**Tracking Survey of** 

# **Canadian Attitudes Towards**

# Natural Resources Issues, 1997



Canada

Natural Resources Ressources naturelles Canada

# Tracking Survey of Canadian Attitudes Towards Natural Resources Issues, 1997

# FINAL REPORT

Prepared by:



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# Introduction

Canada's natural resources have been the foundation upon which the country has developed, from which it has drawn much of its identity, and on which it continues to rely for much of its prosperity. Yet the rapid changes now taking place among economies around the globe are placing new pressures on Canada's resource sector industries to become more competitive, while at the same time there are increasing concerns about the environmental consequences of the way in which resources are managed and used. Because of the fundamental role which natural resources play in Canadian society, these issues cut to the very core of our society.

Although natural resources are largely a provincial jurisdiction, the federal government plays an important role in setting national objectives, conducting research, and developing policies and programs, primarily through Natural Resources Canada. In carrying out its mandate, the Department must ensure that it understands and takes into account public opinions, priorities and concerns as they relate to forestry, energy, mining and the earth sciences. This objective has been accomplished, in part, through ongoing tracking of public opinion, which has provided valuable input into strategic planning, policy development and communications.

In 1993, the Department commissioned a national public opinion study to measure public opinion across Canada on key energy and resource issues, in part to establish a benchmark from which changes in opinions could be tracked over time. In 1997, the Department identified the need to repeat this study in order to measure current public opinion on key issues, and how these have changed (or not changed) over the past four years. The current study also addressed forest sector issues in greater depth, since the merger of Forestry Canada and Energy, Mines and Resources Canada into Natural Resources Canada took place subsequent to the 1993 survey. Several of the forestry questions included on the current survey were drawn from previous national surveys conducted by Forestry Canada in 1989 and 1991, providing a basis for tracking changes in public attitudes on these issues as well.

The current study was designed to replicate the one conducted in 1993, and consisted of a public opinion survey, based on telephone interviews with a representative sample of 1,507 Canadians (18 years plus) conducted between March 21 and April 5, 1997. A complete description of the methodology used to conduct this study is provided at the back of this report.

This report begins with an executive summary and key conclusions, followed by a detailed analysis of the study findings. Appended to this report is a copy of the survey questionnaire. *Une version française est aussi disponible.* 

# **Executive Summary**

At a time when so much attention is being focused on the emergence of a knowledge-based economy driven by computer-related and other service industries, the Canadian public as much as ever identifies the resource sector as contributing most to the economy, both nationally and in most cases provincially. Over the past four years, the perceived economic contribution of resource sector industries have either remained stable or increased, and there is a general expectation that this sector will grow rather than shrink in importance over the next decade.

At the same time, the environmental impact of this sector remains an issue with Canadians that must still be addressed. The public continues to see resource industries as damaging the environment, and remains divided about whether such damage can be justified when weighed against the economic benefits provided by this sector. While there is some recognition and acceptance that industry cannot operate without some disruption, there is an emerging public consensus that pollution reduction makes sound business sense; increasingly Canadians will not accept that economic growth and employment can only be achieved at the expense of environmental quality. Although the environment is not currently "top of mind" relative to such issues as unemployment, Canadians care deeply about environmental quality and will react strongly if they feel it is threatened.

The forest industry continues to command the highest public profile among resource industries in Canada, but it is also the most vulnerable, in part because of its environmental impact, but also because – more than most other industries – forestry retains the "low tech" image that is at odds with the new emerging economy. Although such issues as clearcutting are not as contentious on a national scale compared with several years ago, Canadians are becoming more critical of industry management practices, which are seen as out-of-step with their own values that place environment over jobs.

The public continues to undervalue the economic contribution of Canada's mining industry, but this industry has made noticeable progress over the past four years, in terms of how Canadians see its current and future role in the country's economy. It is not yet clear what impact, if any, the Bre-X mining scandal will have on public confidence in the country's mining industry since the news story broke midway through the period in which the survey was in the field. What is clear from the results is that the early coverage of this story did not have a dramatic effect on public attitudes toward the industry.

By comparison, both the hydro-electric power and oil and gas industries continue to be strongly positioned in the public's mind as important to the economy now and in the future, while at the same time having less significant impacts on the environment. (This study was conducted prior to recent controversy arising over the financial health of Ontario Hydro resulting from its nuclear generating stations. This issue could well affect public confidence in hydroelectric power in the future both in Ontario and elsewhere across the country.)

Given the absence of shortages and steep price hikes, it is no surprise that energy supply and consumption issues are not top-of-mind for most Canadians. The public continues to be more concerned about the cost of energy than environmental impacts or the adequacy of supplies, but all of these issues have diminished in importance over the past four years. As in 1993, consumers recognize that environmental impacts are caused by visible forms of consumption like automobiles and factories, but they are no more aware than before of the impacts of electric power generation and their own consumption of power in the home. Nevertheless, Canadians value the concept of conservation and efficiency; they continue to look to the federal government to play a leadership role in promoting it.

Canadians recognize the importance of science and technology in supporting both economic prosperity and overall quality of life. Notably, they are as likely to value S&T innovation directed at ensuring the sustainable development of the country's natural resources. This priority is more likely a reflection of the strong value placed on both S&T and environmental quality than the public's appreciation of how S&T contributes to natural resource management. Nevertheless, this presents an excellent opportunity to build a greater public understanding of S&T innovation in the resource sector. This will address Canadians' concerns about environmental damage and management practices, while at the same time boosting the Department's profile in a positive way.

Finally, Natural Resources Canada does not have broad public name recognition nor is it the source that most Canadians think of when they look for information about natural resource issues. Despite this absence of profile and direct contact with the public, the Department has public credibility for launching new communications and education initiatives directed at broad public audiences. Notwithstanding the general trend in some areas toward privatization and smaller government, Canadians continue to look to government to protect the broad public interest, and this is particularly the case with respect to ensuring the proper use and protection of the country's cherished natural resources.

# **Study Conclusions**

#### Economic Importance of the Resource Sector

• Canadians continue to view resource sector industries, primarily forestry, as the most important sector of the Canadian economy.

Canadians recognize the importance of all major sectors, but as in 1993 they continue to see the resource sector as the one making the greatest contribution to the country's economy. The stability of this perspective is notable, given the growing role and profile of emerging service sector industries, particularly those in the knowledge-based and high technology areas. Among resource sector industries, forestry continues to command the strongest public profile, and while this has dropped somewhat from 1993, forestry's profile remains well ahead of such industries as mining, oil and gas, and hydro-electric power.

The emphasis on the resource sector is evident across the country, but it is greatest in the Atlantic and Western regions, where this view has strengthened over the past four years. By comparison, public appreciation of the contribution of resource industries is less widespread in Ontario, where manufacturing is increasingly viewed as the country's top sector.

• Canadians' perceptions of what drives their provincial and local economies more accurately reflect the true contribution of the three major economic sectors.

While the public tends to focus on resource industries when considering the national economy, many Canadians also recognize that other sectors may play a more prominent role in their provincial or local economies. Sectors considered most important to the provincial economy are more likely to reflect actual regional differences, with the resource sector most prominent in the West and manufacturing in Ontario. The importance placed on the service sector is largely defined by community size, with those living in urban areas most likely to identify this sector as number one.

• Resource industries are increasingly recognized as major contributors to Canada's trade balance, with the most significant gains recorded for oil and gas and mining.

The public recognizes that the importance of the resource sector stems in part from its contribution to the country's trade balance. This appreciation has increased over the past four years. The degree of perceived export success varies by industry. This is influenced in part by each industry's profile both nationally and in different parts of the country.

Forestry and hydro-electric power are most widely seen as very successful in selling their products abroad, in comparison with Canada's oil and gas and mining industries. But it is these latter industries which have recorded the most substantial gains in public perception over the past four years, again with the increases most noticeable in those regions where these industries play the largest role (e.g. oil and gas in the Prairies).

Canada's mining industry has increased its public profile since 1993, when the previous survey revealed a lack of awareness and an underestimation of this industry's economic contribution. The rising profile of this industry is reflected by the fact that at least seven in ten Canadians now agree that it is a an important source of jobs and contributes to the country's international image abroad.

• Canadians generally expect resource industries to grow rather than shrink in importance over the next 10 years, but this view applies more widely to hydro-electric power and oil and gas, than to forestry and mining.

While the resource sector is widely seen as most important to Canada's economy today, what about the future? Canadians are more likely than not to believe that resource industries will grow in importance over the next 10 years, but this varies noticeably by industry. Most expect that hydro-electric power and oil and gas will become more important over the next 10 years (comparable with their expectations for such industries as telecommunications, manufacturing and agriculture), but fewer expect an increased role for either forestry or mining. It is the mining industry, however, that has recorded the most significant improvement in this area over the past four years, providing further indication of its growing public profile.

Opinions about the future importance of particular industries are generally stronger in regions where they are most prominent, with the notable exception of forestry. As in 1993, forestry is least apt to be viewed as an industry for the future in those regions where it is most significant (e.g. B.C., Quebec) and by Canadians with the most education and income (the country's opinion leaders). These results suggest that the public profile of the forest industry may be more vulnerable than others, in terms of positioning as an important part of Canada's future.

Overall, the resource sector is holding its own in terms of its public profile as a part of the Canadian economy of the future. Although there is no consensus about the future growth of core resources industries (e.g. forestry, mining), there is little evidence that they are seen as "sunset" industries destined to fade away in the shadow of an emerging knowledge-based economy.

#### **Environmental Impacts of the Resource Sector**

• The Canadian public continues to see resource industries as significantly damaging the environment, although the degree of damage varies by industry.

As important as the resource sector is to the economy and to jobs, the public continues to believe that these industries are causing moderate to significant damage to the environment. As in 1993, the extent of such damage varies by industry in a consistent pattern: Forestry is most widely seen as causing significant damage and hydro-electric power is considered to have the least impact, while other resource industries fall somewhere in between.

Although overall perceptions of forest industry impacts have not changed over the past four years, industry management practices (e.g. clearcutting, lack of replanting) are increasingly being seen by Canadians as the greatest threat to the country's forest resources, in comparison to such external threats as acid rain and forest fires. Mining activity is not as widely viewed as causing significant environmental damage relative to most other resource industries, but continues to be seen as disruptive to nearby land uses.

 Canadians remain divided about the acceptability of industry damage to the environment, but concerns about such damage appear to have moderated over the past four years.

Those who believe that resource industries are damaging the environment continue to be divided on whether or not these impacts can be justified when weighed against the economic benefits these industries provide. Since 1993, however, Canadians appear to have become marginally more comfortable with the damage caused by each of the five industries rated.

As before, the degree of acceptance varies by industry, depending in part on the extent to which it is seen as causing such damage. The public is most likely to accept the impacts of hydro-electric power generation and distribution, while least accepting of the damage resulting from forestry and coal operations. Canadians, however, are not fully accepting of hydro-electric power impacts, in part because they have higher expectations that this industry is "clean".

This increasing acceptance of resource industry impacts may be partly because the public is also a bit more likely than before to believe that the sector is demonstrating a commitment to reducing the environmental damage resulting from its operations. The small magnitude of this trend, however, indicates that resource industries have made little progress over the past four years in convincing the public of its commitment to sound environmental practices. • There is an emerging consensus that investment in pollution reduction is not a barrier to either industry competitiveness or job creation.

Canadians continue to be divided about the extent and acceptability of environmental damage resulting from resource industry activities. However, they increasingly believe that reducing such damage makes sound business and economic sense. A strong majority across the country maintains that industry investments in pollution reduction would either improve or have no impact on both economic competitiveness and job creation. In both cases, this viewpoint has strengthened noticeably since 1993.

These results indicate that the Canadian public has embraced to some degree the basic premise of "sustainable development" as desirable (if not fully practical) for the resource sector. Moreover, the expectation that environmental clean-up makes economic sense appears to be driven by the belief that this action is either positive or necessary to address public and marketplace expectations for companies to be good corporate citizens. In any case, it is clear that the public will not be prepared to accept delayed environmental action based on economic arguments.

 Canadians continue to value the country's forests more for their environmental and ecological benefits than for their economic contribution in the form of jobs and valuable materials.

While the public clearly understands and appreciates the economic benefits flowing from Canada's forests, in the form of jobs, economic growth and valuable materials, this is not what they say is most important to them when presented with a direct comparison. Canadians are most likely to value forests for the environmental and ecological benefits, such as protecting water, air and soil, balancing climate and global ecosystems, providing habitat for wildlife, and wilderness preservation. Only after these benefits does the economic contribution of forests emerge, while recreational opportunities rate last in relative importance.

The relative priority placed on these forest values has remained consistent over the past six years, across the Canadian population, both by region and by demographic strata. While economically disadvantaged groups are more likely to place importance on the economic benefits of forests, even these segments of the population rank this value no higher than third or fourth in relative importance.

#### **Energy Sources and Energy Use**

 Canadians are paying less attention than before to energy issues, but continue to be most concerned about the cost of energy, followed by environmental impacts and the adequacy of supplies.

Energy issues have not been salient to most Canadians throughout most of the 1980s and the 1990s, and attention to these issues has declined noticeably over the past four years. As before, the public is most likely to express concern about the price they pay for energy (e.g. gasoline, home heating), but even these concerns are lower than in 1993.

Canadians are also less inclined than before to say they are worried about the environmental impacts of energy production and energy use, while they are least apt to be concerned about the supply of energy available to meet Canadians' needs. The low salience of supply issues reflects the fact that few are concerned about the availability of energy sources to meet the future demand, which most Canadians expect to increase over the next few years.

 The public's understanding of the environmental damage caused by energy use is limited largely to the highly visible forms, with little awareness of the impact of their own household consumption.

The public recognizes that significant environmental impacts result from such highly visible forms of energy consumption such as automobiles and factories. But Canadians continue to be much less cognizant of the environmental consequences that flow indirectly from the consumption of power by households and businesses, and most remain largely unaware of where their household electricity comes from, in terms of power generation sources in their province. Few Canadians have made a conscious connection between their own household consumption of electricity and the environmental consequences resulting from the generation and distribution of this power.

 Canadians remain divided on the need for new energy sources for their province, but are most apt to favour new sources that minimize impacts on the environment.

While there is relatively little concern about the availability of energy supplies, the public continues to be divided on whether or not there is a need to develop new energy supplies for their province. Canadians are noticeably more likely to feel that the country as a whole will require new energy sources over the coming years, but this may simply reflect the fact that residents are less certain about what would be required in regions outside of their own.

Also unchanged since 1993 is the absence of consensus about what types of new energy sources would be the best ones to develop to meet their province's future needs. As before, however, Canadians are most likely to favour new sources that minimize environmental impacts (e.g. hydro-electric power, solar energy), while placing less importance on cost and reliability of supply criteria.

• Canadians continue to look to the federal government to actively promote energy conservation and efficiency.

Despite the fact that energy issues generally – and supply issues specifically – are not particularly salient, the public values the concept of conservation and efficiency, and look to the federal government to play an active leadership role in promoting it. Close to nine in ten Canadians from every region and demographic strata continue to believe the federal government should actively encourage Canadians to change the way in which they use energy.

As to how the government might carry out this role, the public continues to express a preference for the softer, voluntary strategies involving education and tax incentives (in comparison with tougher appliance standards), while increasing emphasis is also being placed on improving efficiency through more scientific research. These results are consistent with previous research conducted for the Department showing a clear preference for education and incentives over tax-based approaches to changing energy consumption behavior.

### Science and Technology in the Resource Sector

• Canadians are as likely to see science and technology as having a critically important role in the sustainable development of natural resources as in contributing to economic prosperity and improving the overall quality of life.

The public recognizes an important role for science and technology in society today, both in terms of contributing to the country's economic prosperity as well as providing Canadians with a good quality of life. Yet Canadians' appreciation of science and technology in these areas has not progressed over the past four years, with fewer now rating this role as critically important.

