

**Canadians' Attitudes Towards  
Natural Resources Issues, 2002**

**Final Report**

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## Introduction

Natural resources have always been a fundamental cornerstone of Canada's identity and its prosperity. As the country begins the 21st century, the resource base itself remains much as it has over the past several generations, but rapid social and economic changes taking place both domestically and abroad are creating new pressures on the country's resource base and the industries these resources support. Canada's resource sector industries are realizing new opportunities for growth while at the same time being pressed to become more competitive. The environmental consequences of resource sector management continue to be an issue on the public agenda that defies straightforward solutions.

While natural resources fall largely within provincial jurisdiction, the federal government carries an important role in setting national objectives, conducting research and developing policies and programs, primarily through Natural Resources Canada (NRCAN). In fulfilling this mandate, NRCAN must ensure that it understands and takes into proper account the opinions, priorities and concerns of the Canadian public, as they relate to forestry, energy, mining and the earth sciences. This objective is accomplished, in part, through public opinion research that serves to guide strategic planning, policy development and communications.

In 1993, the Department (then Energy, Mines and Resources) commissioned a national public opinion survey to measure public opinion across Canada on key energy and resource issues, with the goal of establishing a benchmark against which such opinions could be tracked over time. In 1997, NRCAN repeated this study to identify how public opinions and priorities had changed over the previous four years. This second study incorporated forest sector issues to reflect the inclusion of the Canadian Forestry Service into the Department, drawing upon earlier national surveys conducted by Forestry Canada in 1989 and 1991.

The third wave of this research was commissioned by NRCAN in early 2002, to provide an update on Canadians' attitudes towards key natural resource issues. Public awareness is now identified as a Performance Indicator under Goal 1 of NRCAN's Performance Measurement Framework (Report on Plans and Priorities, 2001-2002). The specific objectives of the 2002 survey are to:

- Continue tracking Canadians' awareness, perceptions and priorities on key natural resource issues, identifying trends from data collected in 1993 and 1997;
- Determine public awareness of the importance and relevance of the natural resource sectors and science and technology;
- Identify regional and demographic differences in public opinion; and
- Provide strategic guidance to departmental planning and communications.

The current survey was designed to replicate the previous surveys conducted in 1993 and 1997, although somewhat shorter in length and with a few minor changes in content. The survey consisted of telephone interviews with a representative sample of 1,502 Canadians (18 years or older), conducted between February 25 and March 3, 2002. A more complete description of the methodology used to conduct this survey is provided at the back of the report.

This report begins with an executive summary and key conclusions, followed by a detailed analysis of the survey findings. Appended to this report is a copy of the survey questionnaire (Appendix A) and comprehensive tabular results (Appendix B - under separate cover) which present the results for all questions by regional and demographic sub-groups of the population. The survey questions and tabular results are referenced by number in the report for easy reference, and match those in the 1993 and 1997 surveys (where applicable) to facilitate comparisons.

## Executive Summary

The public opinion environment with respect to the natural resource sector has not undergone fundamental change over the past five years. At a broad level, Canadians' attitudes about issues pertaining to the economic contribution of the sector, environmental impacts, energy supply, and science and technology are generally similar to what was recorded in previous surveys conducted in 1993 and 1997. At the same time, however, some discernible shifts in public opinion have taken place since 1997, most important of which is the decline in the importance ascribed to the resource sector generally, and forestry and mining in particular; a drop that reverses gains made earlier in the decade.

### Economic Importance of the Resource Sector

As in the past, Canadians continue to identify the resource sector, and forestry in particular, as the most important part of the country's economy. But the preeminence given to this sector has declined noticeably since 1997, both generally but especially in the case of forestry and mining. In terms of which industries have salience as economic drivers of the economy, forestry and mining have been steadily declining (along with agriculture) over the past nine years, as Canadians are increasingly focusing on such industries as oil and gas, and the information technology sector. Five years ago, the resource sector was more than twice as likely as the service sector to be seen as most important (48% versus 19%), but in 2002 this gap has narrowed (41% versus 25%).

The resource sector has lost less ground in terms of how Canadians view its contribution to their provincial economy, and continues to be seen as the dominant sector in western Canada and to a lesser extent in Atlantic Canada and Quebec. Since 1997, however, this sector has lost ground in British Columbia, where the forest industry has experienced a major downturn in the past year.

Part of the reason for the diminishing priority given to the resource sector could well be a lack of progress in changing its image as traditional and reliant on "old fashioned" technology. In comparison with such industries as telecommunications, hydro-electric power and manufacturing, forestry and mining are apt to be seen by Canadians as "low tech" industries, and this view has broadened significantly since 1997, more than wiping out gains achieved during the previous period (1993-1997). The oil and gas industry has been more successful in establishing a "high tech" image, but has also experienced a similar decline over the past five years.

Consistent with these findings, the public is now placing less importance than before on the contribution they expect this sector to play in the Canadian economy over the next 10 years, again reversing a modest upward trend achieved earlier in the decade. Fewer than half of Canadians now believe the forestry (49%) or mining (37%) industries will grow in importance over the next decade, while a more prominent role is given to the oil and gas industry (67%), which has experienced only a marginal decline. The mining industry in particular has lost substantial ground in the public's mind since 1997, in terms of its role as an important source of jobs and a leading edge industry that contributes to the country's image abroad.

By comparison, the hydro-electric power industry continues to enjoy a favoured status among the Canadian public, with more than eight in ten (84%) expecting it to increase its economic contribution in the future. This view is driven in large part by the fact that this industry is widely considered to provide a clean and abundant source of power that both supplies an essential resource to all Canadians, as well as supporting economic growth.

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

While Canadians are somewhat less focused than before on the resource sector as a cornerstone of the economy, they continue to believe these industries are having a significant negative impact on the environment. As before, this perspective varies by industry and the forest sector continues to have the highest profile, with more than four in ten (43%) saying that significant environmental damage is being caused by its operations, while another third (34%) indicate it is responsible for at least moderate damage. Moreover, there is a growing public consensus that forest management practices, such as clear-cutting and over-cutting, are the single greatest threat to the country's forest resources.

Among the most significant trends since 1997 is a growing concern about the environmental impacts of Canada's oil and gas industry, which is now as likely as the forest industry to be seen as causing significant environmental damage (43%). This view has risen across the country, but most noticeably in Quebec and the Prairie provinces (including Alberta). In comparison, Canadians are noticeably less apt to believe such damage is resulting from the operations of the mining industry (25%) or hydro-electric power (21%), opinions that have remained stable over the past five years.

