

Backgrounder
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Study Measures the Sustainability of Alberta's Progress

The development of the GPI accounts considered a number of measurement frameworks including the U.S. Genuine Progress Indicators, the UN Human Development Index and the World Bank's Total Wealth accounts. Researchers drew from publicly available sources, including Statistics Canada, the Alberta Government and other researchers. Each genuine progress indicator is represented in its original raw data form and indexed, using a unique indexing system that yields composite indices of economic, social and environmental well-being. The results can then be used to report to citizens on the state of the wealth of the province or nation.

Just as companies or organizations use annual reports to report to shareholders on the condition of their assets, liabilities, income and expenditures, the GPI accounts are a way of reporting to citizens on the condition, costs and benefits associated with the total wealth or capital assets of a nation or community in order to achieve sustained well-being.

Alberta's first set of GPI total well-being accounts reveals important insights into sustainability. For example, while Alberta's real GDP (in 1998 dollars) grew over 400 percent—or 4.4 percent per year—from 1961 to 1999, the GPI Sustainability Well-being Index (a composite index of all 50 Genuine Progress Indicators) fell marginally by 0.5 percent per year over the same period. Since the early 1980s, the overall GPI Index has remained virtually unchanged while the GDP continues to rise.

The Institute also estimated a UN Human Development Index (HDI) for each province and found Alberta would rank second in Canada after Yukon. Canada ranks number one among the nations of the world on the HDI Index, suggesting that Alberta is one of the best places on earth to live. However, the HDI takes a very narrow view of well-being, considering only GDP per capita, life expectancy and educational attainment.

The Economic GPI Index (a composite of 12 economic indicators) rose by 0.4 percent per year from 1961 to 1999 – much less rapidly than the GDP. The Personal-Societal GPI Index (a composite index of 22 social and human health indicators) declined at an annual rate of 0.7 percent. At the same time, the Environmental GPI Index (a composite of 17 environment and resource sustainability indicators) fell at a rate of 1.0 percent per annum over the same time period. The results suggest that despite robust economic growth, as measured by the GDP, some aspects of economic, social and environmental well-being have declined or are lagging.

The Human Health GPI indicators show that personal health has been improving with Albertans enjoying a higher life expectancy than most people on the planet. Also, premature mortality from all forms of disease, like cancer, heart disease and other ailments is declining. Suicide is an exception. Alberta's rate of suicide is one of the highest in Canada, particularly in Calgary where more males aged 10 to 49 die by taking their own life than are killed by any other form of premature death.

The Social GPI indicators reveal higher levels of divorce, gambling and auto crashes but falling levels of voter participation compared with 40 years ago, although some, such as crime, have declined relatively recently. While Albertans have the highest level of post-secondary education in the country, the returns, in terms of real weekly wages, have not been apparent for the average Albertan. Furthermore, more students are going deeper in debt to pay for their

education. The GPI accounts also examine how Albertans spend their time. The average Albertan is working fewer hours for pay and has more free time, but is spending less time with the family. In terms of work, some Albertans are underemployed while others are overworked, with many working mothers reporting extreme stress levels.

The GPI Environmental accounts show that Albertans have the fourth highest ecological footprint in the world, exceeded only by the United Arab Emirates, Singapore and the U.S. Albertans are consuming energy, food, and other resources at a rate almost six times the Earth's natural capacity to sustain our level of consumption. The higher our footprint, the greater our ecological deficit and the more we are shortchanging someone else on the planet.

The development of Alberta's fossil fuel energy resources has come with a tremendous ecological price tag. The GPI forest accounts show that more than 90 percent of Alberta's productive forests are fragmented and accessible as a result of oil and gas, forestry and agricultural development. They also show that timber sustainability may be at risk with total depletions now exceeding the annual rate of replenishment.

Alberta's conventional crude oil and our strategic natural gas reserves are in decline. Industry data suggest that Alberta has less than 10 years of natural gas and conventional crude oil reserves remaining, if current economic reserves continue to be depleted at 1999 levels of production and no new reserves are found. Alberta's trump card will be oilsands and coal whose reserves could last hundreds of years, but with higher ecological costs.

More agriculture crops and livestock are being produced, but under more intensive management conditions, including rising levels of pesticide and herbicide use, and more livestock feedlots. The long-term environmental risks to water and air are only beginning to be understood.

While much of Alberta has an adequate supply of water and relatively good water quality, the rate of glacial melt and uncertainty about the conditions of groundwater raise concerns about long-term sustainability. There have been measured improvements overall in air quality, but emissions of particulate matter are rising in Calgary and Edmonton, which may lead to long-term human health risks.

While Alberta has a successful program of toxic waste elimination in the Swan Hills waste treatment facility, more toxic waste is actually being produced by industry. Of greatest concern are the unknown environmental and human health risks of storing industrial pollutants in deep wells under Edmonton.

The GPI accounts also include a full financial cost-benefit analysis of economic progress by identifying the expenditures and benefits that are contributing to GDP growth. Just as companies account for the depreciation costs of their assets, the GPI monetary accounts look at the full costs and benefits associated with human, social and natural capital consumption. This makes the GDP measure of economic progress more transparent by identifying the expenditures that contributed to a rising GDP, allowing decision makers to discern between expenditures that contribute to genuine well-being and those that may be seen as regrettable.

For example, the GPI income statement shows that the monetary value of unpaid work (housework, parenting, volunteerism) in Alberta would have amounted to \$38.8 billion or 35.4 percent of Alberta's GDP in 1999. These benefits currently are not counted in the GDP. Furthermore, social costs such as underemployment, auto crashes, crime, divorce, suicide, and problem gambling, which total an estimated \$23.4 billion in 1999, or 21.3 percent of GDP,

are currently treated as economic gains rather than as regrettable costs. Adding up the costs of natural capital depletion and environmental costs of pollution would amount to \$26.4 billion or 24.0 percent of GDP. The result is a new bottom line that considers which expenditures and income in society contribute to sustained economic welfare.