More significantly, Canadians are as likely to see a critical role for science and technology in ensuring the sustainable development of Canada's natural resources, despite the fact that few are likely familiar with how science and technology is currently contributing in this area or the potential role that it might play. Industries such as forestry and mining continue to have

a "low-tech" public image. The priority given to S&T in this area is most likely driven by the public's appreciation of the value of scientific research and new technology, coupled with the broad support for the principle of sustainable development.

• The public is becoming increasingly positive in their view of where Canada stands relative to other countries in the area of science and technology innovation.

Canadians have become noticeably more positive about how their country compares with other industrialized nations in terms of science and technology innovation. One-quarter now place Canada among the leading countries and most of the rest believe the country is close behind, while very few place Canada near the bottom. As before, those who feel the country lags behind say Canada either lacks the necessary resources to compete successfully or simply places a lower priority given to innovation.

The positive public view of Canada's international standing is noteworthy given the limited public familiarity with much of what takes place in the science and technology sector. Because Canadians place a high value on science and technology in economic and quality of life areas, there will likely be strong public support for initiatives that either demonstrate or further promote the country's science and technology capabilities, both at home and abroad.

 Universities and corporations are seen to be the leading contributors to science and technology innovation in Canada today, with government and small businesses considered to play a supporting role.

As in 1993, universities are identified by Canadians as contributing the most to science and technology in Canada today (reflecting the science component), followed by large businesses and corporations (the technology side). By comparison, small businesses are much less likely to be viewed as contributing the most to such innovation, perhaps because they are not considered to have the requisite resources available to larger institutions and businesses.

Few Canadians believe the federal government, and even fewer see their provincial government, as playing a lead role in S&T innovation in the country today. This result is not surprising given that government activities do not have the same level of profile, and because a large part of government's role is to support the activities of universities and business. This latter point is recognized and generally supported by Canadians, as three-quarters believe the federal government should promote S&T innovation by supporting other sectors rather than directly through government-operated facilities.

• The Canadian public increasingly looks to the federal government to focus its science and technology resources on improving the quality of life, rather than on strengthening economic competitiveness.

The public is evenly divided on whether they believe the federal government should place a higher priority on science and technology innovation directed at making the economy more competitive or on improving the overall quality of life. This represents a noticeable shift from four years ago when economic competitiveness was the greater priority and this shift likely reflects the improved economic conditions being felt across the country. This trend may also indicate that the public is growing weary of the emphasis by governments across the country on deficit cutting and economic competitiveness.

• The Department is seen as a credible source of public information on natural resource issues.

The Department is far from being a household name for most Canadians. It is not top of mind for most when they think about where they might go to learn more about natural resource topics, relative to such sources as local libraries and the media. Moreover, relatively few know much about the Department's areas of responsibilities or specific programs and activities.

Despite this low level of familiarity, Natural Resources Canada enjoys public credibility as a source of information on natural resource topics, ahead of libraries and other government sources. This positioning – although perhaps as much a function of the Department's name as with direct experience and knowledge – provides an excellent foundation to launch public communications and education initiatives.

# **Recommendations**

Based on the results and conclusions drawn from this study, the following recommendations focusing on strategic communications are presented to the Department for consideration:

1. Build public awareness of the federal government's role in how science and technology innovation is transforming Canada's resource sector.

Canadians clearly value science and technology, and they see its role in ensuring the sustainable development of natural resources to be equally important to what it can do in terms of improving the economy and our quality of life. However, it is unlikely that most are aware of or understand just how S&T contributes to the resource sector. Many may feel this is more of a promise than a reality.

This presents a significant opportunity in terms of building greater profile for S&T innovation in the resource sector and support two important objectives. First, communications in this area will support the resource sector overall by showing how innovations are reducing the environmental damage caused by industry operations, making more efficient use of valuable resources, and making Canadian industry more competitive in the world economy. Second, this strategy will boost the Department's profile (and that of the federal government more generally) in a positive way, associating it with initiatives that Canadians will appreciate and support.

2. Continue to develop effective strategies for increasing Canadians' awareness about energy, generally, and the environmental consequences of their own consumption behavior.

With energy issues occupying a low public profile, there has been little progress over the past few years in Canadians' understanding, particularly in terms of the environmental consequences of their own consumption. While it is unlikely that government efforts on their own will mobilize the public to a significant degree, the Department is well positioned to expand communications and educational initiatives in this area because the public continues to be concerned about the environment and looks to the federal government for leadership.

Given the lack of increased public awareness of these issues over the past several years, the Department needs to closely evaluate the effectiveness of its current initiatives and consider alternative strategies that offer greater potential impact. Collaboration with the provinces, utilities and other private companies provide a basis for leveraging limited resources, but it will be important for the Department to maintain a clear profile in such joint initiatives.

3. Support the efforts of industry and provincial stakeholders in addressing the forest industry's vulnerable public image as environmentally damaging and low tech.

The forest industry is widely recognized as playing a critical economic role, but its image with the general public remains vulnerable in two key areas. First, Canadians continue to be critical of this industry because it is using inappropriate management practices that are out-of-step with their own values, which place environmental priorities ahead of economic ones. Second, forestry continues to be viewed as a traditional "low tech" industry that may not have as big a future in Canada's knowledge-based economy of the future.

Although Ottawa does not have regulatory powers in the forest sector, the Department can help address public concerns about forestry because Canadians look to the federal government to play a role in safeguarding the country's natural resources. While the Department must be careful to present a balanced and defensible picture of forestry practices in Canada (to avoid being criticized as doing industry's bidding), it can publicize positive stories and developments about how forest management is making progress in reducing negative impacts, using more sustainable management practices, shifting to valueadded products, and generally incorporating more sophisticated science and technology. Showcasing government-sponsored S&T innovation in the forest sector might prove to be an effective means of achieving this objective.

4. Target communications initiatives broadly rather than tailor them to specific audiences.

Canadians' awareness and perceptions about natural resource and energy issues are largely consistent across the country, with surprisingly little variation across different regions or demographic strata. This means that, in developing communications initiatives that address broad themes (e.g. innovation in the resource sector), the Department can target the messages broadly at the national or regional level, rather than focusing on narrower segments of the population.

5. Continue to track public opinion over time, to monitor trends and evaluate communications initiatives.

The survey provides a current benchmark of Canadian public opinion on key issues facing the Department, and reveal that such opinions tend to be relatively stable over time. Such stability will not continue indefinitely, and the Department will need to monitor public opinion on an ongoing basis to detect and respond to changes that may result from broad shifts in public priorities and major events (e.g. energy shortages, environmental disasters). As well, research provides an important evaluation tool for both the delivery and impact of new or ongoing communications initiatives targeted at the public.

In addition, the Department should take the necessary steps to identify and use pertinent research conducted elsewhere in the federal government, through Environment Canada and Industry Canada for example. Finally, the Department should ensure it is coordinating its public opinion and market research, to ensure it is focused on Departmental needs and that this information is distributed appropriately throughout the organization.

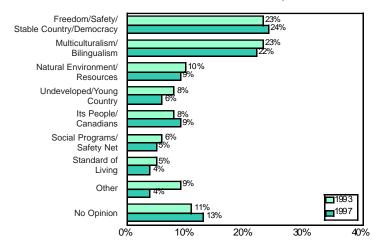
**DETAILED FINDINGS** 

# **Economic Role of the Resource Sector**

#### Importance of Natural Resources to Canadians Today

The central role that natural resources have played in the country's development and economy has been a major aspect of Canada's image, both to its citizens and to the world-at-large. But while this image of pristine natural environment and plentiful resources may still be how the rest of the world views Canada today, it is not how Canadians define what makes their country unique.

When asked on the survey (as the first question) to identify what single thing they believe makes Canada unique from other countries, Canadians are most likely to mention that they live in a safe, free and stable country (24%) or the country's multicultural/ bilingual character (22%). By comparison, barely one in ten define Canada's uniqueness in terms of its natural resources (5%) or natural environment (4%)(down 1 percentage point since 1993). Other defining characteristics mentioned even less often include Canada being a young, undeveloped country, it's people, social programs/safety net, and its standard of living. Of note is the fact that Canadians' view of what makes their country unique has been remarkably stable, having changed very little since this question was asked in the 1993 and 1991 surveys (Question 1).

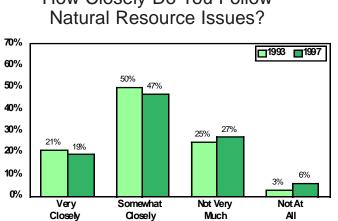




As on the previous surveys, Canadians' perceptions of what makes their country unique are largely similar across the country. Residents of British Columbia (10%) and rural parts of Canada (9%) are no more likely to define their country in terms of natural resources than those living in Ontario (9%) or the major urban centres (9%). On other aspects of what makes Canada unique, residents with higher levels of education and income, those living in larger population centres and residents of Ontario and western Canada are more likely to focus on multiculturalism and less apt to define their country in terms of freedom and liberty.

The survey also probed how Canadians interpret the term "natural resources." When asked what first comes to mind when they hear this term, the public is most apt to think of forests and trees (61%), followed by minerals and mineral deposits (36%), oil and gas (33%), and water, rivers or streams (25%). Other responses, such as hydro-electricity, agriculture, fish, energy resources and the Canadian people themselves, are mentioned by no more than one in ten. As might be expected, the relative emphasis on particular resources varies predictably across regions, with forests most widely mentioned in B.C., oil and gas in the Prairies, and hydroelectricity in Quebec. How Canadians define the term "natural resources" has changed very little since 1993 (Question 10).

While the country's resources are not prominent in how Canadians define their country, it is a topic that many people maintain some level of interest. Seven in ten say they very closely (19%) or somewhat closely (47%) follow stories in the news about natural resource issues (defined in the survey as the country's physical resources connected to the land, such as forests, minerals, water and wildlife). The remainder indicate that they do not follow such stories very much (27%) or at all (6%). The extent to which Canadians follow natural resource issues has declined marginally over the past four years (Question 11).



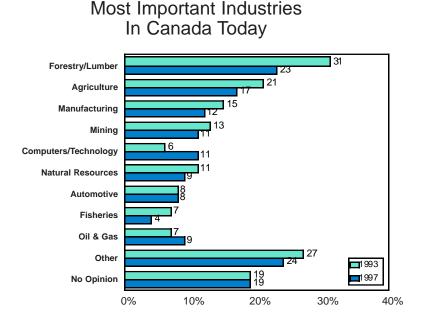
How Closely Do You Follow

As was the case in 1993, Atlantic Canadians (26%) and British Columbians (25%) are most likely to closely follow natural resource issues, while Quebecers (12%) are least likely to do so (close to half of Quebecers do not follow such issues very much or at all). Interest in natural resource issues increases with household income and age level, but not by community size: Residents of rural areas (24%) are only marginally more likely than urban residents (20%) to follow such issues very closely.

### Importance of the Resource Sector to the Canadian Economy

A principal objective of this study is to gauge the importance which Canadians place on the natural resource sector in contributing to economic prosperity. Results from the survey indicate that, as was the case in 1993, the public continues to place a high degree of importance on this sector, beyond its actual contribution to Canada's GNP.

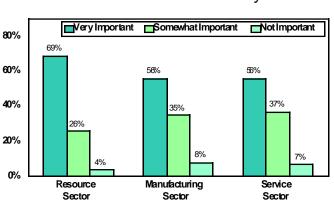
When asked to identify (unprompted) which particular industries or areas of economic activity contribute most to the Canadian economy today, the public is most likely to mention forestry/ lumber/pulp and paper (23%), followed by agriculture (17%), manufacturing (12%), mining (11%), computers/information technology (including telecommunications)(11%), and natural resources non-specifically (9%). No other industries are mentioned by more than eight percent, while one in five (19%) could not name any industry (Question 2).



Although forestry continues to be the single most salient industry in the minds of Canadians, this is noticeably less so than in 1993 (down 8 percentage points), with this decline evident across the country. Also less likely to be identified this year are agriculture and manufacturing, while there is increased attention to the contribution of computer and technology industries (11%, up 5). Despite the drop in public attention on the forest sector (and to a lesser extent on other traditional resource-based industries), core resource-sector industries account for 40 percent of all responses to this question, well above that given to manufacturing (11%), agriculture (11%) or service sector industries (13%).

The profile of important Canadian industries varies in a predictable pattern across the country, although these differences are not as substantial as might be expected given the prominence that particular industries play in each region. Forestry and lumber is given the most prominence in B.C. (51%) (although it is also the most often mentioned industry in Atlantic Canada and Quebec), while agriculture is most prominent in the Prairies, the automotive industry in Ontario, hydro-electric power in Quebec, and the fishery in Atlantic Canada. But in each case the variation is matter of degree rather than a predominant response. Differences in the salience of industries also varies somewhat by demographic characteristics, with Canadians having higher levels of education and income more likely to emphasize the importance of the computer and technology sector, while (as in 1993) those with lower levels are least able to identify any industries in response to this question.

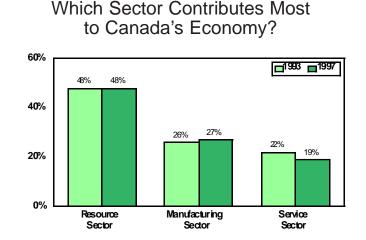
The perceived importance of the resource sector emerges more clearly when the question is posed in more specific terms. Seven in ten (69%) Canadians say the resource sector is very important to the country's economy today, essentially unchanged from 1993 when 70 percent expressed this view. By comparison, little more than half place the same level of importance on either the manufacturing (56%) or the service (56%) sectors, in both cases representing a marginal (3 percentage points) increase over the past four years (Questions 3a-c).



## Importance of Industry Sectors to the Canadian Economy

The resource sector is most widely seen as very important across the population, although some regional variation is evident. This sector is most likely to be rated as very important by residents of the Prairies (85%) and B.C. (82%), but also by those living in Atlantic Canada (80%). By comparison, only 42 percent of Quebecers rate this sector as very important to the country's economy, despite this province's reliance on forestry, mining and hydro-electric power. Quebecers, however, are also less likely to place a high level of importance on either the manufacturing or service sectors, which may reflect a lower level of knowledge about the structure of the Canadian economy as a whole (this pattern was also evident in 1993).

The preeminent profile of the resource sector is most clearly reflected when Canadians are asked to make a direct comparison in picking one of the three sectors as contributing most to the country's economy. In this context, close to half (48%) identify the resource sector as most important, compared with those who assign this role to the manufacturing (27%) or service (19%) sectors. These ratings are essentially the same as those given in 1993 (Question 4).



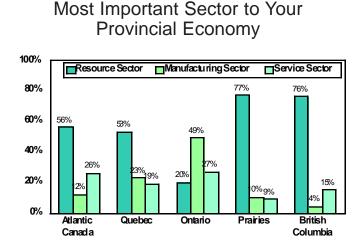
Consistent with the findings presented above (and with the 1993 results), the importance placed on the resource sector is higher in the West (B.C., 65%; Prairies, 57%), and to a lesser extent in Atlantic Canada (53%) and Quebec (49%). By comparison, this view is shared by only 37 percent in Ontario, equal to the percentage assigning this importance to the manufacturing sector (37%). The apparent stability in these results nation-wide masks some regional shifts in the relative importance placed on the resource sector, which has increased since 1993 in B.C. (up 7), the Prairies (up 5) and Atlantic Canada (up 9), while declining in Ontario (down 5) and Quebec (down 1).

The importance of the service sector to the Canadian economy is most likely to be emphasized by urban residents, women, and residents with higher levels of education. Manufacturing is assigned a greater importance than service industries by men, rural residents, those with a high school education, and older Canadians.

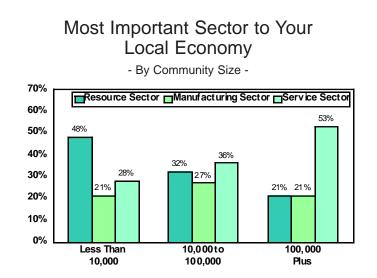
### Importance to the Provincial and Local Economy

For many Canadians, understanding and focus on the economy is primarily at the provincial level, and their views of the relative importance of different sectors at this level more accurately reflect the reality of the country's regional variations. The resource sector is considered the most important of the three by a strong majority of residents of B.C. (76%) and the Prairies (77%), and to a lesser extent by those living in Atlantic Canada (56%) and Quebec (53%), compared with only 20 percent in Ontario where half (49%) assign this importance to manufacturing (Question 5).