How the public feels about the damage they see resulting from resource sector operations has changed little over the past decade. Those who feel such impacts are taking place continue to be divided on whether or not this damage is acceptable when weighed against the economic benefits these industries provide. However, the balance has tipped slightly since 1997 against accepting such damage, reversing a more positive trend recorded over the previous period. As before, Canadians are most apt to be accepting of the impacts resulting from hydro-electric power generation, while least likely to hold this view about the coal industry. But such distinctions are relative in that all of the industries examined in the survey are seen by a sizeable proportion of Canadians to be causing unacceptable environmental impacts (a view expressed by 25% of the population in the case of hydro-electric power, compared with 42% for the coal industry).

Along with diminishing public acceptance of industry environmental impacts is a marginal decline in the belief that sector industries are committed to reducing the damage caused by their operations. While Canadians continue to be more likely than not to give these industries credit for demonstrating at least a modest level of commitment in this area, they are somewhat less apt to do so than in 1997, reversing modest gains achieved earlier in the decade in every industry except coal. Taken together with the other findings in this survey, these results indicate clearly that the resource sector as a whole has lost ground over the past five years in establishing a public profile as an effective steward of the environmental resources it manages. While this shift has been small to date, it leaves the sector vulnerable to further declines, which could be hastened by future high profile events (e.g. oil spill, clear-cut controversy) that would likely focus public attention and reinforce existing concerns.



Finally, public expectations about industry management of the environment are being driven in part by the belief that reducing environmental impacts makes sound economic and business sense. A strong majority of Canadians continue to believe that industry investment in pollution reduction would make it more competitive (45%) or make no difference on competitiveness (33%). This means that whatever obstacles industries may face in taking the next steps to reduce their impact on the environment, they cannot count on making a convincing case in the court of public opinion for delay based on economic arguments.

## **Energy Sources and Energy Use**

Energy issues continue to be of low salience for most Canadians, as they have been for most of the past 20 years. Among energy specific issues, the public continues to be most concerned about the prices they pay (e.g. for gasoline, heating fuel), with four in ten (41%) saying this is a major concern to them. As before, consumers are less apt to express such concern about the environmental damage resulting from energy generation (31%) or their consumption (30%), while a smaller but growing proportion (23%, up 7 points) are now very concerned about the available supply of energy resources.

Growing concerns about energy supply may be fuelled in part by the emerging issue of exporting domestic resources to feed the growing U.S. market, with close to half (46%) of Canadians saying they are very concerned about this issue (most noticeably in Ontario and western Canada). But this concern may have as much to do about Canada-U.S. relations as about energy supply itself, as the public is now less likely than in 1997 to believe that the country needs to develop new sources of energy over the next 10 to 20 years.

As before, consumers are most apt to recognize the environmental impacts that result from the most visible forms of energy consumption, such as vehicle use and factories. More than six in ten (62%) Canadians now agree that use of automobiles causes major environmental damage, a view that has increased in eastern Canada and Ontario, while declining marginally in the west. The public continues to be much less likely to see such damage resulting from non-manufacturing businesses or from energy consumption in the home. This can be explained, at least in part, by the fact that many Canadians do not understand how their electricity is generated, with most (78%) holding to the belief that their homes are powered by relatively "clean" hydro-electric power. Whether this is a function of ignorance or denial, it is clear that, unlike vehicle pollution, the environmental consequences of electric power generation have not yet been firmly established in the public's consciousness.

Although Canadians have limited understanding of the impacts of electric power generation, the environment commands a clear priority when it comes to developing new sources energy. Those who believe the country needs to develop new sources over the coming decade (65% of the population) state a clear preference for wind, solar and hydro-electric power, which are seen to be both environmentally-friendly and in abundant supply. Cost-effectiveness is given less priority.

Among the issues covered on this survey, the strongest public consensus is around the importance of the federal government taking an active role to promote energy conservation among consumers and

businesses. More than eight in ten (84%) Canadians continue to express this view, which is widely held across the country. What has changed since 1997 is a growing interest in the use of tax incentives as a means of promoting such change (now the favoured option of 29%, up 12 percentage points), now more popular than education campaigns (27%) and well ahead of options involving tougher appliance standards (17%) or further scientific research to improve energy efficiency (19%). Economic incentives have grown in popularity across most segments of the population, but most widely among those with higher incomes, who stand to gain most from this approach.

## **Science and Technology**

The public is generally positive about Canada's record in science and technology innovation relative to other industrialized nations, with one-quarter (24%) placing us among the leaders, while most of the remainder (49%) believe we are close behind. However, this view has remained flat over the past five years, following modest progress earlier in the decade. As before, those who believe Canada lags behind other countries are most apt to attribute this to our country spending less on S&T, or being slower to change, although an increasing number focus on other countries simply being more advanced.

In terms of where the leadership comes from in developing S&T domestically, Canadians increasingly see universities making the greatest contribution, followed by large businesses and corporations. By comparison, relatively few believe the federal government is playing the lead role, but this is consistent with the public's expectation that government's role should be to support the activities of other sectors rather than undertake this work directly. At the same time, it is apparent that the federal government's S&T activities do not enjoy the same level of profile as those of other sectors, and so its contribution is likely under-appreciated.

This low profile notwithstanding, the survey also reveals that Canadians are increasingly looking to the federal government to focus its S&T efforts on improving the quality of life for Canadians rather than on making the economy more competitive. This represents a substantial shift since 1993, when the public's priorities were reversed. This trend reflects the current positive economic conditions, along with growing public concerns about quality of life issues such as health care, education and transportation. Now that deficits, employment and inflation are well under control, Canadians are telling the government to pay attention to other areas that affect them directly.

## **Information Sources on Natural Resources**

Over the past few years, the Internet has emerged as a leading medium and source of information among Canadians generally, and is now where the public is most apt to go to learn about natural resource issues of interest. Close to half (46%) of all Canadians identify the web as where they would go for such information, up from only 12 percent just five years ago. The popularity of the web is particularly notable given that only six in ten Canadians currently have ongoing access to the Internet. This source is increasingly replacing libraries and the traditional media (TV, radio, newspapers), while government remains largely stable as a secondary source of information about topics such as natural resources.

