

FROM FUN TO FUNCTIONAL:

*Cycling – A Mode of Transportation
in its Own Right*



Bicycle Policy

Revised Edition
May 2008

Québec 

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■ A Word from the Minister

Over the last few years, the Ministère des Transports du Québec has set the example in green transportation by applying, in all its actions and achievements, the principles and orientations it adopted in its Bicycle Policy in 1995.

Today, we can take pride in the fact that we created the Route verte, that municipalities are increasingly committed to the development of bicycle mobility in the province, and that Quebecers are the ones who use bicycles the most in North America. With this revised edition of the Bicycle Policy, the Ministère des Transports intends to further pursue its support of this active mode of transportation. As transportation, in Québec, is considered to be a major cause of greenhouse gas emissions, we must continue to promote bicycle transportation as a solution for the health of our people and our cities.

That is why the new bicycle policy continues the efforts undertaken in 1995 and places even more emphasis on the use of a bicycle as a true mode of transportation, particularly in urban settings. With the support of our municipal partners, this new policy will work to improve the conditions of use of bicycles in Québec and, in this way, promote their use.

Julie Boulet

Québec Minister of Transport



Source: Vélo Québec

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Introduction

In June 1995, the Ministère des Transports (MTQ) and the Société de l'assurance automobile du Québec (SAAQ) jointly adopted the first bicycle policy. This policy followed from a public consultation conducted within the population and echoed the commitments made by the Minister of Transport as part of the Conférence Vélo Mondiale held in Montréal in 1992.

This initial policy essentially dealt with elements associated with safety and the creation of cycling facilities. It primarily aimed at addressing the immediate needs of cyclists in terms of safety and mobility.

After more than a decade of application of this policy, the Ministère and the Société have reviewed the actions taken in accordance with the policy to improve the safety and mobility of cyclists. This review made it clear that the 1995 policy had significantly modified the way things are done, in particular within the Ministère des Transports as regards interventions on its own road system. It was an opportunity for the Ministère and the Société to better define the outlook for the use of bicycles in Québec and establish the foundation for a renewed policy on this matter.

The new Bicycle Policy essentially reiterates the statements set out in the 1995 policy, making the clarifications and adjustments that will enable the Ministère, the Société and organizations reporting directly to Québec's Minister of Transport to make their actions regarding bicycles and bicycle use more effective. This new policy focuses more on the use of bicycles for transportation, within a context that encourages active transportation, a healthy lifestyle, reduced greenhouse gas emissions and the economic, tourism and sustainable development of the regions.

1. Bicycles in Québec

The application of the Bicycle Policy from 1995 to 2007 was an opportunity to consider the extent of the phenomenon of bicycle use in Québec. In fact, the latest study, titled *L'état du vélo au Québec en 2005*¹, drew a portrait of bicycle use in Québec. This study, also conducted in 1995 and 2000 in collaboration with municipal and governmental partners, brought to light a number of findings on the evolution of indicators linked with bicycle use in Québec. Whether directly linked to the application of the Bicycle Policy or not, the findings and resulting outlooks are such that they motivate the pursuit of actions aimed at supporting the use of bicycles for transportation.

Bicycle trends

L'état du vélo au Québec en 2005 tells us that bicycle use by adults aged 18 to 74 has gone from 49% in 2000 to 47% in 2005. This decline can be attributed to a minor portion of the cycling population that uses bicycles less often, since the proportion of the adult population that uses a bicycle at least once per week rose from 31% in 2000 to 33% in 2005. This trend indicates that people who use a bicycle could be doing so with increasing regularity over the next few years, especially if safe and effective infrastructures are in place to facilitate the regular use of this mode of transportation.

Several other factors work in favour of supporting the development of measures encouraging the use of bicycles for transportation in Québec:

- The bicycle is one of the best modes of transportation capable of contributing to the reduction of greenhouse gas (GHG) emissions. Indeed, each modal transfer from a car to a bicycle is all the more interesting as it represents not only a reduction, but the elimination of these gasses. As well, bicycles allow for travel over greater distances than walking does, partially circumventing the issue of urban sprawl seen in many of Québec's agglomerations.
- Cycling, like walking, is increasingly viewed as an effective way of improving Quebecers' overall health. By adopting active transportation habits in their day-to-day lives (transportation to work or school), Quebecers have a greater opportunity to improve their overall health, in particular by avoiding problems associated with obesity which are on the rise in North Americans. In this respect, Québec holds a strategic position in North America as



Source: Ministère des Transports du Québec

the modal share of walking, cycling and public transit in urban agglomerations is greater here than in US agglomerations².

- Certain phenomena, such as the search for a better quality of life, the scarcity of resources, the break-up of households and the ageing of the population, may bring municipalities to rethink city development. Accordingly, over the next few decades, we could see a development of the urban fabric focused on mixed usages and the densification of land use, i.e., urban developments encouraging cycling and walking as transportation (active transportation).

1. Vélo Québec Association. *L'état du vélo au Québec en 2005*, June 2006, 119 pages.

2. Cycling and walking are used by 8.7% of Montréal's residents for their daily commutes, while the rate in the top American city in this regard, Portland (Oregon), is of only 3.8% for these two modes (ACS-AEC, 2004).

- The rising cost of gas, for households, and of infrastructure operating and maintenance costs, for road managers, should encourage the implementation of transportation infrastructures that are more cost-effective for the community, such as bike-ways, pedestrian networks and public transit systems.
- The declining use of bicycles by young people (18-24 years of age, i.e., the age group bridging the use of active transportation and the systematic use of a car) should justify an intervention directed at this clientele.

These observations accordingly argue in favour of continuing the MTQ's interventions for the development of cycling facilities. In fact, measures to encourage an increase in the modal share of cycling are concrete actions by the Ministère already proposed in the implementation of the Quebec Public Transit Policy (2006-2012) titled *Passenger Transportation in Québec: Better Choices for Citizens*, the *Government Sustainable Development Strategy (2004)*, the *2006-2012 climate change action plan titled Québec and Climate Change - A Challenge for the Future* as well as the *2006-2012 government action plan to promote healthy lifestyles and prevent weight-related problems, Investing for the Future*. The Bicycle Policy thus allows the Ministère to gain an increasingly strategic position with respect to issues linked with sustainable transportation.

Cycling as a mode of transportation

Starting in 1995, the Bicycle Policy set an objective to gradually encourage the use of bicycles as a mode of transportation. Yet, given the scope of application of this policy, limited to the road system for which the Ministère is responsible, and given the fact that bicycles are used for utilitarian transportation purposes more often in urban environments, there have never been any measures following from the Policy directly leading to an increase in the modal share of the bicycle in transportation. However, the Policy, combined with projects such as the Route verte, supported by

financial aid programs, introduced mechanisms aimed at taking bicycles into account when developing and updating development schemes and plans for regional county municipalities (MRCs) and metropolitan communities. In this way, the Policy has had a beneficial effect on the implementation of cycling facilities and the utilization rate of bicycles by the population as a whole, a phenomenon that is having repercussions in both the rural and urban environments. Between 1995 and 2005, the rate of cyclists using their bicycle, in general or on occasion, for utilitarian transportation purposes (other than for recreation, tourism or training) grew from 21% to 34%, representing a 62% increase³.

