. As with timber reforestation, if you under-invest in capital, the impact is typically felt more over time than immediately. Funding has been restored for research, but less so for basic instructional costs. Canadian university students are likely to be in large classes and stay in school more semesters than desired because courses are full or because the costs of tuition require them to work part time. Anyone who thinks the quality of PSE has remained constant over time hasn't spent any time in a university lately.

A second example is the under-investment in training in specific skills, such as our under-investment in training health care professionals (doctors, nurses, lab technicians).

The Canadian Institute of Health Information reports that Canada has approximately 300,000 practicing nurses, 70 percent of whom are over age 40. By the end of this year, 13 percent of them will reach age 65 and most are expected to retire. A number of those aged 55 to 64 are also expected to retire before they are 65. The total loss by the end of this year might exceed 50,000. Canada produces approximately 10,000 nurses per year, and licensing bodies now require registered nurses to have a bachelor's degree. We've been filling some of the gap with nurses trained in other countries, something that harms developing countries and is probably unsustainable. Exporting countries are trying to prevent this brain drain.

While data shows that a university degree is essential to high-paying jobs in areas where job growth is expected to occur, education policy has swung too far toward promoting PSE as the only route to high-paying jobs. Public high schools have scaled back much of their non-academic skills education. Students find it increasingly difficult to get education that would enable them to move into skilled trades. These skills may be acquired after high school graduation from colleges, private institutions, on-the-job training and apprenticeship programs, but the evidence suggests that fewer are choosing this path than before. As well, there is the problem that some students drop out before completing high school because they don't think they need, or cannot complete, a curriculum that is focused on preparing them for university. Canada is currently facing significant shortages in skilled trades.

Language training (LT) is another human capital challenge for Canada. The federal government has announced that it will seek to address the challenges from our aging population with greater inflows of immigrants. What hasn't kept up is our ability to address the training needs of people who need LT. Public sector educators have not received the resources to provide adequate language training at both the K-12 and PSE level. The private LT sector appears to lack sufficient standards to ensure that quality norms are met. Better policies, not just more funding, are needed to address this policy issue.

Canada's political and economic relationship with the US affects all forms of capital. The relationship has been strained due to differences in responses to terrorism and security, trade disputes and cultural and social policy divergences, to name some of the key areas. However, much more binds us to the US than divides us. Security and ability to respond to terrorism is a North American, not an American problem. Canada has under-invested in its military and border protection for years, and while a large increase in military budgets has been announced, we will remain dependent on the US for security. Canada would have to spend a much larger share of GDP on military and security budgets without the US's support. Security is also a trade issue. Unilateral measures by the US to increase border security can adversely affect trade flows and the costs of export.

Trade disputes continue to injure Canadian industries and put people out of work — softwood lumber, electricity, barriers in agricultural products such as beef, potatoes and tomatoes come to mind. The US Congress is and will remain protectionist, so if we are to sustain our exports to the country that is our biggest trading partner, better relations with the executive branch may help. Abolition of NAFTA would hurt Canada far more than it would harm the US. The growing dependence of the US on foreign oil, at a time of increasing instability in the Middle East, heightens the importance of Canadian energy resources. An adversarial relationship between Canadian and US federal governments creates friction within Canada as provincial interests diverge from those of the federal government, and makes it less likely that good energy policy decisions will flow.

The economies of Canada and the US are so integrated that cooperation on policy responses is vital in issues such as the current crisis facing the North American automobile industry, competition from rapidly industrializing countries and other trading blocs, mobile capital and labour, environmental policy and protection of natural capital (think cross-border air pollution from fossil-fuel electricity generation, Arctic wildlife reserves and the resource base of the Far North).

Rebuilding a better relationship with the US does not mean we have to abandon our social policies and adopt all those of the United States. We need to sustain our production at levels that generate the income to support our social programs and, for that, we need the US as well as domestic markets. Other foreign markets help, but cannot replace those of the US. Sustaining our capital thus requires Canada to look both inward at domestic policies and outward toward our position in the global economy.

Nancy Olewiler is a professor in the graduate Public Policy Program and the Department of Economics at Simon Fraser University.