QUÉBEC'S SUSTAINABLE DEVELOPMENT INDICATORS

SUMMARY DOCUMENT

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Contents

For more information on Québec's sustainable development indicators, please see the "Sustainable Development" section of the website of the Ministère du Développement durable, de l'Environnement et des Parcs: http://www.mddep.gouv.qc.ca/developpement/indicateurs/index-en.htm.

To go directly to the fact sheets on the indicators comprising the First List of Sustainable Development Indicators, please see the website of the Institut de la statistique du Québec: http://www.stat.gouv.qc.ca/donstat/dev_durable/index_an.htm.

QUÉBEC'S SUSTAINABLE DEVELOPMENT PROCESS

Québec's sustainable development process is the outcome of deliberations and numerous studies[1] begun in the early 1980s, when a desire arose to encourage the emergence of behaviours compatible with sustainable development. Québec subsequently became ever more committed to that path, as it demonstrated at major international events marking the progress of this model of development.

So it was that in April 2006, following consultations conducted the previous year in every region of the province, the Québec process passed a significant milestone with the adoption of the Sustainable Development Act (R.S.Q. c. D-8.1.1). Addressed primarily to the public administration, the Act is aimed at setting an example through the government apparatus so as to incite the population as a whole to follow suit.

In autumn 2007, following a second public consultation and a parliamentary commission, the Government Sustainable Development Strategy 2008-2013 was adopted. It came into force on January 1, 2008.

Finally, after further public hearings held in committee, in autumn 2009 the First List of Sustainable Development Indicators was adopted to monitor and measure Québec's progress in the matter.

This entire process is based on the certainty that we must take action and reconsider our ways of doing things in terms of three tightly linked priorities:

1. Maintain environmental integrity to ensure the health and security of human communities and to preserve the ecosystems that sustain life;
2. Ensure social equity to enable the complete fulfillment of all men and women, development of communities and respect for diversity;
3. Aim for economic efficiency to create an innovative and prosperous economy that is ecologically and socially responsible.

The ultimate goal of Québec's sustainable development process is to meet society's current needs while safeguarding the potential for greater well-being and a better quality of life in future generations.

In this process, the sustainable development indicators provide precious information by which to measure and monitor our progress while producing periodic reports. They will serve as an objective basis for the revision of orientations and priorities, mobilizing the public administration and Québec society toward the achievement of a common goal: development that is sustainable.

THE IMPORTANCE OF MEASURING PROGRESS

In the wake of work begun at the Earth Summit in Rio in 1992, and continuing at Johannesburg in 2002, governments agreed on the importance of developing national strategies and systems of sustainable development indicators. Indicator systems were identified as privileged tools for measuring the status and evolution of the principal parameters of sustainable development and for giving authorities and communities the information they needed to make better decisions. As an active participant in the processes and commitments made at Rio and Johannesburg, Québec considers itself bound by them.

[1] These studies may be consulted at *State of Affairs in Sustainable Development – A Decade of Information and Progress Reports*.

Developing a system of sustainable development indicators is a daunting challenge. Indeed, an examination of the numerous indicator systems that are in use or being developed elsewhere in the world[2] suggests some interesting avenues, but also shows that the results are not always satisfactory.

EXPERIENCES GUIDING QUÉBEC

Analysis of the experience of several countries that have developed sustainable development indicators over the past fifteen years suggests that the best approach is to proceed in learning mode. Québec has chosen to benefit from that experience, such that our First List of Sustainable Development Indicators constitutes a solid foundation whose components, when fully implemented by 2015, may be improved and completed by new indicators.

The first and no doubt the most important lesson to be drawn from others' experience is that if we want to measure progress, we must start out from existing data and information. Focusing exclusively on what we should or would like to measure, instead of on what we can measure now, would compromise the effectiveness of any system of indicators for measuring and monitoring.