When compared to other modes of transportation, particularly the automobile, the bicycle is still used for a very small share of trips in Québec. The 2003 Origin-Destination survey indicated that 1.2% of trips in the Montréal agglomeration were done on a bicycle. This rate rises to 1.6% for the island of Montréal and up to 6.5% for Plateau Mont-Royal, making it just about unique in Québec. Even if the current outlook does not show any rise in the modal share of the bicycle in urban agglomerations due to a slight decrease in trips associated with school or work (the most representative for trips using the bicycle), it is understood that any measure encouraging the use of bicycles as a mode of transportation can easily cause such low rates to rise. By comparison, the modal share of the bicycle observed in Swiss cities is of 10%, 15% in Munich and 25% in the Netherlands as a whole. In Copenhagen, 36% of all trips to work are done using a bicycle.

It is accordingly important to focus particularly on measures that could support municipalities in the establishment of utilitarian bicycle networks, increasing bicycle mobility and the safety of bicycle trips in built environments.



Source: Ministère des Transports du Québec

3. Vélo Québec Association. *L'état du vélo au Québec en 2005*. June 2006, p. 25.

Bicycles and safety

Cycling is a mode of transportation that has the particular quality of requiring physical activity, and remains one of the safest. While 7 out of every 1,000 cyclists consulted health professionals in 1999-2000, 10 times more people consulted a doctor for injuries attributable to hockey (79) or jogging and running (78)⁴.

Furthermore, between 2002 and 2006, the safety record of cyclists on the road remains stable, with an annual average of 171 serious injuries and 18 deaths, while the number of cyclists and the use of bicycles have also remained stable. This reality is in contrast with the years preceding the adoption of the Bicycle Policy, where the number of cyclists that died following an accident involving a road vehicle averaged 32 between 1990 and 1994. The number of cyclists who died or were seriously injured in road accidents reached 423 in 1991. Similarly, the total number of victims of bicycle accidents involving a motor vehicle was on average 2,529 between 2001 and 2006, while, according to the 1995 Bicycle Policy, the average was 3,700 between 1990 and 1994.

The percentage of cyclists who wear a helmet, which averaged 25% between 1996 and 2000, reached a peak of 37.2% in 2006. This progression reflects cyclists' increased awareness of their own safety.

The Route verte

The Route verte is a national veloroute extending more than 4,000 km long, announced by the government of Québec almost at the same time as the 1995 Bicycle Policy was adopted. These two events are closely linked, due in particular to the fact that about 40% of the Route verte's length was built on roads under the Ministère's responsibility, as provided for in the Bicycle Policy.

This ambitious initiative by Vélo Québec Association, inaugurated in 2007, is accordingly the result of 12 years of effort by the Ministère and an impressive number of municipalities, MRCs and organizations. Already, the Route verte is a prominent feature used to market Québec as a cycling destination abroad in Tourisme Québec's assessment of the velotourism situation in Québec. The future outlook of this national bicycle network relies on the Bicycle Policy, at least for the consolidation and maintenance of segments implemented on roads for which the Ministère is responsible.

First, the work undertaken to complete the Route verte should continue over the 2007-2010 period since, as of October 31, 2007, the route was only 90% complete, i.e., 3,924 km out of a total of 4,366 km. Provisions must also be made to enhance the current Route verte network, in particular to improve and repair the route as it stands today. The fact remains that the Québec bicycle network was built over a relatively short period (10 years) and that the latter will require periodic maintenance and major repairs following a cycle that is yet to be defined. The consolidation also underlies the consideration of regional offshoots or routes that take regional needs and plans into account and that contribute to facilitating the use of bicycles and tourist exploration.



Source: Ministère des Transports du Québec



Source: Vélo Québec

4. *Idem*, p. 39.

5. Groupe DBSF. *Le cyclotourisme au Québec: Diagnostic et enjeux*. Final report presented to the Table sectorielle de concertation sur le cyclotourisme, September 2006, 118 pages.



Source: Ministère des Transports du Québec

Positive external effects of the Bicycle Policy

The Bicycle Policy was adopted in 1995 and is a departmental policy, since it specifically covers the actions of the MTQ and SAAQ in their respective areas of action. However, the possible effects of this policy exceed the jurisdiction of the organizations under the Minister of Transport. Many other Québec government departments and organizations can contribute, in their own way, to the development of a number of aspects associated with cycling, such as:

- the influence of urban planning tools governed by the Ministère des Affaires municipales et des Régions on the urban structure, mixed usages and building density, in particular to encourage the integration of urban bicycle networks;
- the increase in the proportion of schoolchildren travelling by bicycle or by foot, through programs for the promotion and safety of school routes managed or proposed by the Ministère de l'Éducation, du Loisir et du Sport;

- the introduction, by Tourisme Québec, of velotourism policies;
- the monitoring, by the Ministère du Développement durable, de l'Environnement et des Parcs, of the progress made by the transportation sector in controlling greenhouse gases and climate change;
- measures to improve the bill of health, administered by the Ministère de la Santé et des Services sociaux, in particular as regards the issues of weight and sedentary living, etc.

All of these measures, while not an integral part of this Bicycle Policy, are elements that can interact with the actions undertaken by the Ministère des Transports du Québec and its affiliated organizations.

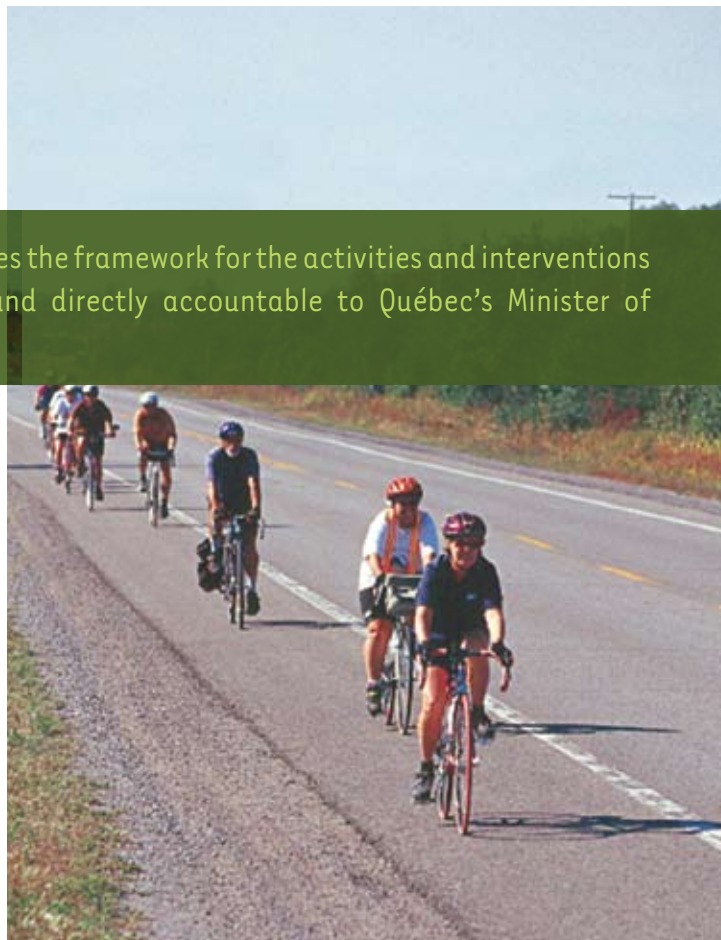
2. Scope

The Bicycle Policy is a departmental policy that establishes the framework for the activities and interventions of all organizations associated with transportation and directly accountable to Québec's Minister of Transport, namely:

The Ministère des Transports du Québec

As part of its mission, the Ministère des Transports du Québec (MTQ) must ensure, across the territory of Québec, the movement of people and freight through the development, establishment and operation of safe, effective transportation infrastructures and systems that contribute to the sustainable development of Québec. As such, the MTQ, as primary stakeholder in transportation infrastructures and systems in terms of both the development of standards and regulations and the management and design of infrastructures, must aim to improve the safety of all road users in their movements. As regards bicycles, this responsibility translates into:

- the standardization of cycling facilities and related signage;
- the development of cycling facilities on roads managed by the Ministère;
- the coordination of the activities of all stakeholders across the province associated with cycling facilities.



Source: Ministère des Transports du Québec

The Société de l'assurance automobile du Québec

The mission of the Société de l'assurance automobile du Québec (SAAQ) consists in reducing the risks inherent to the use of roads by controlling access to the road system, preventing accidents and bodily injuries, and compensating road victims. In particular, as regards cyclists, the SAAQ:

- conducts promotional campaigns on the rules of the road and bicycle safety;
- updates the Highway Safety Code and ensures the latter's effective enforcement;
- raises awareness in schools;
- establishes and applies standards regarding bicycles as vehicles;
- monitors the evolution of the road safety record and supports research aiming to improve knowledge regarding road safety.



Source: Ministère des Transports du Québec



Source: Ministère des Transports du Québec

The Agence métropolitaine de transport

The mission of the Agence métropolitaine de transport (AMT) is to increase the efficiency of personal travel by promoting the use of public and paratransit while consolidating urban cores. With a view to expanding its service area and meet the needs of its clientele, the AMT works to facilitate cyclists' use of its transportation infrastructures, whether by establishing bicycle parking areas or through the development of policies and/or services allowing cyclists to transport their bicycles on board public transit vehicles. It is also true of planning for the integration of bicycles in shared traffic lanes and the development of paths within commuter train right-of-ways or bus-only lanes. Finally, through its coordination role, the AMT will be in a position to promote initiatives in favour of intermodality with other public transit companies in the metropolitan area.

The Société des traversiers du Québec

The Société's mission is to "contribute to the mobility of people and goods by ensuring safe, reliable and efficient marine transportation services favouring Québec's social, economic and tourism growth". In doing so, the Société must make sure its ships and landing piers, where applicable, meet the needs of its bicycling clientele.



Source: Société des traversiers du Québec



Source: Société des traversiers du Québec

The Commission des transports du Québec

The mission of the Commission consists in increasing the safe behaviour of carriers, taking part in economic development by encouraging a transportation service offer that meets the expectations of citizens, and supporting equity in the transportation industry, all with a view to sustainable development.

More particularly, the Commission issues permits in the transportation by taxi and transportation by bus sectors, and it establishes the rates for certain transportation services, particularly in the taxi industry. In fact, it is in this capacity that the Commission can play a part in the institution of services intended for cyclist clientele, in particular for the transportation of bicycles in taxis or on buses

In this policy, unless specifically cited by name, the Ministère des Transports and the organizations under the Minister are designated by the word “Ministère”.

As regards this definition of the scope, it is understood that the Policy does not directly involve other managers of transportation systems such as municipalities, mass transit organizations, federal government departments and organizations, etc.

However, given the objectives and statements contained in this policy, these partners may be called upon to play a part in any action following from the policy and, in this way, help improve the conditions of use of the bicycle as a means of transportation in Québec.

Finally, the organizations covered by the Bicycle Policy have, over the last few years, developed expertise that allows them to exercise, with other Quebec government departments and organizations, a leadership as regards bicycles and their use. It is accordingly up to organizations under the Minister of Transport to support the government of Québec's other partners in the process to establish bicycle policies, orientations and action plans, in all aspects that concern them, to disseminate this acquired expertise.

3. Principles

The Policy's principles rest on the fact that the bicycle is a mode that encourages active transportation, a healthy lifestyle, the reduction of greenhouse gas emissions and the economic, tourism and sustainable development of the regions. The principles to be observed to achieve the Policy's objectives and pursue its statements are much the same as those defined in the 1995 Bicycle Policy, these are:

- pursuing the safety and mobility of cyclists on the territory;
- aligning, on the one hand, the costs associated with the availability of bike paths and bicycle-friendly roads and, on the other hand, the benefits of safe active transportation;
- dividing responsibilities among all governmental, municipal, associative and other stakeholders in the pursuit of the objectives contained in the Bicycle Policy.

4. Objectives

The Bicycle Policy pursues roughly the same objectives as those already defined in 1995. However, armed with the experience it has acquired since 1995, the Ministère is introducing, for each of these objectives, measurable targets allowing it to channel its efforts towards very specific outcomes. In this way, actions that follow from statements contained in the Bicycle Policy must make the attainment by 2020 of the following targets possible.

Objective	Target
1 Gradual encouragement to use the bicycle as a mode of transportation	<ul style="list-style-type: none"> • A 50% increase in the modal share of the bicycle for Québec as a whole, calculated in major agglomerations, compared to data from the latest Origin-Destination surveys. For example, the rate for the Montréal agglomeration was of 1.2% in 2003. It should rise to 1.8% in 2020. • A 10% increase in the population using a bicycle on a regular basis, i.e., at least once per week, particularly children (5 to 17 years of age) and young adults (18 to 35 years of age). In adults, this rate was of 33% in 2005; it should rise to 36% in 2020. • A 10% increase in the share of utilitarian bicycle trips (work, school, business, shopping, etc.). This rate was of 17% in 2005 and should rise to 19% in 2020.
2 The promotion of road safety with cyclists and other road users	<ul style="list-style-type: none"> • A 30% reduction in the total number of cyclists victims of an accident involving a motor vehicle (serious injuries and deaths), compared to the 2002-2006 average. The annual average number of seriously injured or deceased cyclists for the 2002-2006 period was of 189. This number should fall to an annual average of 132 in 2020.
3 The improvement of the transportation system for cyclists	<ul style="list-style-type: none"> • A 30% increase in the total number of kilometres of bikeways in Québec. While there were 6,789 km of bikeways in Québec in 2005, this number should rise to 8,826 in 2020.

These targets will accordingly require follow-ups, at least every five years, for the period leading up to 2020.

5. Focus Areas

The policy statements that guide the Ministère's and its organizations' actions regarding the use of bicycles are divided into four focus areas for which specific issues were examined:

Human	Vehicle	Traffic infrastructure	Socioeconomic environment
<ul style="list-style-type: none"> • The use of safety equipment • Compliance with rules of conduct • Awareness-raising in school 	<ul style="list-style-type: none"> • Safety equipment on bicycles 	<ul style="list-style-type: none"> • Planning • Standardization • Implementation and funding 	<ul style="list-style-type: none"> • Coordination • Legislation • Research and training • Assessment

Each of these issues is the subject of statements in this chapter. These statements constitute the policy of the Ministère, Société, and all organizations under the Minister of Transport.