No more than one-quarter from any region or demographic group considers the service sector as primary in driving their provincial economy, with this view most evident in Atlantic Canada and Ontario, as well as among urban residents, Canadians with at least some university education, and those under 35 years of age. Overall, public perceptions on this issue have changed very little over the past four years.



When the focus shifts to the local economy, Canadians' perspective shifts noticeably depending on the size of the community in which they live. Across the country, it is the service sector (41%) that emerges as the one seen as contributing most to the local economy, but this ranges from 53 percent among urban residents to only 28 percent among those living in communities of less than 10,000. The reverse is true among rural residents, with half (48%) identifying the resource sector as most important, in comparison with service (28%) and manufacturing (21%) industries. Overall, these results indicate that Canadians have some awareness of what economic sectors support their local economy, and can distinguish these from what industries are driving the economy at the national and provincial levels (Question 6).



Perceptions on this question also vary somewhat by demographic characteristics. The service sector is given greater local prominence by women, Canadians under 35 and those with more education, but these differences partially reflect variations in the population by community size. Opinions have changed little since 1993, except for a shift in focus from the service sector to the resource sector among residents of Atlantic Canada (10 points), B.C. (8 points) and Canadians in the top income bracket (7 points).

### Contribution to Canada's Trade Exports

Given the significant role that exports play in the Canadian economy, a relevant measure of economic importance is the extent to which industries are seen to contribute to the country's trade balance. The survey addressed public perceptions of this dimension by asking Canadians to indicate the extent to which they believe each of seven specific industries is successful in selling its products and services abroad.



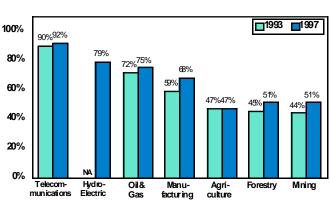
All seven industries are considered to be somewhat if not very successful in exporting to other countries by at least seven in ten Canadians, with no more than one-fifth rating any to be not successful. As in 1993, however, whether or not an industry is viewed as being "very successful" – arguably the best indicator of public opinion on this type of question – varies noticeably, although the gap between the strongest and weakest industries has narrowed over the past four years. The public is most likely to see Canada's forest (45%), hydro-electric power (44%) and telecommunications (42%) industries as very successful in selling their goods and services to other countries [Note: hydro-electric power was not included on the 1993 survey]. The public is less likely to assign this level of success to the country's oil and gas (35%), agriculture (37%), mining (27%) and manufacturing (26%) industries, but Canadians' ratings in each case have improved noticeably since 1993 (Questions 7a-f).

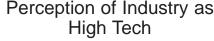
As in 1993, the perceived success of each industry's export performance varies noticeably across the country, according to regional strengths: The greater the importance assigned to an industry, the more likely it is seen as very successful in selling abroad, and the more noticeable the increase in "very successful" ratings over the past four years. For example, the stronger ratings for mining since 1993 are most evident in Ontario and the Prairies (up 14 points), while oil and gas has increased most substantially in the Prairies (up 14), and manufacturing in Ontario (up 19). The one notable exception is the forest industry, which B.C. residents are most likely to rate as very successful (58%), but are marginally less likely to do so than before (down 5). Except in the case of hydro-electricity, Quebecers are least likely to rate all industries as very successful at exporting abroad, but they are also the only ones to express increased confidence in the success of the forest industry (38%, up 11).

Across the population, perceptions of successful export contributions are strongest among Canadians with the highest levels of household income, and it is within this segment that increased ratings since 1993 are most evident.

#### Perceptions of Industries as High Tech Versus Low Tech

Canada's resources industries have a popular image as being traditional and unsophisticated, rooted in the country's historic image as "hewers of wood and drawers of water." This image no longer accurately reflects how these industries operate, but the extent to which this view continues to be held will likely influence whether they are seen as "sunset" industries destined to disappear over time, or promising industries that will carry Canada well into the 21st century. Results from the survey indicate that Canadians still associate core resource industries as low tech, relative to other industries, and that this image has been slow to change.





The survey asked Canadians whether they considered each of seven industries to be essentially "high tech" (relying on sophisticated or advanced technology and equipment) or "low tech" (relying on less advanced or more traditional technology/equipment). The benchmark for "high tech" industries is set by the telecommunications industry (a view expressed by 92% of Canadians), but a significant majority also think "high tech" in rating both the hydro-electric power (79%) and oil and gas (75%) industries. By comparison, the public is divided in how it thinks of other core resource industries, with barely half assigning a high tech image to agriculture (47%), forestry (51%) and mining (51%), although the latter two industries have made modest gains since 1993 (Questions 8a-f).

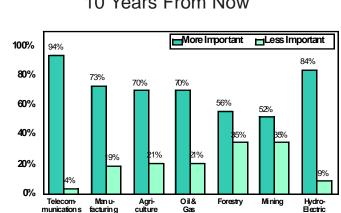
Public perceptions are again partially influenced by the regional prominence of specific industries. Hydro-electric power is most widely considered high tech in Quebec, while both oil and gas and agriculture are most likely to be thought of in these terms by residents of the Prairie provinces. The increase since 1993 in perceptions of forestry as high tech is most evident among residents of Ontario, Quebec and the Prairies, as well as among Canadians living in rural areas, those 55 and older, and those with the least education. The increase in the image of mining as high tech has also taken place mostly in Ontario and the Prairies, but across the country as a whole it is among younger Canadians and those with the most education who have shown the most movement in how this industry is viewed.

## Future Importance to the Canadian Economy

Beyond how Canadians view the current contribution of economic sectors, of even greater significance is how they view the future role of these industries in Canada, as the economy continues to undergo fundamental structural changes. Results from the survey reveal that, while resource industries are considered the primary sector in today's economy, it is other sectors that are more likely to be seen as growing in importance in the future.

There is virtual consensus among Canadians that the telecommunications industry will be much more or somewhat more important to the Canadian economy 10 years from now (94%, up 4 points since 1993), followed closely by the hydro-electric power industry (84%, no trend data). Seven in ten anticipate increasing importance for manufacturing (73%, no change), oil and gas (70%, up 6) and agriculture (70%, up 2), compared with no more than one-fifth who believe any of these industries will decline over this time period.

Canadians are much less likely to anticipate a stronger role in the Canadian economy for either forestry (56%, up 1) or mining (52%, up 9), although the latter has increased more than any other industry over the past four years. In both cases, one-third express the view that these two core resource sector industries will be less important 10 years from now (Questions 9a-f).



## Importance to the Economy 10 Years From Now

As in 1993, future expectations about the role of these industries varies across the country. The oil and gas industry is most widely seen as growing in importance among residents of the Prairies (82%, up 11 points) where this industry is most prominent, but also in Atlantic Canada (86%, up 8) fueled by the promise of new offshore activity with the Hibernia and Sable Island projects. Expectations for the forest industry, on the other hand, are lowest in B.C. (49%) and Quebec (49%), where this industry is currently most important, as well as among Canadians with higher levels of education and income.

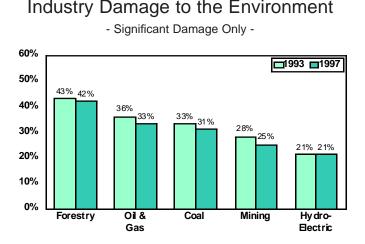
Anticipation of improving prospects for the mining industry have increased across the country, but most substantially in the Prairies (63%, up 15) and B.C. (52%, up 19), as well as among Canadians in the top income bracket (52%, up 21). Quebecers continue to be least optimistic about the future of mining, and are evenly divided between those who expect it to grow more important (41%) and those who think it will become less so (39%).

# **Environmental Impacts of the Resource Sector**

As important as the resource sector is to economic prosperity and jobs, Canadians continue to be concerned about the impact of these industries on the country's natural resources and the overall quality of the environment. The survey addressed the public's perceptions about the magnitude of these impacts, their acceptability, and the extent to which they can be reduced.

#### Extent of Industry Damage to the Environment

Canadians were asked about the extent to which they believe each of five resource sector industries is damaging the environment. All five are seen as causing at least moderate environmental damage, although the public is marginally less likely than it was four years ago to feel the extent of this damage is significant. Among the five industries, Canadians are most likely to say the forest industry is causing significant damage to the environment (42%, down 1 since 1993), while fewer make this judgment about the oil and gas (33%, down 3), coal (31%, down 2), mining (25%), and hydro-electric (21%) industries. In each case, a majority rates the extent of environmental impact to be moderate or minor, while few say there is no damage caused at all (Questions 12a-e).



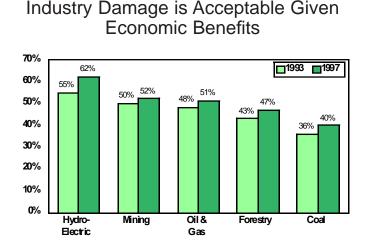
Perceptions of environmental damage vary to a modest degree across the country, but in some cases the pattern is the reverse to that seen when rating the economic importance of these industries. Significant forest industry impacts are most likely to be identified by urban residents, Canadians with a university degree, and those living in the Prairie provinces (with this view having increased among this last group since 1993).

Perceptions of oil and gas impacts are most widespread in Quebec, although they have declined in both this province and among Atlantic Canadians, while at the same time increasing modestly among those living in the Prairies and B.C. As in 1993, women, younger Canadians and those with lower levels of household income continue to be among those most apt to believe this industry is causing significant environment damage.

Perceptions of significant mining industry impacts have declined across the country, except in B.C. (34%, up 10) where there has also been the most noticeable decline in perceptions of coal industry impacts (25%, down 5). No more than one-quarter of Canadians from any region or group maintains that hydro-electric power causes significant environmental damage, but this view is most evident among university graduates and Canadians 35 to 54 years of age.

### Acceptability of Industry Impacts

While most Canadians believe the resource sector is damaging the environment, what is perhaps more important is whether or not they believe these impacts are acceptable given the jobs and economic benefits provided by these industries. The survey indicates that the public remains largely divided on this issue, but since 1993 has become a bit more accepting of industry impacts.



Across the five resource industries examined, Canadians continue to be most likely to say the environmental damage caused by the **hydro-electric industry** is fully (11%) or somewhat (51%) acceptable, and such acceptance has increased since 1993 (up 7 points) [Note: this question was asked only of those who say this industry causes moderate or significant environmental damage]. As in 1993, Quebecers continue to be most accepting of such impacts, but the most significant increase has occurred among residents of Ontario (63%, up 15). Residents of Atlantic Canada (53%) and B.C. (54%) are least likely to share this view (Question 13e).

Public opinion is more divided in terms of the environmental impacts of **mining** activities, with little more than half (52%) rating these as acceptable (up 2), compared with 45 percent who say they are unacceptable. Increasing acceptance of mining impacts is most evident in B.C. and Ontario, as well as among Canadians in the top income bracket. Canadians are similarly divided in their views about the **oil and gas industry**, with half (51%) saying the impacts are acceptable (up 3), having increased primarily in Ontario, while declining in the Prairies and B.C. Residents of Quebec continue be least accepting of the damage caused by this industry (Questions 13b-c).

A growing minority of Canadians find the environmental damage caused by the **forest industry** to be fully (4%) or somewhat (43%) acceptable (up 5 points since 1993), but a larger proportion continue to say they are somewhat (32%) or fully (19%) unacceptable. Increasing acceptance is evident across the country, but most noticeably in B.C. (50%, up 9) and in communities under 100,000 in population (52%, up 9), as well as among Canadians in the top income bracket (52%, up 13) and those under 35 years of age (51%, up 11). Modest growth is also evident in the percentage of Canadians who find acceptable the environmental damage caused by the **coal industry** (40%, up 4), with this increase most evident in Ontario and B.C., as well as in communities between 10,000 and 100,000 in size (Questions 13a, d).

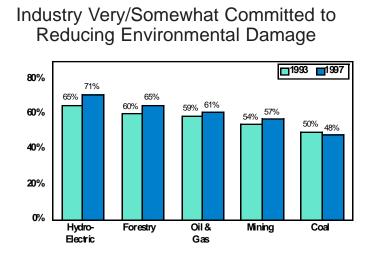
As in 1993, men and Canadians with lower levels of education continue to be most accepting of resource sector impacts, while residents 55 and older have become significantly less accepting over the past four years. Although Canadians as a whole appear to have become marginally more ready to accept that these industries will damage the environment, it remains the case that no more than one in ten from any group finds the environmental damage from any of these industries to be fully acceptable.

#### Industry Commitment to Reducing Environmental Damage

Given that resource sector industries are damaging the environment beyond what is acceptable to many Canadians, to what extent are they seen to be taking steps to reduce such impacts? Results from the survey indicate that the public is more likely than not to believe these industries are making some effort to reduce the environmental damage they cause, and this view has increased marginally over the past few years. Few, however, feel the sector is strongly committed to this goal.

The hydro-electric industry – the one least likely to be seen as damaging the environment or causing unacceptable impacts – is also the industry which Canadians are most apt to feel is very (14%) or somewhat (57%) committed to reducing the damage it does cause, up six points from 1993. Small but increasing majorities believe this level of commitment also applies to the forest industry (65%, up 5), oil and gas (61%, up 2) and mining (57%, up 3), but less than half (48%, down 2) think the coal industry is at least somewhat committed to reducing its

environmental impacts. No more than one in ten consider any of these industries to be "very" committed in this area (Questions 14a-e).

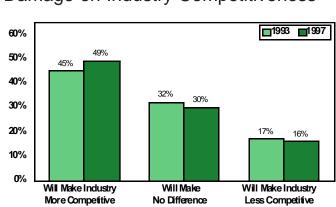


Public perceptions of industry commitment do not vary significantly across the country, although residents of Atlantic Canada and the Prairies are more likely to believe these industries are at least somewhat committed, while Quebecers are least apt to share this opinion. The trend since 1993 is not consistent across industries, and shows a different pattern for hydro-electric power (increased commitment seen in Ontario and the Prairies, among women, and Canadians 55 and older), forestry (Prairies and rural communities), oil and gas (up in the Prairies, but down in B.C.), mining (Atlantic Canada and rural communities), and coal (Prairies).

Overall, the survey indicates that most Canadians believe (or would like to believe) that resource sector industries are paying some attention to the environmental consequences of their operations. However, the sector has made little progress over the past four years in convincing the public of its commitment to sound environmental management. The small number of Canadians who believe these industries are strongly committed to this goal likely reflects both a low awareness of what the industries are actually doing to reduce their environmental impacts, and a healthy skepticism about their commitment to doing what is right.

#### **Environmental Investment and Economic Competitiveness**

While Canadians may not be fully convinced that resources industries are ready to adopt environmentally-responsible practices, they are increasingly sure that such efforts make sound economic sense. Half (49%) of Canadians believe making a financial investment by industry to reduce environmental damage would make these industries more competitive in the marketplace over the long term, up from 46 percent in 1993. Another three in ten (30%) maintain that such investments would have no impact either way on industry competitiveness, while only 16 percent say that reducing environmental impacts would hurt industry's long term competitive advantage. Very few could not express a clear opinion on this issue (Question 15).



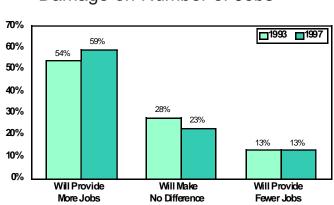
#### Impact of Reducing Environmental Damage on Industry Competitiveness

Strong public belief in the economic soundness of environmental damage reduction is evident across the country, but continues to be most widespread among women, Atlantic Canadians and urban residents. Since 1993, however, the most noticeable growth in this viewpoint has occurred among residents of Ontario and the Prairies, as well as among university graduates and Canadians 55 and older.