More than 80 countries have adopted national sustainable development strategies. When they chose to measure them, most opted for the "objective-based" approach, also known as "policy measurement".

This approach was also chosen by Québec for measuring its Government Sustainable Development Strategy 2008-2013. Thus, the Strategy focuses on the achievement of the objectives of policies aimed at fighting climate change, reducing poverty and social exclusion, accelerating research and innovation, promoting healthy lifestyles, increasing public transit, improving the number and quality of jobs, managing water and residual materials, protecting cultural heritage and supporting community action.

However, despite the fact that most countries over the years have primarily used the objective-based approach, recent work by major international organizations demonstrates that the "capital-based approach", because of its continuity (beyond political preferences) and exhaustiveness (examining all dimensions), is the best frame of reference for gauging progress toward sustainable development. Financial capital, produced capital and human capital are all well-known concepts. The same is true of natural capital, for example to define the value of natural resources, both renewable and not. Lastly, the concept of social capital is used when measuring collective action, integration and social cohesion, or the potential of social networks. The capital-based approach for measuring sustainable development is based on a vision of development whose "sustainable" nature guarantees that national wealth per citizen will not diminish over time, and that therefore the sources of that wealth, the stocks of human, social, produced, financial and natural capital, are replaced or conserved.

After studying the indicator systems of other countries along with work done by international organizations, Québec decided to use both the capital-based approach and the objective-based approach as complements to each other.

QUÉBEC'S CHOICE: A THREE-LEVEL SYSTEM OF INDICATORS

In accordance with the stipulations of the Act and the Strategy, monitoring Québec's sustainable development process requires three levels of indicators. Each level is independent, but can draw on information from the others. The three levels are:

1. indicators to measure and monitor the progress of Québec society toward sustainable development;

[2] http://www.mddep.gouv.qc.ca/developpement/indicateurs/analyscomp-en.pdf

2. indicators to monitor the implementation of the Strategy;
3. indicators to monitor the results of the sustainable development action plans of each government department and agency.

LEVEL AND TYPE OF INDICATOR	PURPOSE
1. Indicators of sustainable development (First List of Sustainable Development Indicators) [3] • 20 capital indicators (see next section)	Monitor the progress of Québec's sustainable development process to ensure that future generations have at least the same opportunities for development as current generations.
2. Indicators to monitor the objectives of the Strategy[4] • 84 indicators including: – 27 indicators to monitor national targets – 39 sectoral indicators – 18 administrative indicators	Monitor progress toward the 29 objectives of the Strategy as achieved through the actions of the Administration and other sectors of Québec society, with periodic reports on the Strategy's implementation so that it can be revised after five years.
3. Indicators to monitor the sustainable development actions of government departments and agencies • 1585 indicators for 132 departments and agencies	Report on the degree of achievement of commitments announced publically by government departments and agencies in their sustainable development action plans, particularly those aimed at the objectives of the Strategy.

Québec's system of indicators fills the following four functions:

1∞ to aid in decision-making and the revision of sustainable development policies or strategies by the authorities that put them in place;

2∞ to inform citizens (educational and motivational function);

3∞ to measure observable progress or setbacks (evaluation);

4∞ to compare Québec with other states.

Government follow-up is done through the periodic report on the implementation of the Strategy and the annual reports of departments and agencies. The former examines both administrative performance and the degree of achievement of the Strategy's objectives. The report from year five of the Strategy will also constitute the five-year report required by the Act.

Québec's system of indicators is aimed from the outset at being coherent, with a system of three interlocking levels for monitoring Québec's sustainable development process: the societal or national level, the level of the Administration and the level of departments and agencies. These three levels,

[3] These indicators were developed by the Ministère du Développement durable, de l'Environnement et des Parcs with the collaboration of the Institut de la statistique du Québec and the departments and agencies of the Government of Québec. They are updated on an ongoing basis and published on the website of the Institut de la statistique du Québec, with the exception of the administrative indicators, which are addressed in the periodic report on the implementation of the Strategy.