While Natural Resources Canada does not figure prominently "top of mind" among Canadians, it continues to enjoy a high degree of credibility, with close to half (49%) naming it as a very important source of information about natural resource topics, ahead of the federal government generally (40%), local libraries (32%) and provincial or municipal governments (32%). This positioning (perhaps as much a function of the Department's name as with direct experience), provides a solid foundation for communications and education initiatives.

## **Regional and Demographic Patterns**

As with the previous surveys, Canadian public opinion on natural resource issues is generally consistent across the country. There are indeed distinct and in some cases predictable regional differences in viewpoints about some issues, such as the relative importance of specific industries (e.g. forestry in B.C., hydro-electricity in Quebec).

As well, some differences reflect recent developments in the sector, such as the growth of the oil and gas industry in Atlantic Canada and the downturn in forestry in B.C. (where residents are shifting their focus to the service sector). Over the past five years, residents of the Prairie provinces have become more focused on the economic importance of the oil and gas sector, but at the same time have become more concerned about the environmental impacts of this industry (although this concern does not appear to extend to the impacts of consumption in the form of vehicle pollution).

As before, citizens with higher socio-economic status (more education and income) are somewhat more informed about resource issues and tend to have higher expectations for both government and industry.

Yet on many of the key issues covered in this survey (e.g. the future importance of the sector, environmental impacts, energy concerns and S&T innovation), the similarities in viewpoints are more notable than the differences, and the overall conclusions drawn from the nation-wide picture are equally applicable to each identifiable region and demographic sub-group. These results suggest that, as before, most future communications and education initiatives should be targeted broadly rather than to narrowly-defined segments of the population.

## **Recommendations**

Based on the results and conclusions drawn from this survey, the following recommendations focused on strategic communications are presented for the Department's consideration:

### **1. Address the public's declining view of the resource sector's contribution to the economy.**

Whether the diminishing public focus on the economic contribution of the resource sector is happening because of how Canadians are perceiving these industries or because their focus is being drawn to other sectors (e.g. information technology) is unclear. But in either case, it is a trend is likely to continue unless steps are taken to reverse it.

Whether this is done for the sector as a whole or for specific resource industries, it is important to communicate to the public the fundamentally important role these industries play in the economy at the national, provincial and even local level, both now and into the foreseeable future. Communications messages need to stress both the current strengths of these industries (e.g. employment, contribution to exports) as well as address the perceived weaknesses, in terms of resource management, environmental performance and the use of advanced technology.

Forestry and mining require particular attention, as their public image has suffered the most over the past five years. The oil and gas industry is better positioned in terms of its economic importance, but at the same time rising concerns about environmental impacts is a trend that may have to be addressed.

## **2. Build awareness of the federal government's role in promoting science and technology, both generally and specifically in transforming Canada's resource sector.**

The public has little understanding of the government's role in supporting S&T innovation generally, and little progress has been over the past five years in building such awareness. This suggests that new communications initiatives may be warranted, as well as an in-depth evaluation of those that have already been undertaken. Canadians clearly value science and technology, support government involvement in this area, and would almost certainly endorse government initiatives directed at making resource industries more competitive and environmentally-sustainable.

Building public awareness of the government's activity in this area will give both NRCAN and the government a broader positive profile, while at the same time contributing to a stronger image of the industry as innovative and responsible.

## **3. Continue to focus on increasing Canadians' awareness of energy issues, especially the impacts of their own consumption.**

The current public opinion climate presents a significant challenge in terms of attracting the public's attention to energy issues, and in particular the implications of their own consumption patterns. Awareness levels have changed little since 1997, and further progress will be difficult to achieve barring dramatic events (e.g. energy shortages, severe price hikes). The difficulty is well illustrated by the lack of progress achieved over the past few years in mobilizing public awareness and action in the case of climate change, despite a concerted communications effort over the past several years.

This challenge notwithstanding, the Department remains well positioned to take a lead role in educating Canadians about important energy issues. Collaboration with other sectors (e.g. provinces, utilities, gasoline companies) offers a valuable way to leverage limited resources and to demonstrate inter-sector cooperation rather than conflict, with which the public has little patience.

#### **4. Make greater use of the Internet to communicate with Canadians about energy and natural resource issues, but not at the expense of traditional media.**

With the Internet now becoming an increasingly important means by which Canadians are informing themselves about almost everything, the Department should ensure that it makes full use of this medium as part of its education and communications initiatives. Making relevant information available on the web is an essential step, but equally important is the need to build the public's interest in looking for such information and to develop an awareness of what resources are available so that people know where to find them.

Finally, as important as the Internet may be, it is critical to keep in mind that not all Canadians have either access or the comfort level required to make effective use of this medium. Older citizens and those with less education and income are much less apt to use the web, and this gap is unlikely to change noticeably over the next few years. As well, Quebecers are noticeably less likely than other Canadians to use the web (in part because there is less French language content), and a different strategy may be called for in this province.

It is therefore important to maintain (and possibly expand) information and resource material available through more traditional media, such as printed booklets. TV ads and newspaper inserts will continue to be effective tools in both educating the public and drawing attention to further resources (e.g. those available on the web).

#### **5. Continue to track public opinion over time, to monitor trends, evaluate initiatives and address emerging issues.**

This survey provides an important benchmark of Canadian public opinion on key issues of particular relevance to the Department, and how attitudes have evolved over the past decade. While the research shows that public attitudes have not been changing significantly over the past decade, it has revealed some important trends that have important implications for both policy and communications. This research program needs to be maintained, in order to continue monitoring opinions over time to detect and respond to future changes, whether these result from gradual shifts in public priorities or from major events (e.g. energy shortages).

Because this benchmark survey is only conducted every four to five years, the Department should also consider additional research studies to address short term issues that may emerge, as well as to evaluate specific communications initiatives that have been launched. This might take the form of full-scale customized surveys, syndicated research services, commissioning dedicated questions on existing omnibus surveys, and qualitative research (e.g. focus groups) as needed.

Finally, as important as it is to conduct this type of research, it is also essential that NRCAN establish and maintain the appropriate internal processes for coordinating and utilizing this research throughout the Department, in order to realize its full value. In addition to

commissioning its own research, the Department should take steps to identify and more fully utilize where possible research on relevant topics conducted elsewhere in the federal government.