When asked why they believe this type of investment will have a positive impact on industry competitiveness (without offering prompted responses), Canadians (as they did in 1993) are most likely to give reasons that have more to do with image than with substance: Because reducing environmental impacts would improve their public image (24%), to be more responsive to public opinion and expectations (22%), and because it would result in more people buying their products (16%). Noticeably less emphasis is given to more substantive reasons, such as making the resources last longer (15%) or producing better products (6%) (Question 16).

Those who maintain that environmental cleanup investments would hurt industry competitiveness are most apt to say this is because the capital or investment cost would be too high (25%), the costs would generally make companies less competitive (23%), the cost of products would go up (21%) or because Canadian businesses would not be able to compete with companies in other countries (14%). One-fifth (22%) of this group could not offer any reasons for why they believe such investments would make companies less competitive, with this group most likely to include women and Canadians with no more than a high school education (Question 17).

While the public recognizes the importance of local industries being economically competitive, Canadians are even more likely to be concerned about jobs and employment, which consistently shows up on national surveys as the number one top of mind issue of public concern. What impact might investments in pollution reduction have on the number of jobs provided in resource sector industries?



#### Impact of Reducing Environmental Damage on Number of Jobs

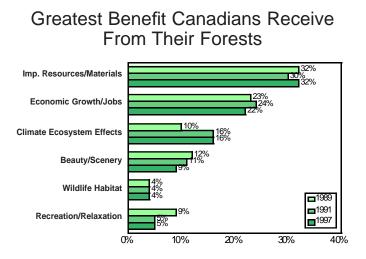
Again, Canadians clearly reject the idea that environmental clean-up must come at the expense of employment in these industries. Almost six in ten (59%) state that such investments would provide more jobs (up 5 points since 1993), compared with only 13 percent who believe it would result in less jobs (no change). Views on this issue are largely consistent across the country, but the increase is most evident in Ontario and B.C, among Canadians in the top income bracket and to a lesser extent in Atlantic Canada, while actually declining in Quebec (Question 18).

## **Forestry and Mining Sectors**

#### **Forest Benefits**

Forests have always played a vital role to Canadians. Historically, forests were valued for their economic contribution, providing both a renewable material resource (for construction, products) and a key source of employment. Forests have also served as a valued setting for recreational pursuits, such as hunting, fishing and hiking, as well as a quiet refuge from the hectic pace of urban life. More recently, Canadians have also come to appreciate the role forest ecosystems play in providing habitat for wildlife and regulating climate.

What types of benefits do Canadians most associate with forests today, and how have these opinions changed over the past eight years? The survey addressed this question by asking respondents (unprompted) to identify what they consider to be the greatest benefit Canadians receive from their forests. As in 1989 and 1991, Canadians are most likely to respond by mentioning either that forests provide an important source of resources or materials (32%) or provide a source of jobs and economic growth (22%). Less often identified are forest benefits associated with climate regulation (16%), as a source of beauty and scenery (9%), habitat for wildlife (4%) or recreation (5%). Although there have been some shifts, the public's response to this question has been surprisingly stable over the past eight years (Question 19).



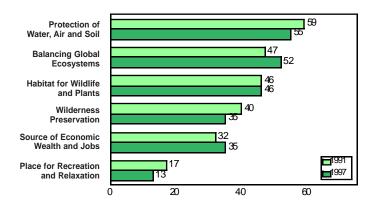
As in 1991, mention of the material/resource benefits of forests is most widespread among residents of Quebec and Canadians with the least education and income, while emphasis on employment and economic benefits is greatest in B.C. Ecosystem benefits are mentioned most often by those living in Ontario.

#### **Forest Values**

Responses to the question about forest benefits reflects what is most salient in the minds of Canadians, but the wording evokes a definite material connotation. The survey also took a broader approach to this issue by addressing the underlying values which Canadians place on forests; such values represent at a deeper level the way in which society defines this resource and how it should be managed. The current controversies over management of forests in Canada reflect in part a conflict between competing interests that are focusing on different forest values. Based on the work pioneered in the 1991 Forestry Canada study, the current survey focused on six broad values which Canadians attach to forests, defined as:

- A place for recreation and relaxation
- A source of economic wealth and jobs
- As a habitat for a variety of plant and animal life
- Balancing the global ecosystem
- Protecting Canada's water, air and soil
- Wilderness preservation

The approach utilized paired comparison scaling methods in which each possible pair of the six values (15 in all) were presented to respondents, who were asked to indicate in each case which of the two values in each pair was more important to them personally. These responses were then combined and recalculated to produce an overall importance score, which represents the importance placed on each value on a scale from "0" (least important) to "100" (most important). This approach was used because it provides an effective means of presenting respondents with clearly-defined choices which can be translated into relative importance scores with a high degree of methodological and statistical precision.



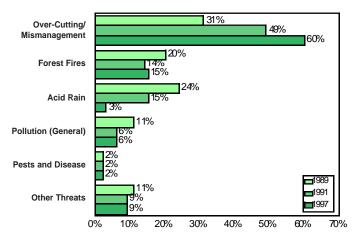
#### Importance Placed on Forest Values

The results yield a clear ordering of the six forest values that reflect the same relative priorities that were recorded in 1991, but with some shifts in overall importance within this general ordering. As before, Canadians place the greatest importance on forests for their environmental and ecological benefits, in terms of protecting the country's water, air and soil (55) and balancing the ecosystem (52), but with a noticeable shift over the past six years from the former toward the latter. Next most in importance are forest values pertaining to wildlife habitat (46), followed by wilderness preservation (35) and economic benefits (35), while the least value continues to be placed on forests as a source of recreation and relaxation (Questions 21; 21a-o).

Importance scores vary somewhat by region and demographic subgroups, but the overall rank order remains essentially the same across the country. As might be expected, economic values tend to be higher in Atlantic Canada and Quebec, among older Canadians and those with the lowest levels of education and income; but even among these groups this value ranks no higher than third or fourth in importance.

#### **Forest Threats**

The survey also examined how public attitudes have evolved in terms of what Canadians see as the primary threats facing the country's forests today, and the results reveal a clear shift in focus of concern towards how industry and government is managing the resource.



Greatest Threat to Canada's Forests

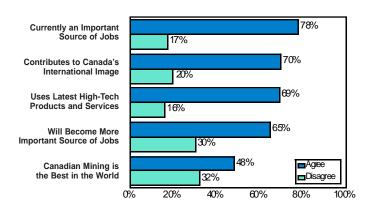
When asked (unprompted) to identify the greatest threat to our forests, six in ten Canadians mention a number of concerns centering around forest harvesting, including overcutting (39%), clearcutting (10%), lack of replanting (6%) or generally poor management practices (5%). This represents a substantial increase from the percentage who identified such problems in 1991 (49%) and 1989 (31%), with most of this increase in the mention of overcutting (up 12 points). By comparison, Canadians are less apt to believe forests today are threatened by

forest fires (15%), acid rain (3%), other forms of pollution (6%) or pests and disease (2%) (Question 20).

Forest management practices and overcutting is the dominant threat identified across the country, but clearcutting is most apt to be identified in Atlantic Canada and B.C., and among Canadians in the top income bracket. As in 1991, Quebecers continue to be more likely than others to identify forest fires (21%, no change) and acid rain (8%, down 23), but residents of this province have also recorded the most substantial rise in concern about overcutting since 1991 (36%, up 22).

#### Economic Contribution of Canada's Mining Industry

Mining plays a significant role in the Canadian economy, and while it may not enjoy as high a public profile as such industries as forestry or oil and gas, the mining industry currently has a positive public image. The results presented below indicate that, while most Canadians may not know much about this industry, their impressions tend to be more positive than negative.



#### Perceptions of Canadian Mining Industry

The public most clearly recognizes the value of this industry because of the employment it provides. Close to eight in ten Canadians strongly (31%) or somewhat (47%) agree with the statement that "*today, the Canadian mining industry is an important source of jobs for Canadians*", compared with only 17 percent who disagree, and another five percent who cannot say either way. Consistent with results presented elsewhere above, however, the public is less convinced about the future role of this industry, as they are somewhat less apt to strongly (23%) or somewhat (42%) agree that "*the Canadian mining industry will be an important source of jobs for Canadians*" in the future. In both cases, strong agreement is most evident among Atlantic Canadians and to a lesser extent residents of the Prairies, as well as among older Canadians and those with the least education and income. Quebecers are least likely to strongly agree with both of these statements (Questions 22b,c).

Seven in ten Canadians strongly or somewhat agree that "*the Canadian mining industry uses the latest high-technology products and services to do its job*" (69%), and that "*the reputation of our mining industry contributes to Canada's image on the international scene*" (70%), with the remainder split between those who disagree and those who cannot say either way. Views on the use of high-technology are consistent across the country, while those most likely to agree that the industry helps Canada's international image include Ontarians, men, older Canadians and those with less education and income (Questions 22a,e).

In contrast to these statements, less than half of Canadians strongly (12%) or somewhat (36%) agree that "*the Canadian mining industry is the best in the world*", with one-third somewhat (25%) or strongly (7%) disagreeing, and another 20 percent unable to express an opinion either way. The lower level of agreement with this statement reflects in part the fact that it represents a strong position and one that most Canadians are not in a position to evaluate. These results are also likely influenced to some degree by the fact that this survey was being conducted just as the Bre-X mining scandal was first becoming widely publicized in late March. The impact of the Bre-X story cannot be clearly measured, but may not have been too significant, given that responses to this question are no different among the most educated and affluent segments Canadians, who would have been most familiar with this story as it was unfolding (Question 22d).

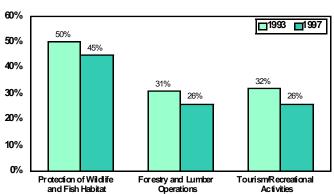
#### Mining Compatibility with Other Land Uses

The positive image that the mining industry enjoys as a source of jobs and economic activity is tempered by public perceptions of its activities as damaging the environment. Canadians generally believe that mining operations are not compatible with other land uses, but they are less likely than four years ago to feel that the level of disruption caused by mining is significant.

As in 1993, Canadians are most likely to believe mining industry operations disrupt more environmentally-sensitive land uses. Close to half (45%) say that mining activity would cause major disruption to the **protection of wildlife and fish habitat** (down 5 points), while a third (33%, up 8) believe the impacts would be moderate and another fifth feel they would be minor (14%) or none at all (5%, no change). Fewer now believe that mining would be a major disruption to **forestry and lumber operations** (26%, down 5) and **tourism and recreation activities** (26%, down 6). Remaining opinions are evenly split between those who would expect moderate disruption of these activities and those who maintain they would be minor or nonexistent (Questions 24a-c).

As was the case four years ago, views on this issue are largely similar across the country, although the downward trend is more evident among certain groups. Concern about wildlife/fish habitat impacts are most evident among residents of Ontario and B.C. and least

so in Quebec, but the largest drop in this opinion has occurred among Prairie residents and Canadians 18 to 34 years of age. Declining perceptions of major disruptions on forestry operations has occurred primarily in Atlantic Canada and Ontario, while increasing marginally in B.C. Finally, the drop in views that mining disrupts tourism and recreation has taken place most noticeably in Ontario and western Canada, as well as among Canadians with higher levels of education and income.



#### Major Disruption from Mining on Other Land Uses

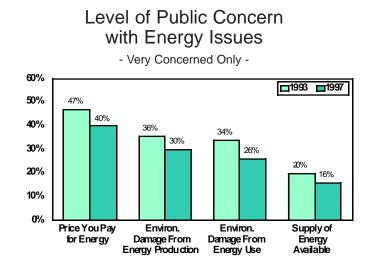
### **Energy Sources and Energy Use**

Following the crisis atmosphere of the 1970s, energy issues have had a relatively low profile through the 1980s and 1990s, as prices have remained largely stable and supply has not been a problem. Throughout this period, however, increasing attention has been devoted to the environmental impacts of both energy generation (e.g. nuclear power, coal-fired power plants) and energy use (automobile emissions and their contribution to smog in urban areas). The current survey examined a range of issues pertaining to Canadians' awareness and perceptions about the generation and use of energy, and how these opinions have changed over the past four years.

#### Public Concerns About Energy

Consistent with other studies conducted over the past several years, Canadians' current concerns about energy continue to be price, environmental impact and supply, in that order. The level of concern in each case has declined noticeably since 1993, reflecting the absence of any major, high profile energy issues that might have focused public attention at the national level.

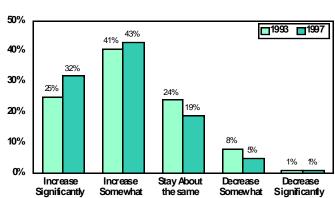
Four in ten (40%) Canadians now say they are very concerned **about the price they pay for energy**, down from 47 percent four years ago. An equal number (40%) are now somewhat concerned about energy costs, while another fifth are not very (14%) or not at all (6%) concerned. As in 1993, price concerns are most widespread in Atlantic Canada (62%) and among rural Canadians (51%), and have actually increased among these groups, as well as to a lesser extent among residents of the Prairie provinces. Elsewhere, strong concerns about energy prices have declined most substantially in Ontario and among residents of communities of 10,000 to 100,000 (Question 32a).



Over the past four years, Canadians have also become less likely to say they are very concerned about **the environmental damage caused by energy production** (30%) and **the damage resulting from energy use** (26%), with half indicating they are moderately concerned, and one-fifth indicating little/no concern about such damage. As before, such concerns are most evident among residents of Atlantic Canada and Ontario, while they are least apt to be shared by Quebecers. Across the country, women and lower income Canadians are most likely to say they are very concerned about the impacts of energy production, while urban residents and university graduates are most likely to be worried about the damage caused from energy consumption. Since 1993, the decline in both types of concerns has taken place primarily in Ontario and western Canada (Questions 32b,c).

As before, the public is least likely to say they are very concerned about **the supply of energy available** (16%, down 4 points since 1993), although close to half (46%, up 3) remain at least somewhat concerned. Again, it is Atlantic Canadians who are most apt to express strong concerns about supply, while Quebec residents are least likely to share this view. As with environmental impacts, the decline in such concerns has occurred primarily in Ontario and western Canada (Question 32d).

The low level of concern about energy supply is striking given that most Canadians believe that energy use in Canada will increase significantly (32%) or somewhat (43%) over the next few years, a view that has broadened considerably since 1993. By comparison, only six percent expect that energy consumption will decline, while the remainder (19%) believe it will remain stable. It is also clear from the data, however, that expectations about future energy consumption have little influence on level of concern about future supply: The likelihood of being very concerned about the supply of energy is no higher among those who believe energy use in Canada will increase over the next few years (16%) than among those who believe that consumption levels will remain stable (14%) (Question 31).



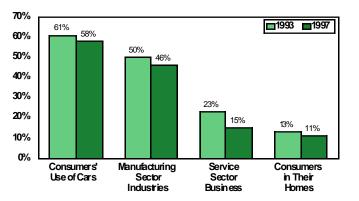
## Anticipated Trend in Energy Use in Canada

Views on this issue vary across the country. British Columbians are most likely to anticipate rising energy consumption (85%), with the percentage expecting a significant increase jumping 13 points since 1993. A similar increase has taken place in Ontario and among Canadians in the top income bracket. In contrast, Atlantic Canadians are less likely than before to believe that energy consumption will increase significantly (24%, down 9). These results suggest that perceptions about energy consumption trends are influenced in part by current economic conditions: The more buoyant the economy, the more Canadians anticipate further growth and the accompanying consumption of resources.

#### **Environmental Impacts of Energy Use**

The survey also focused more specifically on public perceptions of the environmental impacts of different types of energy consumption, which – consistent with the findings presented above – have declined over the past several years.

A majority (58%) of Canadians continue to believe that major environmental damage is caused by **consumers' use of automobiles**, although this view has dropped marginally since 1993 (down 3). Another third (32%) rate such impacts as moderate, while few (9%) believe they are minor or nil. Major damage is most widely mentioned by residents of Quebec and B.C., and by Canadian women, while declining most substantially among Atlantic Canadians and Canadians under 35 years of age. Residents living in major urban centres – where most of the automobile use is concentrated – are no more likely to see such damage as major, although the rate of decline since 1993 among this group is marginally smaller (Question 33b).