5.1 The human factor

5.1.1 The use of safety equipment

Injuries associated with the use of a bicycle are caused by the transfer of energy that takes place when a collision or fall occurs. The laws of physics are such that the head is often the part of the body where this transfer of energy occurs. In fact, an analysis of epidemiological data reveals that approximately 60% of deaths and 30% of hospitalizations are the result of head injuries.

The use of a helmet must be promoted as a safety measure, for two main reasons: on the one hand, it is an effective measure (adequate protection in more than 50% of cases) and, on the other hand, the protection provided is systematic, no matter the cause of the accident.

Accordingly, actions taken over the years of application of the Policy aimed at educating and raising the awareness of cyclists regarding the use of a helmet. This approach, while promoting safety concepts, has a more dynamic feel than a coercive approach within a context where the goal is to encourage the use of bicycles as a mode of transportation.

The Société de l'assurance automobile du Québec closely monitors the evolution of the use of bicycle helmets in Québec. After stagnating at around 25% from 1996 to 2000, the rate of use of helmets by cyclists saw successive increases in the last three surveys. The rate thus rose from 25.4% in 2000 to 37.2% in 2006. If the next surveys were to reveal results nearing 40%, the

Société could consider proposing that the Minister of Transport establish legislation making the use of helmets mandatory.

On another topic, while the majority of bicycle accidents may take place during the day, the fact remains that approximately 15% of them occur on a lit road at night. Although only 1% of bicycle accidents occur in the worst conditions, i.e., on a dark road at night, the latter are much more often fatal for the cyclist. They lead to death in 7% of cases, compared to 0.7% of cases where the accident occurred in lit conditions.



Source: Ministère des Transports du Québec

Statement 1 – Promote the use of helmets by cyclists

As head injuries constitute the main cause of death in cyclists, the use of a helmet remains the most effective way of reducing the gravity of injuries to the head and, consequently, the risk of death. There is accordingly cause to continue intensively promoting the use of helmets by cyclists.

Statistics on the use of bicycle helmets show that young people aged 10 to 24 and people who travel in urban areas not on bicycle paths still appear today as the most resistant to the use of a helmet. Outreach activities must accordingly target these clienteles in particular.

Statement 2 – Promote the use of light or reflective clothing

Although bicycles must be equipped with reflectors, as well as head- and taillights when used at night, all other measures aimed at increasing cyclists' visibility outside daylight hours are likely to increase their safety. The use of light-coloured clothing and reflective accessories is not mandatory under the Highway Safety Code, but it greatly contributes to increasing cyclists' visibility at night.

5.1.2 Compliance with rules of conduct

A false move on the part of the cyclist, including failing to comply with a provision of the Highway Safety Code, is the cause of approximately 60% of cycling accidents involving a motor vehicle⁶. Conversely, drivers also often infringe on certain provisions of the Code, putting the safety of cyclists travelling on the road at risk, perhaps as simply as by speeding or passing too closely, leaving all the less room to manoeuvre when cyclists make an unexpected move (to avoid an obstacle on the road, for example). As well, cyclist/pedestrian conflicts are important because cyclists and pedestrians do not necessarily keep to their respective paths. Such a deeply rooted social phenomenon cannot be changed in the short term.

Non-compliance with traffic regulations is not exclusively linked to a lack of knowledge of the regulations and poor police controls. A study⁷ taking into account observations made at ten intersections in the city of Montréal revealed that the rate of compliance with road signage by vulnerable users (pedestrians and cyclists) is primarily related to the volume of vehicles. In this way, the higher the volume of traffic, the more cyclists comply with traffic signals. Furthermore, male and young cyclists comply with traffic signals less often. It is

also within this segment of the population that there are the most cyclist victims, based on data from the road safety record.

The police have admitted that coercive interventions with pedestrians and cyclists are rarely part of the day-to-day activities of patrol officers. Police authorities explain the situation by stating how difficult it is to enforce traffic regulations within a context where there is no social consensus on the heightened priority to be granted to pedestrians and cyclists. The establishment of a consensus would greatly facilitate the work of police officers, who must enforce the rules of the Highway Safety Code concerning these users.



Source: Ministère des Transports du Québec

6. C. Dussault. « Les cyclistes », in Beaulne, G. *Les traumatismes au Québec : comprendre pour prévenir*. Les Publications du Québec, 1991, p. 101-107.

7. J. Bergeron *et al.*, *Influence des caractéristiques des individus et de l'environnement sur le taux de respect de la signalisation chez les piétons et les cyclistes*, CRT, Université de Montréal, 2000.

Statement 3 – Increase enforcement of Safety Highway Code

As the lack of respect for the provisions of the Highway Safety Code by both cyclists and drivers constitutes a major cause of accidents involving motor vehicles and bicycles, enforcement of the Highway Safety Code must accordingly be increased.

Since 2002, the Société, in collaboration with the police, organizes an intensive outreach period as part of its annual bicycle campaign. *Bicycle Safety Week* has become *Bicycle Safety Month* (mid-May to mid-June) to see the increased presence of all police forces on the road. Jointly with the bicycle safety working group (SAAQ, police and partners), a strategy is developed, and a communication plan gives concrete expression to its various actions.

Accordingly, three press releases on targeted issues are published during the summer to keep the media's interest. As well, because work in the field is favoured, this campaign primarily involves participation in the Montréal and Québec bike shows, the distribution by patrol officers of the *Safe Cycling Guide*, and support to volunteer organizations.

In 2006 and 2007, the “Mêmes voies, même lois” message was used to remind road users of the importance of sharing the road between cyclists and drivers.

Statement 4 – Ensure the effective and ongoing dissemination of messages on compliance with the rules of conduct

This statement aims to call on all stakeholders in the field to promote bicycle safety so as to ensure the dissemination of messages on the observance of rules of conduct.

5.1.3 Education in schools

Since 1982, The Société de l'assurance automobile has developed outreach and education activities for young people (4-17 years of age). The use of a bicycle has always been a favoured theme given recognized issues in this age group.

With the pedagogical renewal implemented in the school system over the last five years, approaches have changed. Because teachers have had to choose among various themes (“life areas”), road safety slowly lost its place on the school calendar, mainly at the secondary level. Faced with this reality, the Société fostered the 5-12 age group in its interventions in the last five years. Three modes of travel are covered with elementary school students – cycling, walking and school transportation – and they are now addressed as part of health and safety education. Teachers do not have specific periods indicated on the schedule to speak about these topics, but they must integrate them in the regular teaching program.

It was in this spirit that the self-learning CD-ROM, *Chemin faisant*, was produced and distributed to all elementary schools in 2003. The latter contains close to forty exercises intended for all three cycles of elementary school. The CD-ROM comes with a teacher's guide and appendices to help carry out the activities in class. However, these interpretive activities remain theoretical.

Furthermore, the Génivélo kit, used by police officers, allows for some initiation to the practical aspect while still dependent on the goodwill of police officers and influenced by logistical restrictions. The kit, developed almost ten years ago, will have to be updated and enhanced.