## Detailed Analysis

### Economic Role of the Resource Sector

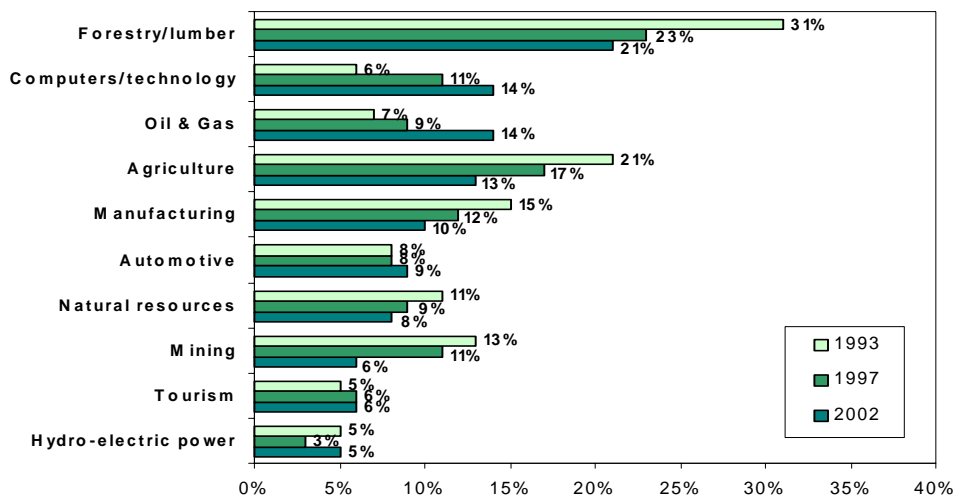
#### Importance of the Resource Sector to Canadians Today

The resource sector continues to be seen as the country's most important, but forestry and mining have lost ground over the past five years, with rising emphasis given to oil and gas, as well as industries such as information technology.

A key objective of this tracking research is to gauge the importance which the Canadian public places on the natural resource sector in contributing to economic prosperity. The latest results show that, while opinions on this issue have not changed substantially over the past five years, the focus is shifting from the traditional resource-based industries of forestry, mining and agriculture, to oil and gas and service sector industries.

When asked to identify (unprompted) what industries or areas of economic activity contribute most to the Canadian economy today, forestry (including lumber, pulp and paper) continues to be the number one response, being mentioned by more than one in five (21%) Canadians. This level is down two percentage points since 1997 and down 10 points since 1993. Also declining over this period of time are agriculture (13%, down 8 since 1993) and mining (6%, down 7). (*Question 2*)

**Most Important Industries in Canada Today**  
*Top 10 Mentions*



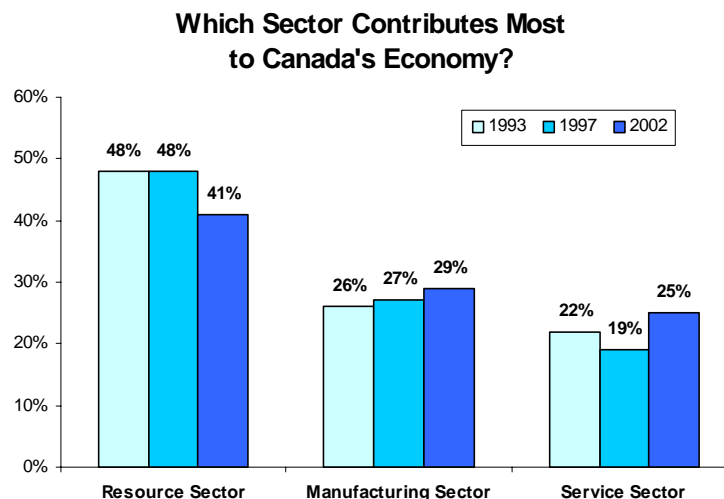
By comparison, the number two industry identified by Canadians is now computers and technology (14%, up 8 points since 1993), followed closely by oil and gas (14%, up 7). Mention of manufacturing, natural resources (non-specific) and the automotive sectors have changed little over the past five years. No other industry or economic activity is identified by more than six percent of the population, while more than one in five (23%) continue to be unable to name any industry as the country's most important.

As might be expected, the prominence given to specific industries is largely influenced by where Canadians live, although in many cases these differences are less significant than what might be expected. Forestry is most widely seen as Canada's most important industry among residents of British Columbia (41%), but it is in this province where most of the decline has occurred (down 10 points since 1997, and down 20 since 1993). The salience given to forestry has stabilized in Atlantic Canada and Quebec since 1997, while continuing to decrease in Ontario (down 4 points).

The opposite pattern is evident in the case of the oil and gas sector. This part of the economy is identified as most important primarily by residents in the Prairie provinces (including Alberta) (44%), having increased by 11 points since 1997, and 18 points since 1993). Attention to this industry has also risen noticeably among Atlantic Canadians and British Columbians, but only marginally in central Canada, where it is seen as number one by very few in Ontario (6%) or Quebec (5%). The declining importance attributed to the country's mining sector is evident in all regions except Quebec, but most noticeably in Atlantic Canada and B.C. where this industry has fallen below the 10 percent threshold in salience as the country's top economic driver.

As in the two previous surveys, the importance attached to specific industries is influenced by Canadians' socio-economic status. Residents with higher levels of education and income are more likely to focus on computers and technology, as well as natural resources generally, while those at lower levels are least able to identify any industry as the country's most important.

