

Environmental Ranking for Canada and the OECD

by Ross McKittrick, Elmira Aliakbari, and Ashley Stedman

Canadians care about the state of their environment. Over the past few years, several reports have presented Canada as an environmental laggard, ranking it near the bottom of the list of OECD countries. But we regard the methodologies behind these studies as flawed: they unfairly represent Canada's environmental performance in some respects and do not always use the most meaningful and relevant performance measures. We therefore sought to develop an improved and transparent methodology that would allow us to measure and compare environmental performance among OECD countries.

This report presents the Fraser Institute's first edition of *Environmental Ranking for Canada and the OECD*, in which we rank 33 high-income countries across two broad objectives: protecting human health and well-being; and protecting ecosystems. We calculate an overall Index of Environmental Performance, which is a composite measure based on 17 indicators that measure 9 core categories. Under the objective, protecting human health and well-being, we examine air quality, water quality, and greenhouse gases. Under the objective, protecting ecosystems, we consider six core categories: air emissions, water resources, forests, biodiversity, agriculture, and fisheries. In order to construct the index, we assign equal weight to composite indicators of the protection of human health and well-being and to indicators of the protection of ecosystems. The index scores range from zero to 100. A higher index score means a jurisdiction has a stronger environmental performance while a lower index score indicates a weaker environmental performance.

The overall scores range from a low of 34.8 for South Korea to a high of 78.9 for Sweden, with an average of 62.9 across all 33 high-income countries. Canada performs relatively well, obtaining an overall score of 68.5 which places it 10th out of 33 high-income OECD countries. Canada ranks behind Sweden, Norway, New Zealand, France, Finland, Denmark, Switzerland,

Spain, and the United Kingdom. In contrast to the studies that used what we consider to be flawed methodologies, our method shows that Canada performs better than the majority of high-income OECD countries on environmental protection.

For air quality (under the objective, protecting human health and well-being), Canada performs well and ranks 9th among the 33 high-income OECD countries, based on the two indicators—average exposure to fine particulate matter and exceedances of fine particulate matter. Iceland is the best performer. For water quality, Canada also performs well and ranks 3rd out of 33 countries based on the two indicators that assess the health risks posed by water pollution: access to improved sanitation facilities and access to improved water sources.

For greenhouse gases, Canada ranks 31st for its carbon intensity (CO₂ emissions per unit of GDP) and 24th for its ability to reduce its carbon intensity over a decade. However, it ranks 6th based on low-emitting electricity production, which measures the share of total electricity generated by low emitting sources of energy, that is, renewables and nuclear.

Canada ranks 29th based on its sulphur (SO_x) emissions intensity, which measures SO_x emissions generated per unit

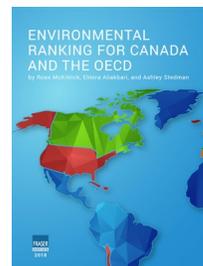
of activity, but on this measure nearly all countries have very good scores and there is little difference between Canada and the top-ranked countries. Canada's SO_x emission intensity declined by almost 53% from 2004 levels, which was better than the average reduction across the OECD countries (51.7%).

Canada ranks 23rd for its wastewater treatment rate and 6th for the intensity of use of its water resources. On the latter measure, only Latvia, Norway, Iceland, Luxembourg, and the Slovak Republic perform better than Canada. Despite preserving its forest cover over a decade, Canada ranks 28th because forest cover has expanded somewhat in many other countries. Chile, with the most significant increase in its forest cover over a decade, is the best performer while Portugal, with the most significant decline in its forest cover, is the poorest. Canada ranks 10th out of 32 countries for the number of species at risk and 32nd out of 33 countries for the percentage of its terrestrial land designated as protected areas. Canada has a good record on environmental issues related to agriculture. Canada ranks 3rd on fertilizer use (nitrogen) and 8th on pesticide use. Only Iceland and Australia perform better than Canada and use less fertilizer.

Indicators such as these do not, on their own, imply a need for looser or tighter policies. Even where Canada ranks below the

mid-point, recommendations to change environmental policies need to be based on comparisons of costs and benefits. Any particular ranking on any particular scale can be consistent with a country having appropriate environmental standards.

The main implication of this report is that Canada is not an environmental laggard as other reports have claimed. Canadians enjoy high levels of environmental quality in absolute terms and in comparison to our OECD peers. In specific areas where our ranking is low, it is sometimes unavoidable due to our geography or climate, and in other cases it reflects the tight distribution of outcomes among the world's wealthiest nations. In many areas of environmental quality that matter the most to Canadians, we compare favourably to the rest of the OECD and, by implication, the rest of the world.



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