Statement 5 – Maintain and improve education program in elementary schools

Children aged 5 to 9 are among the age groups that see the most bicycle accident victims. It is important to maintain education programs in schools and perfect the interpretation tools used by police officers to establish the link between theory and practice.

Statement 6 – Intervene more with secondary school students

The 10-15 age group is the most at risk when travelling by bicycle. A fresh look must be taken at intervention modes specific to this age group. Efforts to raise awareness of bicycle safety rules must be based on a riveting activity and employ a useful tool for stakeholders if this clientele – whose attention is already widely solicited – is to be reached.

The concentration of activities at the elementary level has already had a significant impact on young people aged 13-15, who no longer have access to bicycle safety activities.

In 1997, the ambitious Vélo-Expert program, focused on the acquisition of bicycle skills and techniques, was introduced into the physical education program. The lack of time on the schedule for teachers and the fact that some students could not obtain a bicycle rendered the general implementation of this program impossible.

Still, in 2007, it is interesting to see the interest young people have in using a bicycle. Riding a bicycle is often seen as a rite of passage to the adult world. Bicycles are an extension of young people as are cars for young adults.

With a rate of 5.7 victims per 100,000 inhabitants, cyclists under the age of 15 represent the group that is most at risk of fatal or serious injuries. They constitute the most over-represented age group in the road safety record for cyclists, making their proper preparation and knowledge of safety rules all the more important. Furthermore, the rate of helmet use in 10-15-year-olds is only 28.9%, while the national average was of 37.2% in 2006.

We must start anew to raise the awareness of teenagers of the various factors to be taken into account when using a bicycle as a mode of transportation. The objective here is to make them accountable for their own safety, particularly given that they could soon become road users as drivers of motor vehicles.

A sufficiently flexible tool must be developed to allow its use by various stakeholders. In addition to secondary schools, day camps, summer camps and youth centres should be able to adapt it to their needs. The goal is to seize the opportunity and use this mode of transportation to invite young people to adopt behaviours focused on health and a healthy lifestyle.

5.2. The vehicle

5.2.1 Safety equipment on the bicycle

Unlike motor vehicles, bicycles sold in Canada are not subject to federal standards. This explains in part the fact that many bicycles are sold without safety equipment and without reflectors. However, some manufacturers install reflectors on their bicycles on a purely voluntary basis.

The decision to make retailers responsible for equipping bicycles with the mandatory reflectors has not proven very effective. Indeed, despite the addition to the HSC of section 233.1 (1996, c.56, s.72) forcing retailers to sell or rent bicycles equipped with the reflectors provided for in the Code, the fact remains that most bicycles sold are equipped with white reflectors on both wheels. A quick survey with retailers revealed either the unavailability of coloured reflectors or the often mass assembly of bicycles to meet orders from various countries as causes for this non-compliance.

The context of globalization forces us to re-examine the relevance of maintaining certain obligations, as it is becoming increasingly difficult to control manufacturers, particularly those outside the North American continent.

However, efforts to find a solution must first be undertaken before amendments to the Code can be considered, such as allowing the use of white reflectors on both wheels rather than the ones currently required.

Statement 7 – Increase compliance with the obligation to equip bicycles with reflectors

With the lack of visibility of cyclists at the root of 30% of fatal accidents involving a bicycle and a motor vehicle, there is cause to increase compliance with the obligation to equip all bicycles sold or rented with reflectors.

Statement 8 – Raise the awareness of cyclists of equipment (other than reflectors) that can be installed on the bicycle to increase their safety on the road

A bicycle in good condition and equipped with the necessary equipment contributes to increasing the safety of the cyclist as well as that of other road users. The suggested equipment includes the following:

- **A horn or bell**
As bicycles are silent, a simple bell allows the cyclist to announce his arrival to pedestrians, thereby avoiding a collision.
- **A rearview mirror**
Being able to see what is coming from behind prevents the cyclist from being surprised by a car passing him and making a false move when nearing an obstacle in the road, for example.
- **A safety flag**
A safety flag on the bicycle is sometimes enough to encourage a passing driver to give the cyclist enough space.
- **A touring rack**
Whether a basket attached to the handlebars or a pannier attached to the touring rack, any device that allows the cyclist to safely and conveniently transport his belongings makes the bicycle a truly utilitarian vehicle.
- **Tires with reflective stripes**
These tires can be installed on both mountain and road bikes, even high-performance bicycles.



Source: Ministère des Transports du Québec

5.3 Traffic infrastructures

5.3.1 Planning

The planning of bicycle networks, like other transportation systems, is one of the elements that must be considered when planning for regional and municipal land-use development. This authority is all the more relevant at the municipal level because the bicycle – particularly as a mode of transportation – is of a decidedly local scope.

Municipalities and regional county municipalities, and, by extension, the *conférences régionales des élus*, have a major role to play in the planning of bicycle transportation. This responsibility may extend well beyond the bicycle network to be put in place, especially since, within the context of urban transportation; cyclists may be present on almost the entire local road system.

For example, all residential, low-traffic roads can already be considered bicycle-friendly without any intervention. However, in urban and periurban sectors where traffic is denser and where there is no shoulder, bicycle lane or sidewalk, cyclists and pedestrians often have much difficulty getting to their destination safely.

Accordingly, bicycle planning can pursue any and all interventions likely to encourage bicycle transportation, such as:

- Measures to ease traffic;
- The mitigation of natural (river, topography, etc.) and man-made obstacles (highway, railroad tracks, etc.);
- The reduction of travel distances through urban densification and mixed usages (particularly in the case of the redevelopment of already urbanized spaces);
- Complementing the use of bicycles with mass transit through incentive measures (bicycle racks, for example) at train and bus stations, park-and-ride lots, bus stops and aboard vehicles.

Regional bicycle networks (which are intended more for recreational trips or tourism), on the other hand, are generally the subject of planning at the regional county municipality level. In fact, under the *Land Use Planning and Development Act*, these networks must be identified in development plans.

Finally, the Route verte is undoubtedly the only case involving planning at the national level. Since 1995, under the coordination of Vélo Québec Association, this project has been taken into account in regional plans integrated in a national development plan covering most of Québec's regions. This network was also considered as part of the planning of connections with provinces and border states.

Statement 9 – Recognize the planning of bicycle networks included in the land-use development process

This statement refers to the land-use planning and development tools embedded in the *Land Use Planning and Development Act* and acts incorporating the metropolitan communities of Montréal and Québec, i.e., the regional and metropolitan development plans and local development plans and laws of planning. This planning can also be expressed in transportation or mobility plans adopted by agglomerations or communities to better organize bicycle travels on their territory (bike plan).

Accordingly, in accordance with this statement, all measures are taken to ensure that these planning tools serve as the basis for exchanges with the municipality for the integration of bike paths in the planning of all new road projects on the system under the Ministère.

Statement 10 – Encourage and support municipal urban and transportation planning and development efforts promoting effective and safe bicycle transportation

This statement underlies the dissemination of the Ministère's expertise on bikeways, in particular as regards the standardization of infrastructures (design and signage) and the safety of cyclists. This support to municipalities makes it possible to provide quality transportation networks to all destinations for cyclists and offer choices in terms of the type of bikeway (municipal road adapted for bicycles, shared lanes, one-way bike lanes on the road, bike paths alongside the road or bicycle right-of-way, bridges, tunnels, catwalks, shortcuts for cyclists and pedestrians, etc.).