Canadians' opinions about the relative importance of economic sectors comes into sharper focus when the question is posed in more specific terms. When provided with a choice between three concisely defined sectors of the country's economy, Canadians continue to be most likely to name the resource sector (e.g. energy, forestry, agriculture, mining) over either manufacturing (the production of goods and products) or the service sector (personal and financial services, including tourism and telecommunications). But the gap has narrowed significantly over the past five years, particularly between the resource sector (41%, down 7 points) and the service sector (25%, up 6). (*Question 4*)



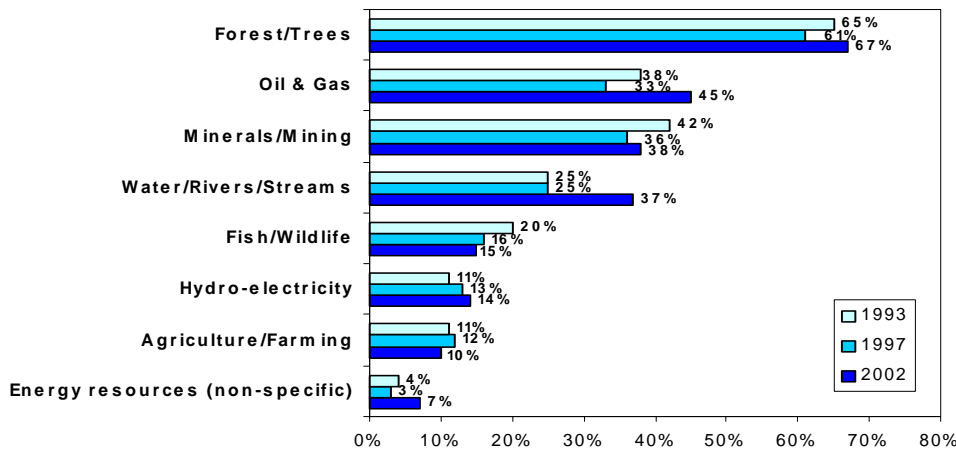


Consistent with the previous surveys, the priority placed on the resource sector is highest in western Canada and lowest in Ontario, but the decline since 1997 is noticeable in all regions except the Prairies (where the growth in oil and gas may have compensated for the perceived downturn in other resource industries). The most noticeable change since 1997 has taken place in B.C. and Atlantic Canada, where the shift has gone from the resource sector (down 14 points in each region) to both manufacturing and service sectors. Perceptions of the service sector as the country's preeminent economic engine is notably consistent across all regions, although rises along with Canadians' level of education.

As in the previous waves, the 2002 survey probed how Canadians interpret the term "natural resources." While the forest sector is losing some of its preeminence as a cornerstone of the country's economy, forests and trees increasingly define how the public thinks of its natural resources (67%, up 6 points since 1997). This view continues to be most widely held in B.C. (77%), but has actually declined marginally in this province since 1997 (down 2), while growing noticeably in all other regions. (*Question 10*)

**What Does "Natural Resources" Bring to Mind?**

*Top 8 Mentions*



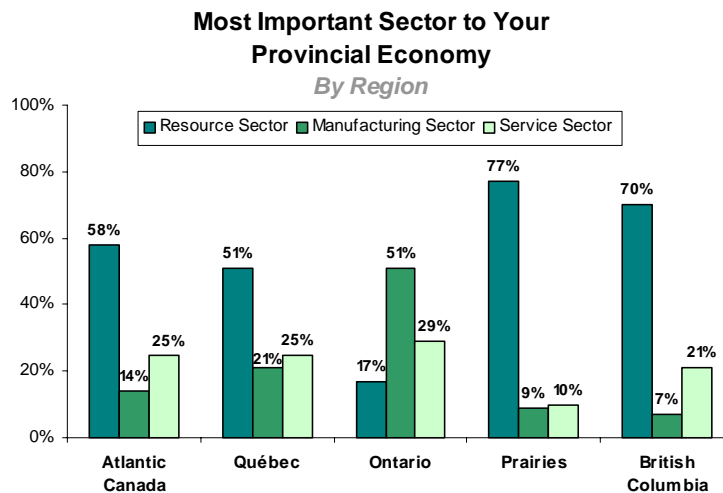
Beyond forests and trees, Canadians are most apt to think of natural resources in terms of oil and gas (45%), and water, rivers and streams (37%), both of which have increased significantly in the past five years (up 12 points). Emphasis given to these different aspects vary in a predictable pattern across regions, but more as a matter of degree than a fundamentally different viewpoint. Mention of water/rivers/streams is highest in Quebec (48%) and has risen most significantly in this province since 1997, but it has also increased noticeably in every other part of the country. The focus on oil and gas is most widespread in the Prairie provinces (65%), but has actually risen most significantly over the past five years in B.C. (49%, up 20 points).

Close to four in ten (38%) identify natural resources in terms of minerals and mining, but is up only slightly since 1997 after having declined earlier in the decade. Since 1997, this definition has grown significantly in Atlantic Canada and Quebec (up 11 points in both regions since 1997), while declining marginally in the western provinces.

## Importance of the Provincial and Local Economy

**Canadians' perceptions of the relative importance of the natural resource sector to their provincial and local economies varies by region and community size, but has declined since 1997, particularly in British Columbia.**

While a national perspective is useful, most Canadians best understand the economic sectors that drive their own provincial economy, which differs significantly across the country. The relative importance attached to each of these three major economic sectors varies noticeably by region in a predictable pattern, and there has been notably little change in views on this question over the past nine years. The resource sector continues to be seen as the most important provincially among residents of the Prairies (77%), followed by B.C. (70%), where this view has declined most noticeably since 1997 (down 6 percentage points). The resource sector is considered the most important by smaller majorities in Atlantic Canada (58%) and Quebec (51%), compared with only 17 percent among Ontarians. (*Question 5*)

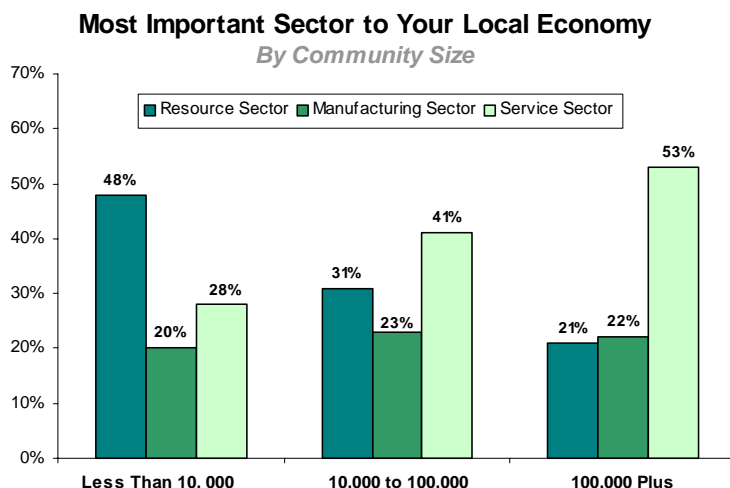


At the national level, naming the resource sector as most provincially has declined marginally since 1997 (down 2 points, following a two-point gain between 1993 and 1997). By comparison, focus on the service sector has climbed modestly to 23 percent (up 2 points), while manufacturing stands at 27 percent (unchanged), being identified mostly by residents in Ontario (51%).