[4] "Sustainable Development" section of the website of the Institut de la statistique du Québec: http://www.stat.gouv.qc.ca/donstat/dev_durable/index_an.htm

extending from the general to the particular, correspond to the levels of intervention represented by the Act, the Strategy and the sustainable development action plans.

The following two examples illustrate how the three levels of indicators can interact:

EX. 1

LEVEL AND TYPE OF INDICATOR	NAME OF INDICATOR
1. An indicator of sustainable development	**Life expectancy in good health**
2. An indicator for monitoring the Strategy	**Proportion of individuals with limitations on activities or a functional problem**
3. An indicator for monitoring a sustainable development action plan	**Statistics on injuries, work accidents and occupational diseases**

EX. 2

LEVEL AND TYPE OF INDICATOR	NAME OF INDICATOR
1. An indicator of sustainable development	**Mean annual temperature trend**
2. An indicator for monitoring the Strategy	**Reduction of greenhouse gas emissions**
3. An indicator for monitoring a sustainable development action plan	**Reduction of energy consumption for transportation**

The indicators of the three levels of the Québec system are also complementary in their **temporal aspect**, confirming the long-term scope of the sustainable development process:

- ✓ The indicators in level 1 will provide a long-term appreciation of the progress of Québec's sustainable development process. Though their scope will extend over many decades, by 2013 they will be providing useful information and can be further enhanced;
- ✓ Indicators for monitoring the Strategy will help identify adjustments needed in the second generation of the Strategy in 2013;
- ✓ Indicators for monitoring actions in the sustainable development action plans of departments and agencies will provide an overall appreciation of performance on an annual or periodic basis.

THE CAPITAL APPROACH ADAPTED TO QUÉBEC

Québec's use of the capital-based approach to measure the sustainability of development is derived from research conducted by the joint UNECE/OECD/Eurostat Working Group on Statistics for Sustainable Development. **It is aimed at measuring the wealth we wish to pass on to future generations. That is the very essence of sustainable development as defined in the Act.**

By this approach, each society is the collective owner of a stock of different forms of wealth (the capitals) that are necessary to the well-being of its members. This wealth constitutes a long-term legacy for later generations, while also being a reserve of resources with which present generations can provide for their own well-being. This approach distinguishes five types of capital, each of which can increase, decrease or remain stable:

- ✓ **human capital,** in the form of an educated, healthy labour force;
- ✓ **social capital,** in the form of institutions and social networks, standards and values;
- ✓ **financial capital,** such as securities, currency, bank deposits, etc.;

- ✓ **produced capital,** such as machinery, buildings, telecommunications and other types of infrastructure;
- ✓ **natural capital**, including natural resources, the soil and ecosystems that provide services such as waste absorption.

With the capital-based approach, progress in sustainable development can be measured through the long-term monitoring of indicators on the status of stocks of the different types of capital. In this perspective, Québec has chosen to represent each type of capital by a limited number of indicators whose evolution, positive or negative, is presumed to be representative of a specific dimension of that capital. The capital indicators do not measure the achievement of a specific objective or target. They do not tell us about the causes of a phenomenon, only its variations.

THE FIRST LIST OF SUSTAINABLE DEVELOPMENT INDICATORS

In seeking to measure the progress of society as a whole, the sustainable development indicators tell us about the cumulative action of all players, not only government. They therefore reflect both the impact of governmental policies and strategies and the effect of actions by the population and all social stakeholders. The First List will be improved over time. To that end, concerns regarding international comparisons, the ventilation of data by gender and administrative region, and the aggregation of indicators, will be addressed in parallel studies.