#### Major Environmental Damage Caused by Types of Energy Use

Less than half (46%) now believe that energy consumed by **industries in the manufacturing sector** cause major damage to the environment (down 4 since 1993), while increasing numbers consider such damage to be moderate (37%) or minor to nil (15%). This opinion has declined most noticeably in Ontario and among rural Canadians, those 55 and older, and those with lower levels of income, while increasing among residents of British Columbia (Question 33c).

Even more substantial is the decline in perception that energy consumption by **businesses in the service sector** results in major damage to the environment (15%, down 8), with more than four in ten (41%, up 9) now rating such impacts as minor or nil. The decrease in this opinion is most evident among residents of Ontario and western Canada, among urban dwellers and Canadians under 35 years of age (Question 33d).

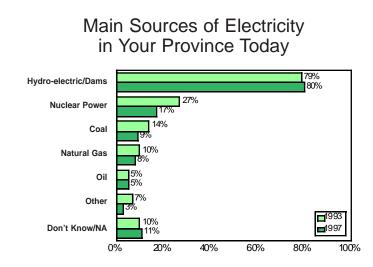
Finally, Canadians still do not see their own **consumption of energy in the home** as having a major impact on the environment (11%, down 2), while an increasing number express the view that home energy use causes minor or no damage at all (48%, up 6). The belief that home consumption has no impact at all is most prevalent (and has increased most noticeably) among Quebecers, residents 55 years or older, and those with the least education and incomes, but this general view is shared by Canadians from all segments of the population (Question 33a).

Overall, these results indicate that the public continues to have limited understanding of the activities that cause damage to the environment, and are much more cognizant of the more visible forms of pollution they can see or hear about (e.g. smog), in contrast to the more indirect forms, such as the impacts resulting from electricity generation at remote power plants.

#### Awareness of Provincial Sources of Electric Power

The study further probed public perceptions about the environmental impacts of household energy use by examining the extent to which Canadians link their own consumption to its environmental consequences. The fact that so few Canadians make this link is rooted in the fact that most are not even aware of how their electricity is even generated.

As in 1993, most (80%) Canadians continue to identify hydro-electric power as the main source of electricity in their province, even when this initial response is further probed to ensure that respondents properly understand what hydro-electric power means. While identification of hydro-electric power is understandably high in such provinces as Quebec and B.C. (where it is in fact the primary source of power), this response is also mentioned by three-quarters of Ontario residents, and two-thirds of those living in Atlantic Canada and the Prairies (where mention of hydro-electric has increased from four years ago) (Question 25).



By comparison, considerably fewer identify any other source of electricity that supplies their province. Nuclear power is mentioned by only 17 percent (down 10 points from 1993, primarily in Quebec and Ontario ), followed by coal (9%), natural gas (8%) and oil (5%). One in ten (11%) could not identify any source, with this group most likely to include women, urban residents, and those with the least education and income.

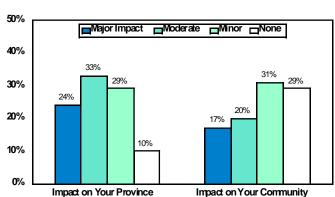
When Canadians are asked which of the sources of electrical power they named is the one most likely to be supplying power to their own household, again hydro-electric power is the primary response (76%, up 12 points from 1993). Few mention other sources that are actually available in their region, such as nuclear power in Ontario (24%), oil in Atlantic Canada (12%) and both coal (15%) and natural gas (11%) in the Prairies (Question 26).

Overall, these findings confirm that Canadians understand very little about how the electricity they use is generated, and the predominant profile of hydro-electric power helps to explain why so few believe that household energy consumption has any significant impact on the environment.

#### **Environmental Impacts of Local Energy Generation**

Those respondents able to identify a source of electrical power likely to be supplying their household were asked to what extent the generation of this power is affecting the quality of the environment in their community and across their province. Perhaps because so many believe they are being supplied by relatively clean hydro-electric power, few believe the energy they use is coming from a source that is damaging the environment.

One in four (24%) Canadians believe the source supplying their household has a major impact on environmental quality **in their province** (unchanged from 1993), while the majority continue to rate this impact as moderate (33%) or minor (29%). Of note is the fact that, although hydro-electricity is seen as less polluting than others, those rating the impact of hydroelectricity on their provincial environment are no less likely to see it as causing major damage than those rating other sources, such as nuclear, oil and coal (although the small size of some subsamples precludes a definitive conclusion of this finding) (Question 27b).

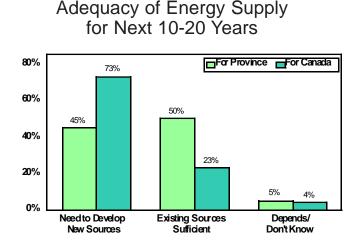


#### Environmental Impacts of Electricity Source Supplying Your Household

Consumers are even less likely to believe their source of electricity is having a major impact on the environmental quality in the community where they live (17%), although this view has increased marginally over the past four years (up 3). Again, perceptions of local environmental impacts do not differ noticeably by type of energy source rated, although small subsamples once again limit a firm conclusion on this point (Question 27a).

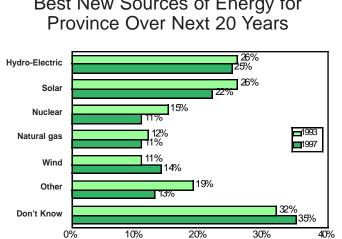
#### Adequacy of Energy Supplies

Despite the fact that few Canadians express concerns about the country's supply of energy, the public continues to be divided on whether their province has adequate sources to cover demand over the next 10 years. Half (50%) believe the existing sources are sufficient to meet their province's energy needs over this period of time (down 2 points since 1993), while almost as many (45%, up 1) say there is a need to develop new sources. As before, the view that current sources are adequate is most widespread in the oil-rich Prairie provinces (64%), while lower and declining in Atlantic Canada (38%, down 6) and Ontario (43%, down 10). As well, the belief that new sources are required is more widespread among those who also believe energy consumption in Canada will increase significantly over the next few years (58%) than among those who expect consumption levels to remain stable (34%) (Question 28).



A very different picture emerges when Canadians are asked about the adequacy of energy sources currently available to the country as a whole. Three-quarters (73%) say that Canada needs to develop new energy sources over the next 10 years, compared with only one-quarter (23%) who consider current reserves to be adequate. The view that new national sources are required is most widespread in Quebec (perhaps because they are keen to export more of their province's hydro-electric power) and British Columbia, as well as among Canadians with lower levels of education and income (Question 30b).

Those respondents who believe that their province needs to develop new sources of power were also asked which new sources they thought would be the best option over the next 20 years. As in 1993, Canadians are most likely to favour those options they see as being environmentally clean, including hydro-electric power (25%) and solar (22%), followed by wind energy (14%), natural gas (11%) and nuclear power (11%). Preferences for new energy options have changed relatively little since 1993, but as before, one-third (35%) could not identify any sources they thought would constitute the best option for their province to develop (Question 29).



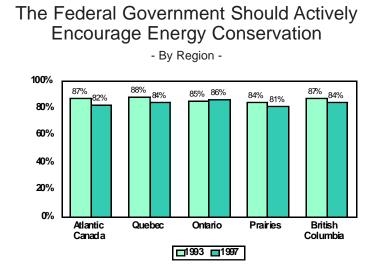
# Best New Sources of Energy for

Preferences for new energy options vary somewhat across the province, reflecting sources that are already known or currently desired. Hydro-electric power is most popular in B.C., while solar is most likely to be identified by residents of Ontario and the Prairies (with the latter also most favourable toward wind power). Atlantic Canadians appear most eager to develop natural gas (with the Sable Island offshore project now underway), while nuclear is most likely to be mentioned by residents of Ontario and to a lesser extent B.C. Quebec residents are most likely to identify hydro-electricity as the best source, but four in ten residents from this province cannot identify any option as the best one to develop further.

When asked why they believe these sources are the best options for their province to develop, Canadians are most likely to say because they have the least impact on the environment (47%, up 2 points since 1993). Others say the preferred option offers the most secure supply (30%, unchanged) or the lowest cost to produce and/or use (18%, down 8%). Smaller percentages mention such advantages as being the only feasible option, job creation, and the opportunity for export sales. The rank order importance of being best for the environment, offering a secure supply, and providing the lowest cost, holds whether the public is describing hydro-electric, solar, wind, or nuclear power (Question 30).

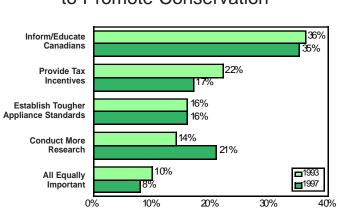
#### Federal Government Role in Energy Conservation

As uninterested in energy issues as Canadians might appear to be, they continue to look to the federal government to play a strong leadership role in such areas as energy conservation. More than eight in ten (84%) say the federal government should actively encourage Canadians to change the way in which they use energy, down marginally from 1993. Support for a strong federal presence in this area remains strong in every region of the country, and is particularly widespread among those with the most education and income (i.e. opinion leaders)(Question 34).





In terms of how the government might best promote conservation, the public continues to favour voluntary, incentive-based approaches. When asked which of four specified strategies would be most effective in encouraging conservation, Canadians are most likely to choose informing and educating the public (35%) or conducting more scientific research to improve energy efficiency (21%, up 7). Fewer believe the best approach would be to offer tax incentives to businesses and consumers (17%, down 5) or establishing tougher efficiency standards on major appliances (16%, unchanged). Another eight percent volunteered that all four of these approaches would be equally effective in encouraging the public to become more careful in how they use energy (Question 35).



# Opinions on this question are generally consistent across the population. Education strategies are most popular in Quebec and Atlantic Canada and among rural residents, while the increased focus on scientific research has occurred most noticeably in the Atlantic provinces and Prairies, as well as among Canadians with a university degree. As in 1993, those who maintain that all four strategies are equally important tend to have the most education and income.

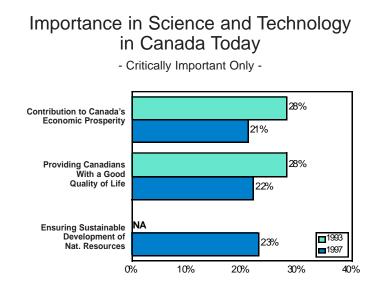
#### Most Effective Way for Government to Promote Conservation

## Science and Technology in the Resource Sector

#### Role of Science and Technology in Canada Today

Science and technology are playing an increasingly significant role in all areas of society, including the resource sector. Results from this research indicate that Canadians are recognizing this contribution, although perhaps not quite as strongly as they did a few years back.

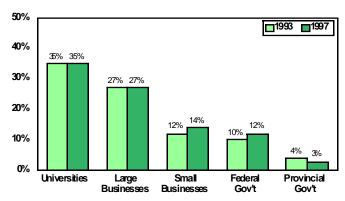
Seven in ten Canadians express the view that science and technology play a critically or very important role in both **contributing to Canada's economic prosperity** (69%) and **providing Canadians with a good quality of life** (72%). But since 1993 the percentage who consider each of these roles to be critically important has declined several points, as the public is increasingly viewing the role played by science and technology to be either very or somewhat important. Of greatest significance to this study is the fact that the public is equally as likely to recognize the role that science and technology plays in **ensuring the sustainable development of Canada's natural resources**, which seven in ten rate as critically (23%) or very (46%) important (no trend data) (Questions 36a-c).



As in 1993, science and technology is most apt to be seen as critically important by urban Canadians and those with higher levels of education and income, with these differences more accentuated in the case of economic prosperity than with quality of life. At the same time, the decline in rating science and technology as critically important over the past few years is most significant among Canadians in the top income bracket. As before, Quebecers continue to place less importance on the role of science and technology than do Canadians living elsewhere in the country. Not only do Canadians place importance on science and technology, but many also claim to have an active personal interest in this area. Close to six in ten say they personally follow science and technology issues very (13%) or somewhat (46%) closely (up 2 points since 1993), while the remainder do so not very much (35%) or not at all (6%). Predictably, these issues are most likely to be closely followed by men and Canadians with a university degree (Question 44).

#### Sectoral Contribution to Science and Technology Advancement

The survey also examined public perceptions about where science and technology innovation is taking place in Canada today. As in 1993, when respondents are asked which one of several specified sectors they believe is contributing the most to the advancement of science and technology in Canada today, they are much more apt to select either Canadian universities (35%) or large businesses and corporations (27%), than small businesses (14%) or either the federal government (12%) or provincial (3%) governments. Conversely, when asked which of these sectors contributes the least to advancing S&T, Canadians are most likely to name small businesses (36%), followed by the federal government (20%), provincial governments (19%), with few assigning this position to large businesses (10%) or universities (6%). These public views have remained remarkably stable over the past four years, during a period marked by shrinking budgets of both universities and governments, coupled with the growing presence and profile of the private sector in many areas (Questions 37, 38).



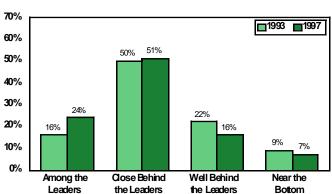
Which Sector Contributes Most to Advancing Science and Technology?

Public perceptions of which sectors are contributing most to S&T innovation are generally consistent across the country, but universities are more likely to be seen as contributing the most by highly educated Canadians, while Quebecers are more likely to see the private sector playing the largest role. As in 1993, the federal government is most likely to be viewed as the leading sector by residents of Atlantic Canada, a region which has traditionally depended more heavily than others on federal government activity. Over the past few years, recognition of the

important role of small business in S&T innovation has grown most substantially among Canadians with lower levels of education and income.

#### Canada's International Standing

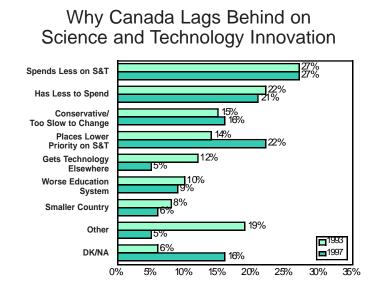
Where does the public think Canada stands relative to other leading industrialized nations in the area of science and technology innovation? Canadians are generally positive about their country in this respect, and their opinions have improved measurably over the past four years. One in four (24%) now rate Canada to be among the leaders in S&T innovation (up from 16 percent who expressed this view in 1993), and another half (51%) place their country close behind the leaders, while fewer now consider it to be well behind (16%) or at the bottom (7%). Of note is that very few (2%) are unable to make a judgment about where Canada stands relative to other countries in this area (Question 39).



#### How Canada Compares with Other Countries on S&T Innovation

The public's increasingly positive view of the country's international standing on S&T extends across the country, but the improvement is most noticeable among residents in Ontario, men and Canadians with a university degree. Those with higher levels of income and education are no longer more critical of Canada's standing, as was the case four years ago.

What is keeping Canada from being among the leaders? When those who place the country well behind or near the bottom of the pack are asked to explain their opinion, two types of reasons emerge. One theme is that Canada lacks the resources to compete successfully with other countries, in terms of spending less on S&T (27%), having less resources to spend (21%), and being a smaller country (6%) (Question 40).



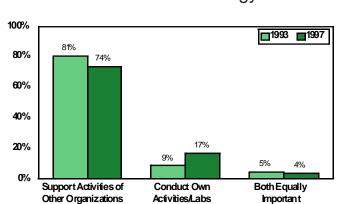
The other type of reason pertains to the country's commitment, in terms of placing a lower priority on S&T (22%), being too conservative or slow to change (16%), and having an inferior education system (9%). Others say Canada lags behind because it can adopt technology developed elsewhere (5%) or loses too many experts to other countries (3%). Overall, the responses to this question are similar to those given in 1993, the one exception being a noticeable increase in the view that Canada places lower priority on S&T innovation, most noticeably among men, Canadians under 35 and those living in western Canada.