While there is growing public awareness and focus on the service sector as an important component to economic growth and prosperity, less than three in ten Canadians from any region or demographic group yet identifies this sector as the most important part of their provincial economy. This view is most likely to be expressed by Ontarians, Canadians under 35 years of age, women, and those with more education and income, while the most notable growth has occurred in B.C. and Quebec (up 6 points since 1997).

When the focus shifts from the provincial to the local economy, Canadians become much more cognizant of the role played by the service sector. Nationally, the public is more likely to name the

service sector (41%) than either the resource (32%) or manufacturing (23%) sectors as contributing the most to the local economy of the community in which they live, largely unchanged from the viewpoints expressed in 1993 and 1997. (*Question 6*)



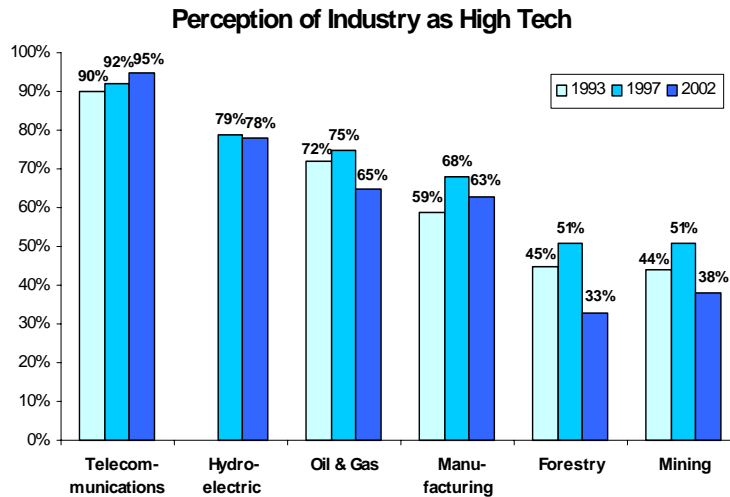
In this case, it is community size that largely determines the relative importance given to each of these three sectors. The service sector is most widely seen as driving the local economy among residents of larger urban areas (53%), while those living in small town and rural areas (with populations of 10,000 or less) most apt to identify the resource sector. Perceptions by community size have changed little over the past five years. Since 1997, however, there appears to be a growing divergence in the perspectives in western Canada. Prairie residents are increasingly viewing the resource sector as the primary cornerstone of their local communities (58%, up 8 points since 1997), in place of the service sector (27%, down 5). B.C. residents are moving in the opposite direction, giving increasing emphasis to their local service sector (55%, up 7) instead of resource industries (38%, down 3).

## Perceptions of Industries as High Tech Versus Low Tech

**Natural resource industries, forestry and mining in particular, have lost ground since 1997 in establishing a "high tech" public image, wiping out gains made over the previous period.**

Because Canada's resource industries have such a long established history, they tend to be viewed as traditional and unsophisticated, relative to more recent technology-intensive industries such as telecommunications and software development. While this image of resource industries as "old fashioned" is no longer accurate in terms of how they actually operate, it can nevertheless influence how Canadians view their future, as either a "sunset" industry or one that will be an important part of the 21st century economy. Results from the latest survey indicate that the public continues to associate core resource industries as "low tech", and that this image has actually strengthened over the past five years.

As in the previous waves, the survey asked Canadians whether they consider each of six industries to be essentially "high tech" (relying on sophisticated technology and equipment) or "low tech" (relying on less advanced or more traditional technology/equipment). As before, the benchmark for "high tech" is the **telecommunications** industry, which is the consensus of 95 percent of the Canadian public. Three in four (78%) also label the **hydro-electric power** as high tech. (*Questions 8f,g*)



As before, other core resource sector industries are less likely to be seen by Canadians as high tech. Of greater importance is the fact that this perception has declined significantly since 1997, after having made modest gains over the previous four years. Less than two-thirds (65%) of Canadians now consider the **oil and gas** sector to be high tech (down 10 points), which is down in every region except Atlantic Canada (82%, up 2 points), but most significantly in Ontario (down 15) and Quebec (down 12). Views of this industry as high tech continue to be strongest in the Prairies (73%), but even here there has been a noticeable decline since 1997 (down 8).

Less than four in ten Canadians rate the **mining** (38%) or **forestry** (33%) industries as high tech, in both cases down substantially from 1997 levels, after having made gains over the previous time period. These declines have taken place across all regions, but most significantly in Ontario and in large urban centres. In the case of forestry, only 25 percent of Ontarians (down 23 points) and 38 percent of Quebecers (down 18) now think of forestry as a high tech industry, with only somewhat higher percentages in B.C. (35%) and Atlantic Canada (42%). These latest shifts more than wipe out the gains in public image achieved by these industries between 1993 and 1997.

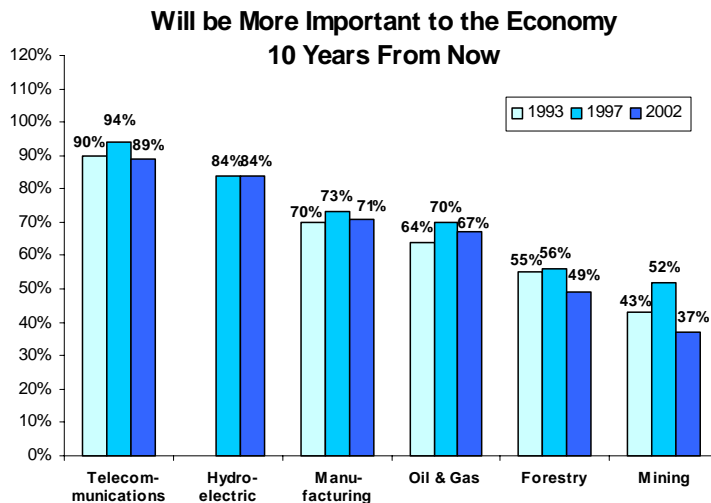
**Manufacturing**, another relevant benchmark industry, also experienced a decline in its image as high tech over the past five years, but to a more modest degree and remains above the level recorded in 1993.

## Future Importance to the Canadian Economy

The resource sector is also now less likely than before to be seen by Canadians as growing in importance over the next 10 years, with mining experiencing the most significant decline.