Given the traffic density and speed generally observed on the highway system, i.e., the one maintained by the Ministère, this technical support also underlies the latter's participation in the search for the best itineraries possible to allow cyclists to safely reach their destinations

Statement 11 – Ensure complementarity between the Route verte, regional velotourism systems and local urban cycling networks

This complementarity between existing bicycle lanes and planned bikeways makes it possible to streamline investments from all stakeholders by increasing connections and multiplying potential destinations for cyclists, whether at the national, regional or local level. The measures that follow from this statement primarily address the consolidation and development of connecting segments between the various bikeways by creating loops, links and junctions.

5.3.2 Standardization

Since the adoption of the Bicycle Policy in 1995, existing standards in Québec have been considerably enhanced, in particular through the introduction of the following standards in the Collection Normes – Ouvrages routiers published by Publications du Québec :

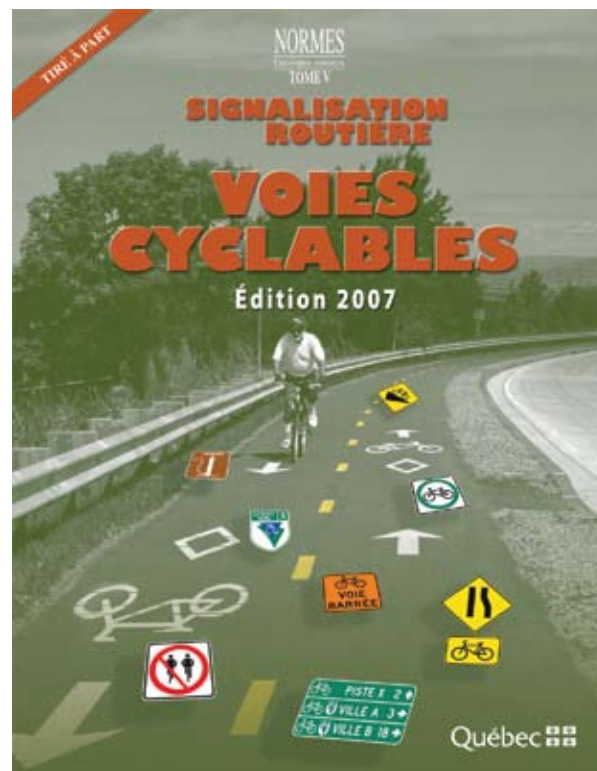
- *Volume I – Conception routière*, chapter 15 “Voies cyclables”, published in 1996 and updated in 2004 and 2006;
- *Volume V – Signalisation routière*, chapter 7 “Voies cyclables”, published in 1999 and updated in 2000, 2001, 2002, 2003, 2006 and 2007;

- *Signalisation routière – Voies cyclables* (off-printed), published in 2001 and updated in 2008;
- *Volume V – Traffic Control Devices*, chapter 7 “Bikeways”, published in 1999 and updated in 2000, 2001, 2002, 2003, 2006 and 2007.

In addition to these standards is the Technical Handbook of Bike-way Design, 3rd English edition (2003), published by Vélo Québec Association and to which the Ministère significantly contributed.

Together, all of these tools should encourage the implementation of bicycle infrastructures in compliance with trade practices and allow for the correction of inadequate and even dangerous infrastructures that exist in certain places (unprotected two-way bike paths along busy roads, for example).

Road and bikeway designers are thus well-equipped to develop a network that meets trade practices. In addition, technological innovations, parity with the legal framework and changes in the status of bicycles as a mode of transportation regularly lead to the revision and, above all, the distribution of these standards to road managers.





Source: Ministère des Transports du Québec

Statement 12 – Continually improve Québec’s normative framework on bikeways

Québec’s standards and guides generally meet the needs of road and bikeway managers when an intervention is needed to improve the safety and mobility of cyclists. However, this normative framework must continue to evolve to integrate all innovations, here and elsewhere, that would help to achieve the Policy’s objectives. This is the case in particular of issues associated with the safety of facilities, comparative analyses with the normative frameworks of other transportation authorities, and the multiplicity of authorized uses on bike paths (pedestrians, disabled persons, skates, electric motor-assisted vehicles, etc.).

Following the Bicycle Policy’s adoption in 1995, a very close partnership was established between the Ministère des Transports and Vélo Québec Association to produce the Ministère’s normative documents. This collaboration, along with the particular contribution of Vélo Québec Association’s expertise and the Association des réseaux cyclables du Québec’s experience, must continue for the benefit of designers working for the Ministère, municipalities and consulting firms.

Similarly, design and signage standards can be improved through exchanges between Québec, Canada’s other provinces and American border states, in particular to advance the expertise developed here.

Statement 13 – Increase the distribution of bikeway signage and design standards

Beyond the quality of the standards and guides, their distribution is just as important to improve the quality of the facilities put in place or renovated. This dispersal cannot be limited to units under the Ministère, but it must extend to all road and path managers, professionals, consultants and workers in the field.

5.3.3 Implementation and funding

Since the adoption of the Bicycle Policy in 1995, the improvement of traffic conditions for cyclists in Québec rests on constant investments – from both the Ministère and the municipalities – in Québec’s bicycle network. It is estimated that the Ministère invested \$66 million between 1995 and 2006 in cycling facilities on its road system, mainly for the paving of shoulders but also for the addition of bike lanes on structures. In all, 1,400 km of bikeways were added during this period on roads for which the Ministère is responsible.

Municipalities have also taken part in improving the quality and number of cycling infrastructures available. As part of the construction of the Route verte alone, they established 1,300 km of bikeways, representing an investment of \$88 million. Here again the Ministère contributed \$22 million under the Financial Assistance Program for Route verte Development, i.e., 25% of project costs.



Source: Vélo Québec

Furthermore, no funding has been granted for facilities implemented by municipalities since 1995 if they were not either on roads under the Ministère or part of the Route verte's itinerary. This lack of government support did not allow for the significant development of quality bike networks in urban environments, which aimed more at utilitarian transportation in particular.

Finally, the maintenance, preservation and improvement of bike networks and signage are essential to the maintenance of their quality and effectiveness. As regards the Route verte network, a financial aid program allows municipalities to ensure the maintenance of the portions of the national network located in their respective territories. Road and bikeway managers are otherwise generally responsible for this maintenance. As regards long-distance bikeways such as the Route verte and regional networks, management of these responsibilities by small municipalities with low tax revenues may pose a problem in terms of quality of the maintenance.