#### Federal Government Role in Promoting Science and Technology

Those respondents who feel Canada lags behind other countries were also asked about how the federal government should promote S&T innovation. Most (74%) Canadians continue to believe the federal government can best promote innovation by supporting the activities of private industry, business and universities, but this view is not as widespread as in 1993 (down 7 points). A small but increasing minority say that it is more important for the government to conduct S&T activities in its own government-operated facilities (17%, up 8).

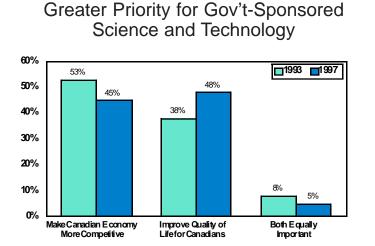
This trend is evident across the population, but is most noticeable in Atlantic Canada and Quebec, as well as among women and Canadians in the middle income bracket. Those in households with the most income continue to be the strongest believers in government-sponsored S&T innovation through other sectors (Question 41).

While Canadians place equal importance on S&T directed at economic prosperity and quality of life, which deserves greater attention for government-directed efforts? As in 1993, there is no consensus on this issue, but the current results reveal a significant shift suggesting that the public may be tiring of the government's recent preoccupation with economic performance.



# How Should the Federal Gov't Promote Science and Technology?

When presented with a choice, Canadians are now more likely to say the top priority for government-sponsored S&T should be improving the quality of life for Canadians (48%, up 10 points), and less apt to believe the focus should on be making the Canadian economy more competitive (45%, down 8). This shift has occurred across the country, but most substantially among Canadians with a university degree (18 point shift), and to a lesser extent among men, rural residents and those with higher levels of income. By contrast, the views of Canadians with the lowest levels of income and education have changed the least, wiping out an income gap identified in 1993 (Question 42).

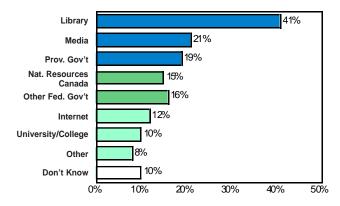


#### Sources of Information on Natural Resources

As Canada moves swiftly towards becoming a knowledge-based economy, the public will look to become better informed about the country's natural resources. The survey briefly addressed where Canadians might go for such information today.

When asked (unprompted) where they might go to obtain information about Canada's natural resources, the public is most likely to think of their local library (41%), followed by a number of sources including the media (TV, newspapers) (21%), their provincial government (e.g. Department or Ministry of Natural Resources) (19%), Natural Resources Canada (15%) and/or other federal agencies (16%), the Internet (12%) or local colleges and universities (10%). By comparison, few would think of seeking out such information from such sources as friends and family members, municipal governments, museums, the private sector or environmental groups. One in ten (10%) Canadians could not identify anyplace they might go for information on the country's natural resources (Question 44.1)

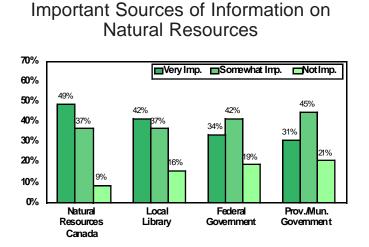




The salience of these different sources is largely similar across the population, with some variations by a matter of degree. Libraries are most apt to be mentioned by residents of Ontario and western Canada, as well as by urban residents and those with a university degree, while emphasis on the media increases along with household income. Natural Resources Canada is more likely to be identified as a source by rural Canadians, those earning less than \$50,000, as well as by residents of Quebec, who are more likely than other Canadians to identify government sources in general.

Although Natural Resources Canada is not top of mind for most Canadians, it emerges as a valued source of such information when the public is specifically prompted. Almost half (49%) would consider this department to be a very important source of information to Canadians on natural resource topics, with most of the remainder (37%) considering it to be somewhat

important. By comparison, no more than a third consider either the federal government generally (34%) or their provincial or municipal governments (31%) to be a very important source of such information, while the importance placed on local libraries (the most salient source for most Canadians) falls somewhere in between (Questions 44.2a-d).



Natural Resources Canada is considered to be an important information source across the country, but this view is most widespread in Atlantic Canada (56%) and Ontario (54%), as well as among women (54%) and Canadians under 35 years of age (53%), while least evident in Quebec (37%). Of particular note is the fact that the Department enjoys a comparatively strong profile among upper income Canadians: Natural Resources Canada is equally valued across all income strata, in contrast with the other three identified sources which are less apt to be seen as very important as household income increases.

**STUDY METHODOLOGY** 

# Study Methodology

#### **Questionnaire Design**

The survey questionnaire used for this study was largely the same one used in the 1993 NRCAN study, with a few questions repeated from the 1991 Forestry Canada study. A small number of new questions were added to the survey, based on input from the Department. The survey was pre-tested in French and English on a small number of respondents prior to being finalized.

#### Sample Design and Selection

The sample for this study was designed to complete interviews with 1,500 adult Canadians from households selected randomly across the country, consistent with the design used for the 1993 study. The sample was stratified by region to ensure adequate sub-samples for meaningful regional analysis.

The sample was drawn from the most current edition of a CD-ROM database of listed residential telephone numbers across Canada, which is updated quarterly. Within those households selected, respondents 18 years or older were screened for random selection using the "last birthday" method, which provides an efficient means of ensuring the final sample approximates the population according to gender and age level. Up to five call backs were used to reach selected respondents who may not have been available at the time of the call.

#### **Survey Administration**

The survey was conducted in English or French by telephone using computer-aided-telephoneinterviewing (CATI) software, from Créatec+'s facilities in Montreal, between March 21 and April 5, 1997. All interviewing was conducted by fully trained and supervised interviewers, and a minimum of 10 percent of all completed interviews were independently monitored and validated in real time. The average length of time required to complete an interview was 32 minutes.

#### **Completion Results**

A total of 4,637 telephone numbers were dialled, from which 1,507 interviews were completed. The response rate is 46 percent, based on the formula used by AIRMS (a professional association that establishes standards for the Quebec research industry). The disposition of all telephone numbers dialled is shown below. The calculation of response rate is as follows: E/C \* Eligibility Rate + D + E, with the Eligibility Rate defined as D+E/B+D+E (refer to table below for definition of each component of this formula).

Α.	Invalid numbers	
	Out of service	569
	Non-residential	11
	Secondary residence	7
B.	Numbers not in sample	
	Language problem	145
	Age, sickness (incapacity)	216
	Duplicate	35
	Not eligible	72
C.	Numbers in sample with unknown eligibility	
	No answer	289
	Household refusal	736
D.	Numbers in sample with known eligibility but not complete	ed
	Absent for a long period	88
	Incomplete questionnaires	44
	Callbacks not completed	94
	Respondent refusal (eligible)	718
E.	Completed Interviews	1,507
Nu	nbers generated	4,637

#### **Sample Distribution**

A sample of 1,507 drawn from the Canadian population (excluding the territories) would be expected to provide a sampling error of  $\pm 2.5$  percent in 95 out of 100 samples. The margin of sampling error will be greater for regional sub-samples, as presented below.

Sample Distribution by Region				
Region/Province	Unweighted Sample	Margin of Error <sup>1</sup>		
Atlantic Canada	195	± 7.0%		
Quebec	338	± 5.3%		
Ontario	466	± 4.5%		
Prairies	260	± 6.0%		
British Columbia	248	± 6.2%		
Canada	1,507	± 2.5%		

<sup>1</sup>95% confidence interval

#### Sample Characteristics

The characteristics of the final sample are presented below, in terms of the distribution across region and demographic characteristics, and how they compare with the population.

Weighted Sample Distribution (by percentage)				
	Sample <sup>1</sup>	Population <sup>2</sup> %		
REGION	70	70		
Atlantic Canada	9	9		
Quebec	25	26		
Ontario	37	37		
Prairies	17	16		
British Columbia	12	12		
EDUCATION LEVEL				
Grade school/some high school	16	21		
Completed high school	32	27		
Some college/university	27	26		
University graduate	26	26		
HOUSEHOLD INCOME				
Less than \$20,000	20	19		
\$20,000 - \$60,000	55	57		
\$60,000 and over	24	24		
GENDER				
Male	49	49		
Female	51	51		
AGE				
18 - 34	34	36		
35 - 54	43	41		
55 and over	23	22		
FIRST LANGUAGE				
English	62	62		
French	27	28		
Other	11	10		
		. 5		

<sup>1</sup>Weighted data (by region)

<sup>2</sup>1991 census for population 18 and over

# APPENDIX : Survey Questionnaire

CRÉATEC + 206, Avenue des Pins Est Montréal, Québec H2W 1P1

#### NATURAL RESOURCES CANADA NATIONAL PUBLIC OPINION SURVEY - 1996 -FINAL VERSION

PROJET : 630-001 MARCH 1993 VERSION 3

#### **INSTRUCTIONS**

- Interviewer must read each set of instructions for each part of this questionnaire.
- Interviewer must record all responses clearly and verbatim where required.
- Interviewer must avoid paraphrasing or rewording responses.
- Record the following information :
  - -- Respondent Name : \_\_\_\_\_
  - Telephone Number : \_\_\_\_\_
  - City / Town : \_\_\_\_\_
  - Postal Code : \_\_\_\_\_

Hello, my name is \_\_\_\_\_\_ and I work with CRÉATEC +, a public opinion and market research company. Today we are conducting a study to find out what people think about some important issues facing Canada today. [IF ASKED, INDICATE THE SURVEY WILL TAKE ABOUT 20 MINUTES]

We choose telephone numbers at random and then select one person from each household to be interviewed. To do this we would like to speak to the person in your household, 18 years of age or older, who has had the most recent birthday.

#### IF PERSON SELECTED NOT AVAILABLE, ARRANGE FOR CALL-BACK

# IF NOT AVAILABLE DURING INTERVIEW PERIOD, ASK FOR PERSON WITH NEXT MOST RECENT BIRTHDAY

#### A. ECONOMIC IMPORTANCE OF INDUSTRY SECTORS

I would like to start off with a general question about the country as a whole.

# Q1 What do think is the single most important thing that makes Canada unique from other countries? (DO NOT READ - CODE ONE ONLY)

	FREEDOM / LIBERTY	$\sim$	01
•			
•	SAFETY / PEACE / STABLE COUNTRY / ECONOMY	()	)02
•	ITS PEOPLE / CANADIANS	()	)03
•	MULTICULTURALISM / ETHNIC DIVERSITY	()	)04
•	NATURAL ENVIRONMENT / BEAUTIFUL	()	)05
	NATURAL RESOURCES (FORESTS, RESOURCES)		
•	UNDEVELOPED / PLANTY OF SPACE	()	)07
•	SOCIAL PROGRAMS / SOCIAL SAFETY NET	()	)08
	BILINGUISM		
•	STANDARD OF LIVING / PROSPERITY	()	)10
•	DEMOCRACY / FORM OF GOVERNMENT	()	)11
•	WINTER / WEATHER	()	)12
	OTHER (SPECIFY)		
•	DK/NA	()	)98

Q2 In your opinion, what particular industries or areas of economic activity contribute most to the Canadian economy today? (DO NOT READ - CODE FIRST THREE MENTIONS IN ORDER / PROBE IF NECESSARY)

٠	AUTOMOBILE INDUSTRY	)01
•	AGRICULTURE	)02
•	BANKING AND FINANCE	)03
•	CONSTRUCTION	)04
•	FISHERIES	)05
•	FORESTRY / LUMBER / PULP & PAPER	)06
•	MANUFACTURING	)07
•	HYDRO-ELECTRIC POWER	)08
•	NUCLEAR POWER	)09
•	MINING	
•	OIL AND GAS	)11
•	TOURISM	)12
•	COMPUTERS / ADVANCED TECHNOLOGY	)13
•	NATURAL RESOURCES (NON SPECIFIC)	)14
•	OTHER (SPECIFY)(	)99
	DK/NA	

- Q3 The Canadian economy can be grouped into three sectors :
  - The RESOURCE sector, such as energy, forestry, agriculture and mining;
  - The MANUFACTURING sector, including industries which produce goods and products; and
  - The SERVICE sector, which includes personal and financial services, and such industries as tourism and telecommunications.

How important do you believe each of these sectors is today, in terms of contributing to the overall Canadian economy? Would you say \_\_\_\_\_\_ is very important, somewhat important, not very important, or not at all important to the Canadian economy today? (**READ AND ROTATE ITEMS**)

	Very important	Somewhat important	Not very important	Not at all important	DK/NA	Depends
a) The resources sector	()1	()2	()3	()4	()5	()6
b) The manufacturing sector	()1	()2	()3	()4	()5	()6
c) The service sector	()1	()2	()3	()4	( )5	()6

# Q4 Of these three sectors, which one do you believe contributes the most to the Canadian economy today? (**READ AND ROTATE IF NECESSARY - CODE ONE ONLY**)

RESOURCE SECTOR	()01
MANUFACTURING SECTOR	()02
SERVICE SECTOR	()03

#### **VOLUNTEERED**

•	ALL EQUALLY IMPORTANT	()04
	MORE THAN ONE	
	DEPENDS	
•	DK/NA	()98
	OTHER (SPECIFY)	

Q5 Which one of these three sectors do you think is the most important to the economy of your own province? (**READ IF NECESSARY - CODE ONE ONLY**)

•	RESOURCE SECTOR	()01
٠	MANUFACTURING SECTOR	()02
•	SERVICE SECTOR	()03

#### **VOLUNTEERED**

•	ALL EQUALLY IMPORTANT	()04
•	MORE THAN ONE	()05
•	DEPENDS	()97
•	DK/NA	()98
•	OTHER (SPECIFY)	()99

Q6 And which one of these three sectors do you believe contributes the most to the local economy of the community in which you currently live? (**READ IF NECESSARY - CODE ONE ONLY**)

•	RESOURCE SECTOR	()01
•	MANUFACTURING SECTOR	()02
•	SERVICE SECTOR	()03

#### **VOLUNTEERED**

•	ALL EQUALLY IMPORTANT	()04
•	MORE THAN ONE	()05
•	DEPENDS	()97
•	DK/NA	()98
•	OTHER (SPECIFY)	()99

Q7 I would now like to ask you about the extent to which you think specific Canadian industries are successful in selling their products or services to other countries. In your opinion, would you say the (**READ**) industry is very successful, somewhat successful, not very successful, or not at all successful in selling its products or services abroad? (**READ AND ROTATE ITEMS - CODE ONE FOR EACH ITEM**)

	Very successful	Somewhat successful	Not very successful	Not at all successful	Depends	Dk/Na
a) Agricultural	()1	()2	()3	()4	()5	()6
b)Forest	()1	()2	()3	()4	()5	()6
c) Manufacturing	()1	()2	()3	()4	()5	()6
d)Mining	()1	()2	()3	()4	()5	()6
e) Oil and gas	()1	()2	()3	()4	()5	()6
f) Telecommunications	()1	()2	()3	()4	()5	()6
g) Hydro-electric power	()1	()2	()3	()4	()5	()6

Q8 For each of these industries, do you tend to think of it as a "high tech" industry (that is, relying on sophisticated or advanced technology and equipment), or a "low tech" industry (relying on less advanced or more traditional technology and equipment)? Do you think of the \_\_\_\_\_\_ industry as generally hi-tech or generally low-tech"? (**READ ITEMS IN SAME ORDER AS Q7 - CODE ONE FOR EACH ITEM PAR ITEM**)

	Generally High Tech	Generally Low Tech	Neither Hi nor Low Tech	Depends	Dk/Na
a) Agricultural	()1	()2	()3	()4	( )5
b)Forest	()1	()2	()3	()4	()5
c) Manufacturing	()1	()2	()3	()4	()5
d)Mining	()1	()2	()3	()4	()5
e) Oil and gas	()1	()2	()3	()4	()5
f) Telecommunications	()1	()2	()3	()4	()5
g) Hydro-electric power	()1	()2	()3	()4	( )5

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Q9 And how important do you believe each of these industries is likely to be to the overall Canadian economy 10 years from now? Starting with the \_\_\_\_\_\_ industry, do you think it will be much more important, somewhat more important, somewhat less important, or much less important to the Canadian economy 10 years from now? (**READ ITEMS IN SAME ORDER AS Q7 - CODE ONE FOR EACH ITEM PAR ITEM**)

	Much more important	Somewhat more important	Somewhat less important	Much less important	As important as it is now	Depends	Dk/Na
a) Agricultural	()1	()2	()3	()4	( )5	()6	()7
b) Forest	()1	()2	()3	()4	( )5	()6	()7
c) Manufacturing	()1	()2	()3	()4	( )5	()6	()7
d) Mining	()1	()2	()3	()4	( )5	()6	()7
e) Oil and gas	()1	()2	()3	()4	( )5	()6	()7
f) Telecommunications	()1	()2	()3	()4	( )5	()6	()7
g) Hydro-electric power	()1	()2	( )3	()4	( )5	()6	()7

## B. CANADA'S NATURAL RESOURCES

I would now like to turn to another topic.