While it is useful to know how Canadians view the current contribution of various industry sectors, it is perhaps more valuable to understand how they see the role of these industries in the future, as the Canadian and world economies evolve. Results from this latest survey reveal clearly that the traditional resource industries have lost ground in establishing themselves in the minds of the public as a growth sector.

Once again, the **telecommunications** industry serves as a benchmark against which to measure other sectors. Nine in ten Canadians believe this sector will become much more (52%) or somewhat more (36%) important to the country's economy 10 years from now. This proportion has actually declined modestly over the past five years and is now back to 1993 levels, likely the result of the widely publicized "meltdown" of high profile Canadian companies such as Nortel and JDS Uniphase. A similar pattern is evident in the public's assessment of the manufacturing sector, which seven in ten (71%) now see as growing in importance over the next decade. (*Questions 9c,f*)



More than eight in ten (84%) Canadians expect the country's **hydro-electric** industry to grow over the next 10 years, and this is the only one of the sectors examined to remain stable since 1997. Two-thirds (67%) believe the oil and gas industry will be more important, down modestly but still above the 1993 level. (*Questions 9e,g*)

By comparison, the public is much less likely to envision a stronger future for the country's **forestry** (49%) and **mining** (37%) industries, and this view has declined over the past five years, particularly in the case of mining (down 15 points since 1997), following a noticeable gain earlier in the decade. (*Questions 9b,d*)

As before, regional differences are apparent in how Canadians view the future of these industry sectors, although the patterns are not necessarily what might be predicted. Hydro-electric power is now most widely seen as growing in importance among residents of Ontario and B.C., while this is least apt to be the case in Quebec (where this view has declined by 9 points since 1997). Positive anticipation for the oil and gas sector is strongest in Atlantic Canada (thanks to significant offshore oil and gas exploration and development), but has actually declined marginally in this region since 1997 (down 2). More significant is the drop in this perspective in the Prairie provinces (including Alberta) (down 14 points), while jumping in B.C. (up 13).

Declining confidence in the future of the forestry and mining sectors is evident in every region of the country, and continues to be lowest in Quebec (41%, down 8 points). Optimism about the mining industry has dropped most substantially in Atlantic Canada (down 21) and the Prairie provinces (down 23), followed by Ontario (down 18). British Columbians are the most divided on the future of the forest sector, with 46 percent saying it will become more important to the Canadian economy 10 years from now (down 3), while 44 percent maintain it will become less so.

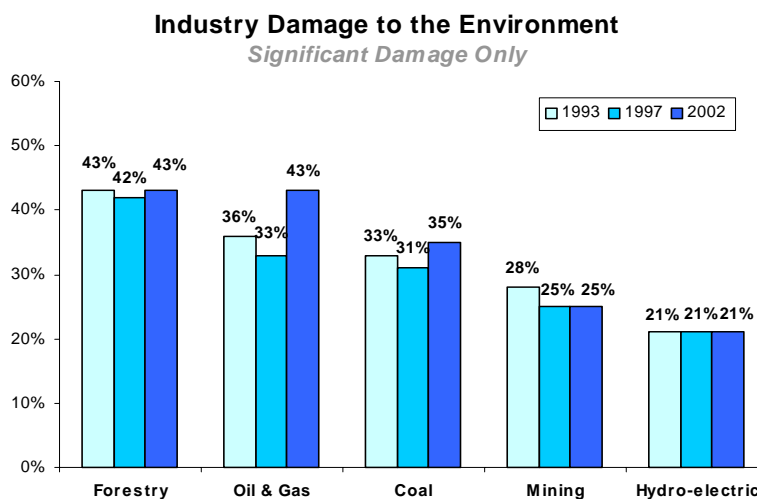
## Environmental Impacts of the Resource Sector

As important as the resource sector is to the economy, Canadians remain concerned about the impact of these industries on the country's natural resources and environmental quality. As with the previous waves, the current survey examined public 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 continue to see resource industries as having a significant impact on the environment. Perceptions of environmental damage caused by the oil and gas sector have risen noticeably since 1997.**

The survey asked Canadians to rate the extent of environmental damage caused by each of five resource sector industries. As in past surveys, a majority of citizens believe each of these industries is causing at least moderate environmental damage, although there is noticeable variation in the likelihood of this damage being seen as significant. At a national level, there has been very little change in views on this issue since 1997, with the notable exception of the oil and gas industry where the percentage who see this sector as causing significant environmental damage has risen 10 points (to 43%), now equivalent to the proportion who hold this view about the country's forestry industry. By comparison, less than half as many (21%) believe that hydro-electric power has this degree of impact on the environment (unchanged since 1993). (*Questions 12a-e*)



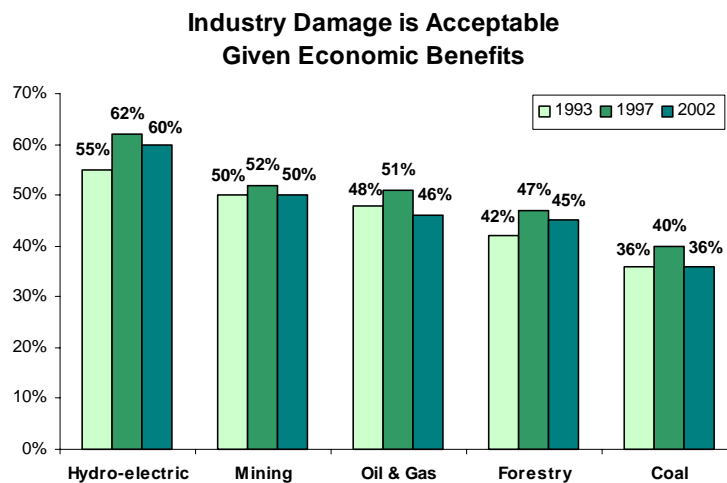
At a regional level, some notable shifts have taken place over the past five years. Perceptions of significant environmental damage from the oil and gas industry have increased in all regions, but are most evident in Quebec (57%, up 18 points) and the Prairies (41%, up 12), while remaining lowest in B.C. (30%, up 7). Forestry impacts are also more widely seen than before in Quebec (up 12) and Atlantic Canada (up 11), while declining in western Canada (down 13 in the Prairies, and down 4 in B.C.).