Statement 14 –Take cyclists' needs into account in all road projects on roads for which the Ministère is responsible to contribute to the implementation of local, regional and national networks

This consideration, by the Ministère, of cyclists' needs rests first and foremost on local planning and translates into the application to the layout of certain criteria associated with the safety and mobility of not only cyclists but also the road's other users. It is accordingly by integrating cycling facilities with other structures (one-way bike lane, paved shoulder for cyclists, shared lane, road or right-of-way bikeway) that the Ministère intends to make

cyclists' travels on its road system along planned bike routes easier and safer. The Ministère assumes up to 100% of the costs of these developments when they are implemented at the time of the construction or repair of roads and structures (bridges or overpasses) for which it is responsible. This financial participation rests on the following characteristics:

1. Spending limited by integrating the construction of a bikeway in a road construction project;
2. Improvement of traffic conditions and the safety of cyclists;
3. Planned bicycle facility to serve a transportation purpose;
4. Inferred impact of the bicycle facility on the physical, geometric and functional characteristics of the road (improved drainage, improved shoulder and infrastructure protection, improved traffic flow, etc.);
5. Strategic importance of the planned bicycle facility at the national (Route verte), regional, or local level.

When a municipality implements a bicycle network and a road under the Ministère's management is concerned by the project, the latter may financially contribute to the project even if no work is planned on this road as part of the roadwork schedule. Because it is not possible to limit the cost of the development by integrating it with a planned road construction project, the Ministère can contribute up to a maximum of 50% of the construction costs directly linked to the bikeway. This participation is established based on characteristics 2 to 5 set out above.

Similarly, if a right-of-way or lot belonging to the Ministère can be used to implement an off-road bicycle path, the Ministère may then contribute by making the lot available, provided compliance with standards regarding clearance from the adjoining road is possible. Finally, if an off-road bicycle path, or even a bicycle path completely outside the road right-of-way, contributes to reducing cycling traffic on a road for which it is responsible, the Ministère des Transports may contribute to the project up to 25% of the cost of the bicycle facility.

The Ministère also makes sure that road projects it implements allow for the harmonious use of the road by cyclists, whether in terms of the orientation of drain grates or by levelling curbs, widening lanes or ensuring any other characteristic required to improve road sharing conditions. In this regard, consideration of cyclists' needs is accordingly not limited solely to planned bicycle networks, but also includes, particularly in urban environments and on structures, the places where cyclists regularly ride on roads under the Ministère's management to reach their destination.

Finally, road, signage and marking maintenance operations include the maintenance of cycling infrastructures on roads for which the Ministère is responsible. The latter must accordingly be mindful of the presence of bikeways. In the course of major roadwork, the Ministère must also ensure the mobility and safety of cyclists, namely by providing for mitigation measures or detours for cyclists, as it does for other road users.

Statement 15 – Encourage the implementation of utilitarian bicycle networks in urban environments

Sustainable development requires a change in lifestyle, in particular as regards commuter transportation (daily travels to work or school), which represents a significant portion of all travel. The use of a bicycle must then be seen as a component of the development of all older and newer city districts. Bicycles must no longer be seen as an essentially recreational vehicle, but rather as a utilitarian mode of transportation. It then becomes necessary to plan its development from a rather broad urban and land-use development viewpoint (overall vision).

In accordance with the Québec Public Transit Policy, the Ministère wants to mobilize municipalities on the importance of implementing measures promoting the modal transfer from solo car use to the bicycle, or even walking, for urban commuter travels. These measures include improving school routes to enable the active transportation of children to school starting at the elementary level.

Furthermore, still within this perspective of the integrated development of utilitarian cycling in urban life, the establishment of a partnership between municipalities and employers must also be promoted so as to provide for support infrastructures (protected and under-cover parking for bicycles, showers, etc.). This partnership should also apply to the development and distribution of maps illustrating the bicycle networks that have been established.

Finally, the Ministère also intends to support measures aimed at improving the complementarity of bicycles and mass transit (bus, metro, and commuter train), ferries, inter-city transportation (bus, train), etc. This improvement concerns both the planning of bicycle networks converging on mass transit networks and facilities at train and bus stations (bicycle parking), in particular to improve the mass transit service area.

Statement 16 – Ensure the consolidation of the Route verte network and regional bicycle networks to promote velotourism in all regions of Québec

Work on the Route verte, inaugurated in 2007, is still not quite complete. It was accordingly decided to extend the Financial Assistance Program for Route Verte Development until work on this nearly 4,350-km-long bicycle route is complete.

In order for the Route verte and the surrounding regional networks to constitute a true velotourism infrastructure, it is essential that new regional connections be supported and a quality level allowing for maximum economic benefits be achieved, in particular by complying with recognized design and signage standards. The network is almost fully developed, while the consolidation and improvement of the networks in place require investments from all stakeholders. The Ministère's programs will take all of this into account over the next few years.

5.4 The socioeconomic environment

5.4.1 Coordination

The development of bicycle networks and transportation infrastructures adapted for cyclists, on the one hand, and the promotion of road safety for cyclists in general, on the other hand, involve a wide range of stakeholders. It is clear that coordination must be seen as a crucial element to ensure the successful implementation of interventions in this area.

Implementation of bicycle infrastructures

Regional and local coordination is essential to the integration of bicycle networks in development and transportation planning. This coordination also takes place at a higher level, in particular for the creation of interregional and interprovincial networks and networks with American border states. In this regard, with the 313 municipalities it crosses and the high number of builders involved in its development, the Route verte is a telling example of the level of coordination that can be achieved in the area of bikeways.

Statement 17 – Encourage coordination between all governmental, regional, local and private stakeholders in the the implementation of bicycle infrastructures

This statement justifies the Ministère's participation in the establishment and maintenance of regional issue tables, as regards the development of bicycle networks, and of special committees whose work concern or will concern specific issues of a national nature, such as velotourism.

It is also necessary to maintain coordination relations between the authorities responsible for the development of the local network and those responsible for the greater network, as well as with other Canadian provinces as regards design and signage standards for bikeways.

Coordination with prevention stakeholders

Coordination with the various types of prevention stakeholders has always been a concern in bicycle safety outreach activities carried out by the Société.

A working group on bicycle safety bringing together representatives of police forces (ADPQ, SQ, SPVM, Laval, Québec) and Vélo-Sécur was formed to coordinate the various education (schools) and awareness (public) actions for the season. Stakeholders also agree to set a date for Bicycle Safety Month to increase awareness and the monitoring of recalcitrant cyclists.

Vélo-Sécur was mandated by the Société to transmit safety messages on bike paths and organize outreach sessions in elementary schools. Additionally, volunteers from the Club Optimiste and the Sentinelles de la route serve as stakeholders in the field whose duties include raising awareness regarding safe bicycle behaviours and compliance with the HSC, with the support of the SAAQ and the materials the latter places at their disposal (Génivélo kit, safety guide). Accordingly, local initiatives to disseminate bicycle safety messages to cyclists through hands-on activities must be encouraged and supervised.

Statement 18 – Maintain the collaboration with stakeholders in the field to ensure the consistency of prevention messages and their relevance to the issues raised

In the spirit of continuing the Société's coordination efforts regarding compliance with the provisions of the Highway Safety Code, promoting the use of helmets, and cyclists' visibility, this statement underlies the constant monitoring of intervention programs to make sure they remain consistent with their targeted objectives.

5.4.2 Legislation

In 1987, cyclists were recognized as road users with the amendment of the Highway Safety Code. Generally speaking, cyclists are subject to the same provisions as drivers as regards road signage and traffic regulations. Cyclists who violate the Code are liable to a fine. Certain violations lead to the registration of demerit points in the cyclist's driving record.

In 1995, the orientation adopted regarding the legislation was to adapt the provisions of the HSC to this type of user and make them enforceable by police officers.