Information about each sustainable development indicator is updated whenever new data is available. **It is therefore advisable to consult the latest version of the fact sheets for each of the 20 indicators in the First List of Sustainable Development Indicators[5].**

Capital	Dimension	No.	Indicator	Summary Description[6]
HUMAN	Active population	1	**Activity rate**	Ratio between the number of people in the active population and the total population aged 15 and over.
		2	**Job quality**	Distribution of jobs held in three categories based on a combination of four dimensions (remuneration, stability, qualification and hours of work) with which different values are associated.
	Healthy population	3	**Life expectancy in good health (without incapacity)**	Average number of years during which a person can expect to live without limitations on activities due to a chronic physical or mental illness or other health problem, if current mortality and incapacity profiles continue to apply. Corresponds to total life expectancy, less life expectancy in a care institution, less life expectancy with incapacity.
	Educated population	4	**Distribution of the highest level of post-secondary education**	Indicates the population's level of education by the highest diploma obtained.
SOCIAL	Feeling of belonging	5	**Persons with a high level of social support**	Proportion of persons who say they enjoy a high level of social support, by age, and their relative weight in the population.
	Civic participation	6	**Time devoted to organizational activities**	Average number of hours devoted per week to organizational activities or volunteering, by persons aged 15 and over.

[5] Idem

[6] The information sheets give more complete descriptions. There are also graphical representations of the data, statistical analyses and an explanation of each indicator's contribution to an evaluation of the capital dimension concerned.

Capital	Dimension	N°	Indicator	Summary Description
SOCIAL	Equity	7	**Income distribution**	Measures the distribution of income among all family units, indicating whether inequality has increased or decreased.
		8	**Surplus family income**	Determined by calculating the average gap in each quintile between a family's disposable income for the Market Basket Measure (MBM) and that family's corresponding MBM threshold.
	Cultural development	9	**Role of culture and communications in the economy**	Measures the relative importance of activity in the cultural and communications sectors in the Québec economy as a whole. Corresponds to the gross domestic product (GDP) of these sectors divided by the GDP of Québec.
PRODUCED	Infrastructure and machinery	10	**Net stock of fixed capital**	Net value per inhabitant of the infrastructure (buildings and engineering works) and machinery (machines and equipment), used for production.
	Buildings	11	**Property value of building inventory**	The value at market price of all the buildings and lands in the municipalities and unorganized areas of Québec.
FINANCIAL	Household assets	12	**Net household assets**	The monetary value of household assets held in financial and non-financial institutions, less their liabilities.
	Assets of the Québec government	13	**Financial assets of the government**	The sum of all assets of a financial nature belonging to the government apparatus.
NATURAL	Biodiversity	14	**Land in protected areas**	Proportion of land in the 13 natural provinces defined by the Ecological Framework that is managed specifically for the conservation of biodiversity and the maintenance of ecological services and their associated cultural values.
	Agricultural land base	15	**Land zoned for agricultural use**	Proportion of Québec land that is suitable for the maintenance and development of agricultural activities and enterprises, including farming, woodlots and sugar bushes.
	Forest	16	**Status of forest ecosystems**	Gross standing merchantable volume of wood on all the productive forest areas of Québec.
	Surface water	17	**Water quality at the mouth of the principal southern watersheds**	Represents the proportion of watersheds whose water quality is good when each of the following descriptors of water quality is considered individually: fecal coliform count, phosphorus and suspended matter.
	Air quality	18	**Annual percentage of days without smog**	Indicates the quality of the air in southern Québec based on data from monitoring stations located in regions likely to present elevated concentrations of the two pollutants that give rise to smog: ozone and fine particles.
		19	**Annual air quality index**	Indicates the quality of the air in southern Québec based on data from monitoring stations in the Réseau de surveillance de la qualité de l'air, which are located on the territory of 14 administrative regions. For the purposes of the indicator it is calculated on the basis of two pollutants, ozone (O_3) and fine particles ($PM_{2,5}$), that are representative of regional air quality.
	Climate	20	**Annual mean temperature trend**	A map of the 17 administrative regions of Québec showing the increase in average temperatures from 1960 to 2003.

For more information

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