# Q10 When you hear the term "NATURAL RESOURCES", what first comes to mind? (DO NOT READ - CODE ALL THAT APPLY - PROBE FOR OTHER MENTIONS)

•	FORESTS / TREES	()01
	FISH .	· · ·
	WILDLIFE	
	WATER / RIVERS AND STREAMS	
	MINERALS / MINERAL DEPOSITS	
•	OIL AND GAS	()06
•	ITS PEOPLE	()07
•	ENERGY RESOURCES (NON SPECIFIC)	()08
•	HYDRO-ELECTRICITY	()09
	CULTURE AND HERITAGE	
•	DK/NA	()98
•	OTHER (SPECIFY)	()99

# Q11 The most common use of the term "NATURAL RESOURCES" refers to physical resources connected to the land, such as forests and trees, minerals and fossil fuels, water, and fish and wildlife.

How closely do you personally follow stories in the news about these types of natural resources? Do you tend to follow such issues very closely, somewhat closely, not very much, or not at all?

Very closely	Somewhat closely	Not very much	Not at all	Dk/Na
( )1	( )2	( )3	( )4	( )5

Q12 To what extent do you think various Canadian resource industries are causing damage to the environment? Do you believe that the activities of the \_\_\_\_\_\_ cause significant damage, moderate damage, minor damage, or no damage at all to the environment in Canada today? (**READ AND ROTATE**)

	Significant damage	Moderate damage	Minor damage	No damage at all	Dk/Na (Do not read)
a) Forest industry	()1	()2	()3	()4	()5
b)Mining industry	()1	()2	()3	()4	()5
c) Oil and gas industry	()1	()2	()3	()4	()5
d)Coal industry	()1	()2	()3	()4	()5
e) Hydro-electric power industry	()1	()2	()3	()4	()5

## ASK FOR EACH INDUSTRY CAUSING SIGNIFICANT / MODERATE DAMAGE IN Q12 :

Q13 Would you say the environmental damage caused by the \_\_\_\_\_\_ is fully acceptable, somewhat acceptable, somewhat unacceptable, or fully unacceptable, given the economic and other benefits this industry provides? (READ ITEMS CAUSING SIGNIFICANT / MODERATE DAMAGE IN Q12)

	Fully acceptable	Somewhat acceptable	Somewhat unacceptable	Fully unacceptable	Depends (Do not read)	Dk/Na (Do not read)
a) Forest industry	()1	()2	( )3	()4	()5	()6
b) Mining industry	()1	()2	()3	()4	( )5	()6
c) Oil and gas industry	()1	()2	()3	()4	( )5	()6
d) Coal industry	()1	()2	()3	()4	( )5	()6
e) Hydro-electric power industry	()1	( )2	( )3	()4	( )5	()6

## ASK ONLY FOR INDUSTRIES WITH SIGNIFICANT / MODERATE IMPACTS IN Q12

Q14 And do you think the \_\_\_\_\_\_ is very committed, somewhat committed, not very committed, or not at all committed to reducing the environmental damage caused by its operations? (**READ ITEMS CAUSING SIGNIFICANT / MODERATE DAMAGE**)

	Very committed	Somewhat committed	Not very committed	Not at all committed	Dk/Na (Do not read)
a) Forest industry	()1	()2	()3	()4	()5
b) Mining industry	()1	()2	()3	()4	()5
c) Oil and gas industry	()1	()2	()3	()4	()5
d) Coal industry	()1	()2	()3	()4	()5
e) Hydro-electric power industry	()1	()2	()3	()4	()5

Q15 If a Canadian resource industry made a financial investment in reducing the environmental damage caused by its operations, do you think this would make that industry more competitive, less competitive, or make no difference on competitiveness in the marketplace over the long term?

•	MORE COMPETITIVE	()1	
•	LESS COMPETITIVE	()2	SKIP TO Q17
•	NO DIFFERENCE IN COMPETITIVENESS	()3	SKIP TO Q18

#### **VOLUNTEERED**

•	DEPENDS()4	SKIP
•	DK/NA()5	TO Q18

## IF SAY MORE COMPETITIVE IN Q15

Q16 In what way do you think this type of investment would make an industry more competitive? (SPECIFY - PROBE FOR RESPONSE OF AT LEAST 10 WORDS / ACCEPT UP TO 2 RESPONSES)

•	GOOD PUBLIC RELATIONS / PUBLIC IMAGE / MORE PUBLIC SUPPORT ()01
•	MORE PEOPLE WOULD BUY / INCREASE MARKET ()02
•	MORE COMPANIES MORE COMPETITIVE ()03
•	MAKE RESOURCES LAST / CONSERVE RESOURCES ()04
•	POPULAR OPINION / ENVIRONMENTAL AWARENESS ()05
•	COMPANIES SHOULD DO LESS DAMAGE
•	PRODUCE BETTER PRODUCTS ()07
•	INFLUENCE OTHER COUNTRIES ()08
•	OTHER ( <b>SPECIFY</b> ) ( )99
•	DON'T KNOW

#### SKIP TO Q18

## IF SAY LESS COMPETITIVE IN Q15

# Q17 In what way do you think this type of investment would make an industry less competitive? (SPECIFY - PROBE FOR RESPONSE OF AT LEAST 10 WORDS / ACCEPT UP TO 2 RESPONSES)

•	CAPITAL / INVESTMENT COST TOO HIGH	()01
•	COST OF PRODUCT WOULD GO UP	()02
•	COST WOULD MAKE A COMPANY LESS COMPETITIVE	()03
•	CAN'T COMPETE WITH OTHER COUNTRIES	()04
•	OTHER (SPECIFY)	()99
•	DON'T KNOW	()98

# Q18 And do you think this type of investment in reducing environmental damage would result in more jobs, fewer jobs, or have no impact on the number of jobs provided by that industry over the long term?

•	PROVIDE MORE JOBS	()1
•	PROVIDE FEWER JOBS	()2
•	HAVE NO IMPACT ON JOBS	()3

## **VOLUNTEERED**

• DEPENDS	()4	4
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## C. FOREST, MINING AND MINERALS

I would now like to turn to another topic.

# Q19 In your view, what is the greatest benefit which Canadians receive from their forests? (DO NOT READ / CODE ONE ONLY)

•	BEAUTY	( )01
•	IMPORTANT PART OF THE ECONOMY	( )02
٠	ECONOMIC GROWTH / PROVIDES JOBS	( )03
٠	EMPLOYMENT	( )04
٠	HABITAT FOR WILDLIFE	( )05
٠	SOURCE OF RESOURCES / MATERIALS	( )06
٠	EFFECT ON CLIMATE	( )07
٠	OTHER (SPECIFY	)( )98
•	DK/NA	( )99

	-	
	OVER-CUTTING OF TREES	
•	FOREST FIRES	)02
•	POLLUTION	)03
•	PRESERVATION OF OLD GROWTH FORESTS	)04
•	POOR IMAGE OF CANADA'S FOREST MANAGEMENT	
	PRACTICES ABROAD	)05
•	LACK OF REPLANTATION	)06
•	PESTS / DISEASES	)07
•	CLIMATE CHANGE / GREENHOUSE EFFECT / OZONE	)08
	RECYCLING	
•	ACID RAIN	)10

Q20 In your view, what is the greatest threat to our forests? (DO NOT READ / CODE ONE ONLY)

- Q21 There are different types of benefits or things people value about the country's forests. I am going to describe six reasons why we value our forests and then read them to you in pairs. For each pair of values, I would like you to tell me which of these two you think is the more important one to you personally. First, I'll read all six. (**RANDOM ROTATION**)
- 1) WILDERNESS PRESERVATION
- 2) A PLACE FOR RECREATION AND RELAXATION
- 3) PROTECTION OF CANADA'S WATER AIR AND SOIL
- 4) HABITAT FOR A VARIETY OF ANIMAL AND PLANT LIFE
- 5) A SOURCE OF ECONOMIC WEALTH AND JOBS
- 6) BALANCING THE GLOBAL ECOSYSTEM

You may feel that both of the values in a pair are very important, but we simply want to know which you think is the **MOST** important of the two.

Which is more important : (READ PAIRS IN PRESCRIBED SEQUENCE - CODE ONE ONLY FOR EACH PAIR)

1)	WILDERNESS PRESERVATION	
	DK/NA (	)9
2)	WILDERNESS PRESERVATION	
	DK/NA	)9
3)	WILDERNESS PRESERVATION ( OR HABITAT FOR A VARIETY OF ANIMAL AND PLANT LIFE	,
	NABITAT FOR A VARIETT OF ANNWAL AND FLANT LIFE       (         VOLUNTEERED       )         DK/NA       (	)2

4)	WILDERNESS PRESERVATION ()1 OR
	A SOURCE OF ECONOMIC WEALTH AND JOBS ()2 VOLUNTEERED
	DK/NA ()9
5)	WILDERNESS PRESERVATION ()1 OR
	BALANCING THE GLOBAL ECOSYSTEM ()2 <u>VOLUNTEERED</u>
	DK/NA
6)	A PLACE FOR RECREATION AND RELAXATION ()1 OR
	PROTECTION OF CANADA'S WATER, AIR AND SOIL ()2 Volunteered
	DK/NA
7)	A PLACE FOR RECREATION AND RELAXATION
	HABITAT FOR A VARIETY OF ANIMAL AND PLANT LIFE
	DK/NA
8)	A PLACE FOR RECREATION AND RELAXATION
	A SOURCE OF ECONOMIC WEALTH AND JOBS ()2 <u>Volunteered</u>
	DK/NA
9)	A PLACE FOR RECREATION AND RELAXATION ()1 OR
	BALANCING THE GLOBAL ECOSYSTEM ()2 <u>VOLUNTEERED</u>
	DK/NA
10)	PROTECTION OF CANADA'S WATER, AIR AND SOIL ()1 OR
	HABITAT FOR A VARIETY OF ANIMAL AND PLANT LIFE
	DK/NA
11)	PROTECTION OF CANADA'S WATER, AIR AND SOIL ()1 OR
	A SOURCE OF ECONOMIC WEALTH AND JOBS ()2 VOLUNTEERED
	DK/NA

\_\_\_\_

12)	PROTECTION OF CANADA'S WATER, AIR AND SOIL	1
	BALANCING THE GLOBAL ECOSYSTEM	2
	VOLUNTEERED	
	DK/NA()9	9
13)	HABITAT FOR A VARIETY OF ANIMAL AND PLANT LIFE	1
	OR	
	A SOURCE OF ECONOMIC WEALTH AND JOBS ()2	2
	<u>VOLUNTEERED</u>	
	DK/NA	9
14)	HABITAT FOR A VARIETY OF ANIMAL AND PLANT LIFE	1
	OR	
	BALANCING THE GLOBAL ECOSYSTEM	2
	VOLUNTEERED	
	()	9
15)	A SOURCE OF ECONOMIC WEALTH AND JOBS()	1
	OR	
	BALANCING THE GLOBAL ECOSYSTEM	2
	<u>VOLUNTEERED</u>	
	DK/NA	9

## **I WOULD LIKE TO TURN TO ANOTHER TOPIC**

# Q22 To what extent do you strongly agree, somewhat agree, somewhat disagree or strongly disagree that : (READ AND ROTATE)

READ AND ROTATE	Strongly agree	Somewhat agree	Somewhat disagree	Strongly disagree	DK/NA
THE CANADIAN MINING INDUSTRY USES THE LATEST HIGH- TECHNOLOGY PRODUCTS AND SERVICES TO DO ITS JOB	()1	()2	()3	()4	()9
TODAY, THE CANADIAN MINING INDUSTRY IS AN IMPORTANT SOURCE OF JOBS FOR CANADIANS	()1	()2	()3	()4	()9
IN THE FUTURE, THE CANADIAN MINING INDUSTRY WILL BE AN IMPORTANT SOURCE OF JOBS FOR CANADIANS	()1	()2	()3	()4	( )9
• THE CANADIAN MINING INDUSTRY IS THE BEST IN THE WORLD	()1	()2	()3	()4	()9
THE REPUTATION OF OUR MINING INDUSTRY CONTRIBUTES TO CANADA'S IMAGE ON THE INTERNATIONAL SCENE	()1	()2	()3	( )4	( )9

Q24 What about the impact of mining activity in areas which are also used for other purposes. Do you think that mining activity would cause major, moderate, minor or no disruption to \_\_\_\_\_\_ taking place in the same vicinity? (**READ AND ROTATE**)

	Major disruption	Moderate disruption	Minor disruption	No disruption	Depends (Do not read)	Dk/Na (Do not read)
a) Forestry and lumber operations	()1	( )2	( )3	()4	( )5	()6
b) Protection of wildlife and fish habitat	()1	( )2	( )3	()4	( )5	( )6
c) Tourism / Recreation activities	()1	( )2	( )3	()4	( )5	()6

## D. ENERGY CONSERVATION AND EFFICIENCY

I would now like to ask you a few questions about the use of energy in your province.

# Q25 What are the main sources or means by which electricity is generated in your province today? (**DO NOT READ - CODE ALL THAT APPLY**)

**[IF SAY ONLY "HYDRO-ELECTRIC", PROBE** : Do you mean power generated from dams on rivers and streams?] **[IF SAY "ELECTRICITY", PROBE** : And can you tell me how this electricity is generated?]

• OIL	
• NATURAL GAS	
• HYDRO-ELECTRIC POWER / DAMS / WATER POWER	
• NUCLEAR POWER	
• COAL	
• OTHER (SPECIFY)()99	
• DK/NA	SKIP TO 28

Q26 And can you tell me which of these sources of energy is the one most likely used to produce the electricity provided to your own home? (**READ LIST FROM Q25 IF NECESSARY - CODE ONE ONLY**) [**IF ONLY ONE SOURCE MENTIONED IN Q25, ASK** : And would you say this is the source of energy likely used to produce the electricity provided to your home?]

•	OIL	()01
	NATURAL GAS	
•	HYDRO-ELECTRIC POWER / DAMS / WATER POWER	()03
•	NUCLEAR POWER	()04
•	COAL	()05

## **VOLUNTEERED**

•	MORE THAN ONE LIKELY SOURCE	
•	DEPENDS (I.E. INPUT TO POWER GRID) ()08	
•	DK/NA	SKIP TO Q28
•	OTHER (SPECIFY)()99	

Q27 As far as you know, does the generation of electric power (**NAME SOURCE MENTIONED IN Q26**) have a major, moderate, minor or no impact on the quality of the environment in : (**READ AND ROTATE**)

	Major impact	Moderate impact	Minor impact	No impact (Do not read)	Dk/Na (Do not read)
a) The community where you live	()1	()2	()3	()4	( )5
b) Your province	()1	( )2	()3	()4	( )5

Q28 Do you think the sources of energy currently available in your province are sufficient to meet the province's needs over the next 10 to 20 years, or do you think the province needs to develop new sources?

