# RESOURCES FOR TOMORROW

BY RODGER SCHWASS

The long-term sustainability of Canada's economy has been a subtext of various Royal Commissions on Canada's economic prospects, from Rowell-Sirois to Gordon to MacDonald. However, the last serious look at the sustainability of our resource base, so far as I can tell, was the Resources for Tomorrow Conference in the mid-1960s. It, along with the Pollution Conference, laid the groundwork for much of the environmental legislation and action since then.

The Resources for Tomorrow process was much more than a conference. It was a two-year process of research and study which produced the first detailed inventory of Canada's resources, from timber to foodland to fish. It also examined the prospects for sustainability and revealed the need for made-in-Canada resource information and policy, rather than continuing our reliance on information from foreign investors.

Even then, with a far smaller economy and population, there was concern that soils were being lost to erosion, fibre and fertility depletion, and urban sprawl. The forest industry was expanding rapidly and unsustainably, and was beginning the assault which has halved Canada's timber resources in just 30 years. The East Coast fishery was, even then, seen to be threatened by overfishing. There was no agreement on Canada's energy supplies. Official documents, derived from estimates produced by the major oil companies and aimed at reassuring Canadians while oil and gas exports increased, indicated 900 years of natural gas and 300 years of oil supplies. The Federal Minister of Natural Resources quoted these figures publicly as late as 1970. Within a year or two, National Energy Board estimates had scaled the numbers back to less than one-tenth as much. Resource information remains unreliable in Canada.

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Canada's sustainability is both stronger and weaker than it was then. It is stronger in the sense that technology has yielded a far wider range of options than we had in the 1960s. Fibre optics, the transistor, the computer as a communications device, miniaturization, and the replacement of metals with plastics, the recycling of paper and metals, new innovations in energy production and use, have made it possible to have a high-quality lifestyle with less demand for resources. Countries with very limited natural resources per capita (Japan, Singapore, Taiwan) have managed to develop very productive economies. However, they have done it the same way Europe did it two centuries ago—by scanning the globe for the resources they need and creating or buying up the supply systems.

Canada is also much stronger and more sustainable than it was in the 1960s as the result of a much better trained and more adaptable labour force. It has been estimated that in the Ottawa area, by the year 2000, the high-technology industry will generate as much employment as the federal government. This growth has taken place entirely since 1965 and illustrates the difficulty of prediction in a world where a rapidly growing global research system drives innovation at an ever faster pace.

It is argued that this capacity for innovation will lead to substitution as soon as resource prices rise to levels which will encourage the development of replacements. Thus, the products of Canada's landscape, from beef and fish to wood, can be replaced by tofu and plastic as soon as prices rise. When the oil and gas run out and imports become more expensive, photovoltaics and small-scale hydro will power a more energy-efficient Canada.

It is also argued that Canada is more sustainable because we have developed our own global supply systems, mining gold and pumping oil in Chile and Indonesia, and importing fish and furniture from Norway.

In other respects, Canada may be less sustainable than it was in 1965. Our energy system is integrated with that of the United States, so supplies of cheap and abundant natural gas will yield no competitive benefit to us and will run out sometime before the middle of the next century as the Americans draw ever more heavily on our supplies. As the world's heaviest per capita user of energy, Canada is more vulnerable than most rich nations to disruptions in global energy flows, yet we remain tied to the American economic model which involves heavy use of cheap imported energy.

In the thirty years since 1965, world population has roughly doubled, from three to six billion people. The world economy has grown by about four times. The United States' share of the world economy has fallen from about one-third to less than one-fifth and the Canadian economy has fallen from about three percent of the world economy to just over one and one-half percent. In the next thirty years, world population will probably rise to nearly ten billion and the global economy may well quadruple again.

Against this backdrop, world fisheries have topped out at one-hundred million tons of fish despite massive subsidization and the introduction of new technology. Canadian fisheries have virtually collapsed. World Watch estimates that China's industrialization will make it dependent on food imports of 200 million tons of grain a year, thus driving up food prices around the world. Canada's foodlands continue to shrink, particularly in areas with favourable climate. The prospect of global warming and climate change complicates the matter further and may increase the continental thirst for Canada's water. As Herman Daly points out, there are limits to substitution. New pulp mills are no substitute for trees. More boats with better sonar will be of little use if there are no fish.

Perhaps it is time for a new look at Canada's Resources for Tomorrow.

*Rodger Schwass is a Professor in the Faculty of Environmental Studies at York University.*