In 1996, the Code was amended to forbid children under 12 from riding on roads posting a speed limit greater than 50 km/h, unless accompanied by an adult. However, adult accompaniment is not required if the bike path is separate from the road, e.g., a bike path built on the border of the road right-of-way or separated from the road by a physical barrier.

The Société de l'assurance automobile has undertaken efforts to rewrite the Highway Safety Code with the Ministère's close involvement. The aim of this extensive and long-winded task is to review all provisions to assess whether they are adapted to road users and enforceable by the police. The working group defined the main problems regarding the Code's current provisions:

- obligation to use a bike path when the latter is not accessible from the road;
- being unable to use the pedestrian crossing lights at intersections on busy roads;
- obligation to ride on the far right, even in the presence of a lane reserved for right-hand turns or reserved bus lane;
- difficulty interpreting the rule for children under 12 on roads with a speed limit greater than 50 km/h;
- number of cyclists in one single file limited to 15 to make it easier for road vehicles to pass when the shoulder is paved.

Although some HSC rules concerning cyclists may be more or less appropriate, the current legislation does not require that actions be taken with any priority or in the short-term with regard to this type of user. The rules are drafted to protect the most vulnerable users (pedestrians and cyclists) by granting them priority in accordance with a determined sequence, particularly at intersections. The difficulty mostly concerns compliance with regulations by pedestrians, cyclists and drivers, as well as police controls.

Police officers are much more comfortable enforcing regulations with drivers guilty of a violation than pedestrians and cyclists who may be at fault. This can be explained among other things by how difficult it can be to identify pedestrians and cyclists, who are not required to carry identification, but who must still identify themselves to the officer's satisfaction. The Code of Penal Procedure, which establishes the framework for police work, does

not give officers the authority to demand the lawbreaker's birth date for immediate verification of the accuracy of the information transmitted verbally.

Statement 19 – Make sure traffic regulations are adapted to the use of bicycles on the road network

Statement 20 – Make sure traffic regulations are enforceable by police

These last two statements must continue to guide Highway Safety Code rewriting efforts.

5.4.3 Research and training

Since the adoption of the Bicycle Policy in 1995, numerous research projects have been undertaken by the Ministère with a view to increasing knowledge and improving intervention tools. The studies listed below were conducted as part of the Programme de recherche universitaire en sécurité routière (FCAR-MTQ-SAAQ):

- *Problématique d'aménagement des passages de pistes cyclables en milieu rural* (Coopérative de recherche en sécurité routière, Université de Sherbrooke (CORSUS), 2000);
- *Convivialité de la route pour les cyclistes – Milieux périurbain et rural* (Groupe de recherche interdisciplinaire Mobilité, Environnement, Sécurité (GRIMES), Université Laval's Centre de recherche en aménagement et développement, 2002).



Furthermore, as part of the same program, two other studies were sponsored by the SAAQ:

- *Influence des caractéristiques des individus et de l'environnement sur le taux de respect de la signalisation chez les piétons et les cyclistes* (CRT, Université de Montréal, 2000)
- *Développer une mesure d'exposition au risque des usagers vulnérables (piétons et cyclistes)* (CRT, Université de Montréal, 2003).

Another major study made it possible to draw a portrait of bicycle use in Québec and monitor its evolution. This study, titled *L'état du vélo au Québec* and conducted by Vélo Québec Association on behalf of the Ministère, the Société and other partners, is presented in section 5.4.4 dealing with the Policy's evaluation.

The "training" component of the Policy gave rise to the appointment, for each of the Ministère's territorial divisions, of a permanent bicycle coordinator. The primary duty of these coordinators is to apply the Bicycle Policy on their territory, analyze all road projects comprising a bicycle component, administer the various assistance programs for the Route verte (development and maintenance), ensure the application of design and signage standards on the Ministère's network and in projects undertaken or financed by the latter, and coordinate the efforts of all stakeholders in their respective divisions in this regard. Almost all of these bicycle coordinators received training from Vélo Québec Association on the new *Technical Handbook of Bikeway Design* in 2004.

Statement 21 – Continue research and training in bicycle safety and facilities

This statement is consistent with what was initiated in the first Bicycle Policy. The Ministère and the Société will pursue, as part of their research activities, studies aiming to increase knowledge of human, environmental and technical factors associated with bicycles.

Following from this statement are also the maintenance and strengthening of the network of division bicycle coordinators to ensure the support of all units under the Ministère of the statements contained in this Policy. In this way, all of the projects undertaken by the Ministère or in which it takes part should, within the context of the preparation process, be submitted to bicycle coordinators for analysis and recommendation. The risk of implementing road projects that do not take cyclists' needs into account, particularly when bicycle transportation is being planned in the municipality concerned by the project, or projects that infringe on our own design and signage standards, is thus lessened.

5.4.4 Evaluation

As mentioned earlier, since 1995, Vélo Québec Association conducts every five years, with the collaboration of the Ministère, the Société de l'assurance automobile du Québec and a few municipal partners, a major study determining bicycle use in Québec. This study, titled *L'état du vélo au Québec* and published in 1995, 2000 and 2005, has to date made it possible to follow the evolution of indicators characterizing the attainment of the Policy's objectives.

Other evaluations may also deal with particular measures following from the Bicycle Policy, such as the financial aid programs⁸. These evaluations make it possible to verify with beneficiaries (path managers, municipalities, etc.) that the tools implemented adequately meet objectives and that they represent an efficient use of available resources

Statement 22 – Regularly assess the results of actions taken by the Ministère and transportation organizations directly under the Québec Minister of Transport on a cost/benefit basis

As the Bicycle Policy entails quantifiable objectives (see section 2), the Ministère and the transportation organizations directly under the Québec Minister of Transport must assess the impact of the various actions undertaken based on their respective authorities. This assessment is likely to allow for adjustments to the action plans of each stakeholder over the next ten years.

8. The Direction de la vérification interne et de l'évaluation at the Ministère tabled an audit report on the Financial Assistance Program for Route Verte Development in April 2002. This report recommended a few corrective measures to be applied to case management but did not lead to the program's modification as the latter achieves its objectives. Furthermore, the same branch undertook in November 2006 an evaluation of the Financial Assistance Program for Route Verte Maintenance. The recommendations made in this report, which is expected to be tabled in April 2008, will be used for the program's review scheduled for 2008.

Conclusion

The statements set out in the Bicycle Policy adequately define the position of the Ministère des Transports, the Société de l'assurance automobile du Québec and other organizations under the Minister of Transport on bicycles. In order to have a tangible effect on increasing the use of bicycles as a mode of transportation and improving the safety and comfort of cyclists, this policy's application requires targeted actions by all of these partners.

Accordingly, following from this Policy will be, for each of these partners, action plans setting out measures to be taken to achieve the Policy's objectives. These same action plans may be adjusted as time goes on and following reviews to ensure the best results.

Finally, aside from the efforts made by the Ministère, the Société and other transportation organizations to give the bicycle its rightful place, development of this healthy, environmentally friendly, economical and pleasant mode of transportation most certainly requires the commitment of municipalities and other governmental and regional partners. The objectives and statements set out in this policy should ideally be shared by all of these partners.