•	EXISTING SOURCES SUFFICIENT	()1	SKIP TO 31
•	NEED TO DEVELOP NEW SOURCES	()2	

#### **VOLUNTEERED**

•	DEPEND	5	()3	SKIP
•	DK/NA		()4	TO Q31

#### **IF NEED TO DEVELOP NEW SOURCES (Q28)**

Q29 What new sources or sources of energy do you think would be the best option for your province to develop over the next 20 years? (DO NOT READ - CODE ALL THAT APPLY IN ORDER OF MENTION)

• OIL	
• NATURAL GAS	
• HYDRO-ELECTRIC POWER / DAMS / WATER POWER ()03	
• NUCLEAR POWER	
• COAL	
• SOLAR	
• WIND	
• TIDAL	
• BIOMASS	
• HYDROGEN	
• DK/NA ()98	SKIP TO 31
• OTHER (SPECIFY) ( )99	

# Q30 Why do you say that [**FIRST RESPONSE FROM Q29**] is the best new source of energy for your province? (**DO NOT READ - CODE ALL THAT APPLY**)

•	BEST FOR ENVIRONMENT
•	LOWEST COST / MOST ECONOMIC ()02
•	SECURE SUPPLY / NO DANGER OF RUNNING OUT ()03
•	ONLY FEASIBLE OPTION
•	CAN EXPORT TO OTHER PROVINCES / COUNTRIES ()05
•	DK/NA
•	OTHER (SPECIFY) ( )99

Q30B Do you think the sources of energy currently available to Canada are sufficient to meet its needs over the next 10 to 20 years, or do you think Canada needs to develop new sources?

•	EXISTING SOURCES SUFFICIENT	()1
•	NEED TO DEVELOP NEW SOURCES	()2
•	DEPENDS	()3
٠	DK/NA	()4

Q31 Do you believe the use of energy in Canada as a whole over the next few years is likely to increase significantly, increase somewhat, decrease somewhat, decrease significantly, or stay about the same?

•	INCREASE SIGNIFICANTLY	()1
•	INCREASE SOMEWHAT	()2
	DECREASE SOMEWHAT	
•	DECREASE SIGNIFICANTLY	()4
•	STAY ABOUT THE SAME	()5

## **VOLUNTEERED**

•	DEPENDS	 ()	6
•	DK/NA	 ()	8

Q32 Thinking about energy issues in Canada today, would you say you are very concerned, somewhat concerned, not very concerned or not at all concerned about? (**READ AND ROTATE**)

	Very concerned	Somewhat concerned	Not very concerned	Not at all concerned	Depends (Do not read)	Dk/Na (Do not read)
a) The price you pay for energy	()1	()2	()3	()4	( )5	()6
b) The environmental damage from energy production	()1	()2	()3	()4	( )5	( )6
c) The environmental damage from energy use	()1	( )2	()3	()4	( )5	()6
d) The supply of energy available	()1	()2	()3	()4	( )5	()6

Q33 Do you think the use of energy in Canada today by \_\_\_\_\_ causes major, moderate, minor, or no damage to the environment? (**READ AND ROTATE**)

	Major damage	Moderate damage	Minor damage	No dammage (Do not read	Dk/Na (Do not read)
a) Consumers in their home	()1	()2	()3	()4	( )5
b) Consumers in their use of cars	()1	()2	()3	()4	( )5
c) Industries in the manufacturing sector	()1	()2	()3	()4	( )5
d) Businesses in the service sector	()1	()2	()3	()4	( )5

Q34	Q34 Do you think the Federal Government should, or should not, actively encourage Canadians to change the way in which they use energy?					
	<ul> <li>SHOULD ACTIVELY ENCOURAGE</li> <li>SHOULD NOT ACTIVELY ENCOURAGE</li> </ul>	()1 ()2	SKIP TO 36			
VOLU	JNTEERED					
	<ul> <li>DEPENDS</li> <li>DK/NA</li> </ul>	()3 ()9	SKIP TO 36			
Q35	<ul> <li>Which one of the following do you believe would be the most effective way for the Fed encourage Canadians to change the way they use energy? (READ AND ROTATE - Control of the second second</li></ul>	ODE (				
	<ul> <li>ENERGY EFFICIENCY</li> <li>ESTABLISH TOUGHER STANDARDS FOR ENERGY EFFICIENCY OF MAJOR APPLIANCES</li> <li>PROVIDE TAX INCENTIVES TO PROMOTE MORE EFFORTS</li> </ul>					
VOL	BY CITIZENS AND BUSINESSES	()04				
<u>volu</u>	JNTEERED	()				
	<ul><li>ALL EQUALLY IMPORTANT</li><li>GOVERNMENT SHOULD NOT PROMOTE CONSERVATION</li></ul>					

٠	GOVERNMENT SHOULD NOT PROMOTE CONSERVATION (	)06
•	DK/NA (	)98
•	OTHER (SPECIFY) (	)99

## E. SCIENCE AND TECHNOLOGY

I would now like to turn to the topic of science and technology, and its role in the sustainable development of Canada's natural resources.

Q36 Would you say the role that science and technology plays in \_\_\_\_\_\_ is critically important, very important, somewhat important, or not very important? (**READ AND ROTATE**)

	Critically important	Very important	Somewhat important	Not very important	Depends (Do not read)	Dk/Na (Do not read)
a) Contributing to Canada's economic prosperity	( )1	()2	()3	()4	( )5	()6
b) Providing Canadians with a good quality of life	()1	()2	()3	()4	( )5	()6
c) Ensuring a sustainable development of Canada's natural resources	()1	()2	()3	()4	( )5	( )6

Q37 Which one of the following do you think contributes most to the advancement of science and technology in Canada today? Would you say it is...? (**READ AND ROTATE - CODE ONE ONLY**)

•	THE FEDERAL GOVERNMENT	()01
٠	PROVINCIAL GOVERNMENTS	()02
•	SMALL BUSINESSES	()03
•	LARGE BUSINESSES AND CORPORATIONS	()04
•	CANADIAN UNIVERSITIES	()05

#### **VOLUNTEERED**

COMBINATION GOVERNMENTS AND BUSINESS	)06
• COMBINATION FEDERAL AND PROVINCIAL GOVERNMENTS	)07
• ALL EQUALLY IMPORTANT	)08
• DK/NA	)09
• DEPENDS	)98
• OTHER (SPECIFY)()	

Q38 And which of these do you believe is contributing the least to advancing science and technology in Canada today? (**READ AND ROTATE - EXCEPT CHOICE GIVEN IN Q37 - CODE ONE ONLY**)

•	THE FEDERAL GOVERNMENT	()01
•	PROVINCIAL GOVERNMENTS	()02
	SMALL BUSINESSES	
•	LARGE BUSINESSES AND CORPORATIONS	()04
•	CANADIAN UNIVERSITIES	()05

#### **VOLUNTEERED**

•	ALL EQUALLY LOW	()06
•	DK/NA	()07
•	DEPENDS	()98
•	OTHER (SPECIFY)	()99

Q39 Compared with other industrialized countries (such as the U.S., Europe and Japan), where do you think Canada stands in the area of science and technology innovation? Would you say Canada is...?

## **READ CATEGORIES - CODE ONE ONLY**

٠	AMONG THE LEADERS	()1	SKIP
•	CLOSE BEHIND THE LEADERS	()2	TO 42
•	WELL BEHIND THE LEADERS	()3	
	NEAR THE BOTTOM AMONG INDUSTRIALIZED COUNTRIES		

## **VOLUNTEERED**

•	DEPEND	5	()5	SKIP
•	DK/NA			

## IF SAY WELL BEHIND / NEAR THE BOTTOM, ASK :

## Q40 Why do you say Canada is **<RESPONSE FROM Q39>**? (**DO NOT READ - CODE ALL THAT APPLY**)

•	CANADA SPENDS LESS ON SCIENCE AND TECHNOLOGY	()01
•	CANADA HAS A WORSE EDUCATION SYSTEM	()02
•	CANADA HAS LESS RESOURCES / MONEY TO INVEST IN S&T	()03
•	CANADA PLACES LOWER PRIORITY ON S&T	()04
•	CANADA IS A SMALLER COUNTRY	()05
•	CANADA IS A CONSERVATIVE COUNTRY	()06
•	CANADA IS TOO SLOW TOO CHANGE	()07
•	DK/NA	()98
•	OTHER (SPECIFY)	()99

Q41 And how do you think the Federal Government should promote science and technology in Canada? Should it be primarily through :

## **READ AND ROTATE - CODE ONE ONLY**

SUPPORTING THE ACTIVITIES OF PRIVATE INDUSTRY, BUSINESS     AND UNIVERSITIES	()02

## <u>VOLUNTEERED</u>

	BOTH EQUALLY IMPORTANT	
•	NEITHER / GOVERNMENT SHOULD NOT PROMOTE AT ALL	()04
•	DEPENDS	()97
•	DK/NA	()98
•	OTHER (SPECIFY)	()99

Q42 In your view, which should be the more important priority for government-sponsored science and technology activity? Is it :

## **READ AND ROTATE - CODE ONE ONLY**

- TO MAKE THE CANADIAN ECONOMY MORE COMPETITIVE ...... ()01
   OR
- TO IMPROVE THE OVERALL QUALITY OF LIFE FOR CANADIANS ....... ( )02

#### **VOLUNTEERED**

•	BOTH EQUALLY IMPORTANT	()03
•	DEPENDS	()04
•	DK/NA	()98
•	OTHER (SPECIFY	)()99

Q44 How closely would you say you personally follow science and technology issues in general? Do you follow them very closely, somewhat closely, not very much, or not at all?

• VERY CLOSELY	)1
• SOMEWHAT CLOSELY	
• NOT VERY MUCH	
• NOT AT ALL	
	,

## **VOLUNTEERED**

•	DK/NA		()	)5	5
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## F. INFORMATION SOURCES

## Q44.1 Where would you go to get information about Canada's natural resources? (DO NOT READ / CODE ALL THAT APPLY IN ORDER OF MENTION)

•	NATURAL RESOURCES CANADA	()01
•	OTHER FEDERAL GOV'T	()02
•	PROVINCIAL MINISTRY OF NATURAL RESOURCES	()03
•	MUNICIPAL GOV'T	()04
•	LIBRARY	()05
•	UNIVERSITY / COLLEGE	()06
•	INTERNET	()07
•	DK/NA	()98
•	OTHER (SPECIFY)	()99

Q44.2 How important a source is... in providing information to Canadians on natural resources? Would you say very important, somewhat important, not very important or not important at all? (**READ AND ROTATE**)

	Very important	Somewhat important	Not very important	Not at all important	DK/NA	Depends
1) Natural Resources Canada	()1	()2	()3	()4	()5	()6
2) Federal gov't	()1	()2	( )3	()4	( )5	()6
3) Provincial / municipal gov't	()1	()2	( )3	()4	( )5	()6
4) Your local library	()1	()2	( )3	()4	( )5	()6

## G. **RESPONDENT CHARACTERISTICS**

And now so that we can compare the answers of different groups of people, I'd like to ask you some questions about you and your household for statistical purposes only.

## Q45 Which of the following best describes your present employment status? (**READ**)

•	EMPLOYED FULL-TIME, THAT IS, AT LEAST 30 HOURS PER WEEK	()01		
	EMPLOYED PART-TIME, THAT IS LESS THAN 30 HOURS PER WEEK			
	NOT EMPLOYED, BUT ACTIVELY LOOKING FOR FULL-TIME WORK	.,		
•	NOT EMPLOYED, BUT ACTIVELY LOOKING FOR PART-TIME WORK	()04		
•	NOT ACTIVELY LOOKING FOR WORK	()05		
	REFUSAL ( <b>DO NOT READ</b> )		SKIP TO G	)47
	OTHER (SPECIFY			•

# Q46 In what industry, if any, do you work? **[IF NOT CURRENTLY WORKING ASK** : In what industry did you work last?] **(DO NOT READ / CODE ONE ONLY)**

• FORESTRY / LOGGING / PULP AND PAPER	
• FISHERY / FARMING / AGRICULTURE	
• MINING / OIL AND GAS	
CONSTRUCTION	
• MANUFACTURING	
• TRANSPORTATION / COMMUNICATIONS / UTILIT	Y
• TRADE (WHOLESALE, RETAIL )	
• FINANCE, INSURANCE, REAL ESTATE	
GOVERNMENT (ALL LEVELS)	
• SERVICE SECTOR (EDUCATION, HEALTH, BUSINES	
PROFESSIONAL, PERSONAL SERVICES)	
• TOURISM	
NONE / NEVER WORKED	
• REFUSED	
• OTHER (SPECIFY	)()99

Q47 Do any of your close friends or family members currently work

	Yes	No	Dk/Na
a) In the mining industry	()1	()2	()3
<ul><li>b) In an energy-related industry (e.g. oil, power utility)</li></ul>	()1	()2	( )3
c) In the forest industry	()1	()2	()3

Q48	In what year were you born? (WRITE IN)		
	YEAR:		
	• REFUSED	. ()97	
Q49	Were you born in Canada or in another country?		
	CANADA     OTHER COUNTRY (SPECIFY		SKIP TO 51
	REFUSED		SKIP TO 51
Q50	(ASK IF BORN OUTSIDE CANADA) And in what year did you immigrate to Cana	nda? ( <b>V</b>	/RITE IN)
	• REFUSED	()97	
	• DK/NA	.,	
Q51	And in which Canadian province or territory have you lived the longest? ( <b>DO NOT I ONE ONLY</b> )	READ /	CODE
	• ALBERTA		
	BRITISH COLUMBIA		
	• MANITOBA	.,	
	NEW BRUNSWICK		
	<ul> <li>NEWFOUNDLAND</li> <li>NOVA SCOTIA</li> </ul>		
	NOVA SCOTIA     ONTARIO	.,	
	PRINCE EDWARD ISLAND		
	• QUEBEC		
	• SASKATCHEWAN		
	NORTHWEST TERRITORIES	. ()11	
	• YUKON		
	• REFUSED	. ()97	
Q52	Of the languages you understand, which one did you learn first? (DO NOT READ -	CODE	ONE ONLY)
	• ENGLISH	. ()01	
	• FRENCH		
	• OTHER	. ()03	
VOLU	NTEERED		
	LEARNED ENGLISH AND FRENCH AT SAME TIME		
	LEARNED OTHER COMBINATION AT SAME TIME		
	• REFUSED	. ()97	

Q53 What is the highest level of education you have completed? (DO NOT READ - CODE ONE ONLY) • ELEMENTARY SCHOOL (GRADES 1-8) ...... ()01 SOME COMMUNITY / TECHNICAL COLLEGE / CEGEP ...... ()04 GRADUATED COMMUNITY / TECHNICAL COLLEGE / CEGEP ...... ()05 SOME COLLEGE / UNIVERSITY ...... ()06 Q54 For statistical purposes only, we need information about your household income. Please tell me which of the following categories applies to your total household income for 1996? (READ - CODE ONE ONLY) UNDER \$20,000 ......()01 Q55 Gender (by observation) : Q56 Code language of interview : 

This completes the interview. In case my supervisor would like to verity that I conducted this interview, may I have your first name?

[IF RESPONDENTS ASK SPECIFICALLY FOR MORE INFORMATION ABOUT SURVEY, PROVIDE NAME AND PHONE NUMBER OF COMPANY CONTACT : YOURI RIVEST / SYLVAIN LAROCHE].

Thank you very much for your cooperation. This survey was conducted on behalf of Natural Resources Canada, and is registered under the Federal Access to Information Act.

## Q57 Code province :

٠	ALBERTA	(	)01
•	BRITISH COLUMBIA	(	)02
•	MANITOBA	(	)03
٠	NEW BRUNSWICK	(	)04
•	NEWFOUNDLAND	(	)05
•	NOVA SCOTIA	(	)06
•	ONTARIO	(	)07
•	PRINCE EDWARD ISLAND	(	)08
•	QUEBEC	(	)09
•	SASKATCHEWAN	(	)10

## Q58 Code community size :

•	LESS THAN 10,000	()1
•	10,000 TO 100,000	()2
•	100,000 TO 1 MILLION	()3
•	1 MILLION PLUS (Toronto - Montréal - Vancouver)	()4