Perceptions of significant environmental damage resulting from the coal industry have risen to a small degree nationally, but most noticeably in Quebec (up 10) and B.C. (up 6). Canadians with a university education continue to be among those most likely to hold this view about the coal industry, and it is in this group where opinions have strengthened the most over the past several years (up 9). Fewer regional or demographic changes are evident in the public's views about the damage caused by the mining and hydro-electric industries, except in B.C. where the percentage identifying significant damage caused by either industry has declined more noticeably than elsewhere.

## Acceptability of Environmental Impacts

**Canadians continue to be divided on whether or not the environmental damage caused by resource industries is acceptable given the economic benefits provided. Since 1997, the overall level of acceptance has declined marginally for all industries.**

Given that many Canadians see the resource sector as causing moderate if not significant damage to the environment, the important question then becomes the extent to which these impacts are considered acceptable, given the clear economic benefits that is provided by these industries. Results from this current survey indicate that Canadians' attitudes on this issue have been relatively stable, but at the same time the public has become marginally less accepting of such damage since 1997.



Those citizens who identified significant or moderate environmental damage from a specific industry were asked how acceptable they find this damage given the economic benefits provided by this industry. As before, Canadians are most forgiving of the environmental effects of **hydro-electric power**, which six in ten say are very (9%) or somewhat (51%) acceptable (down 2 points since 1997), but still above the 55 percent recorded in 1993. This view continues to be most widely held in Quebec, but has actually declined there marginally, while decreasing more significantly in Ontario (53%, down 10). Acceptance of hydro-electric power impacts has increased in Atlantic Canada (61%, up 8) and B.C. (60%, up 6), where this view was least in evidence five years ago. (*Questions 13a-e*)



Public opinion is more divided in terms of the environmental effects of **mining** activities, with only half (50%) rating the environmental damage as acceptable, having declined in every region except Atlantic Canada (57%, up 5), but most noticeably in Ontario (45%, down 7).

Fewer than half of Canadians find acceptable the environmental impacts from the **oil and gas** (46%) and **forestry** (45%) sectors, both down from 1997, erasing the gains achieved earlier in the decade. For both industries, the decline is more notable in eastern Canada, particularly in the case of forestry in Quebec (down 10) and oil and gas in Ontario (down 11). In the Prairies, acceptance of oil and gas impacts has also declined (down 7), while acceptance of forestry impacts has increased (up 7).

As before, the public is least accepting of the environmental impacts caused by the **coal industry** (36%), and here again the level of acceptance has declined over the past five years (down 5), erasing the gains earlier achieved. For this industry, the decline in acceptance is most evident in Ontario (down 10) and the western provinces (down 8).

While there is a clear distinction in the acceptability of environmental impacts, the differences are relative in that each industry attracts a proportion of Canadians who consider the damage it causes to be unacceptable (from a low of 25% of the population in the case of hydro-electric power, to a high of 42% for the coal industry).

As in the two previous waves, men and Canadians with lower levels of education are most apt to be accepting of environmental damage from resource sector industries. This gap appears to be growing in the case of forestry impacts, but diminishing in the case of oil and gas. Residents of large urban areas are marginally less accepting than those in smaller cities and rural areas, but this gap is closing in terms of forestry and mining impacts.

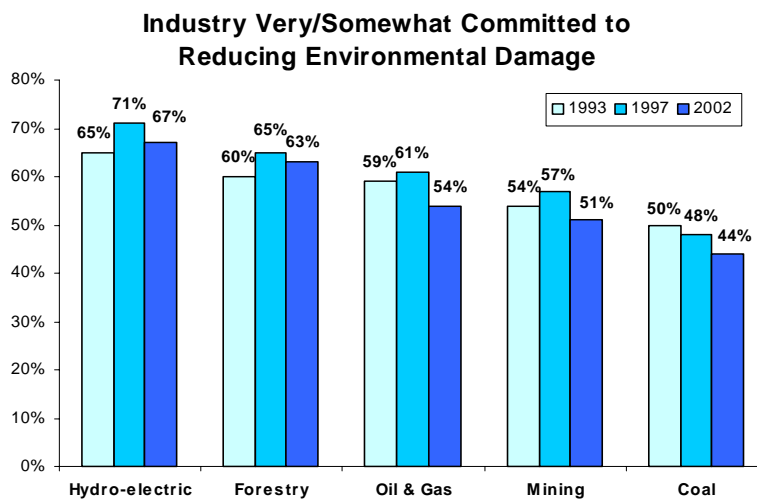
## **Industry Commitment to Reducing Environmental Damage**

**The public is less likely than in 1997 to believe that resource sector industries are committed to reducing the damage caused by their operations, reversing gains achieved over the previous period.**

The fact that resource industries are seen by many to be damaging the environment beyond what is considered an acceptable level creates a degree of public discomfort that cannot be easily resolved in terms of either dramatic changes to how industries operate or a significant shift in public values attached to environmental resources. What can make a difference is whether Canadians feel that resource industries are taking steps, or are at least committed to making changes, to reduce their impact on the environment.

As in past waves, the survey addressed this issue by asking citizens who believe that specific industries are causing significant or moderate environmental damage about the extent to which they believe these industries are committed to reducing these impacts caused by their operations. As before, the public is more likely than not to give industries some credit for having this type of commitment (although few feel this is a strong commitment), but this varies noticeably by industry.

More important, the belief in such a commitment has declined across all industries over the past five years, and in some cases is now less evident than was the case in 1993. (*Questions 14a-e*)



**Hydro-electric power**--the industry least likely to be seen as damaging the environment--is also the one that Canadians are most apt to believe is committed to minimizing its impact, with two in three (67%) saying this industry is very or somewhat committed to this goal. This is down marginally since 1997, but still above 1993 levels. This decline is most evident in the Prairie provinces (down 10 points), while increasing marginally in Quebec (up 2) where this industry has the greatest profile.

Similarly, a clear majority (63%) believe that the **forest industry** is very or somewhat committed to reducing its environmental damage. Nationally this level is down marginally since 1997, but regionally has declined significantly in Atlantic Canada (down 7) and Quebec (down 11), while increasing marginally in Ontario and the Prairies, and remaining unchanged in B.C. Less than half (45%) of Quebecers now feel the forest industry has such a commitment, compared with more than seven in ten residents living in the Prairies (73%) and B.C. (72%).

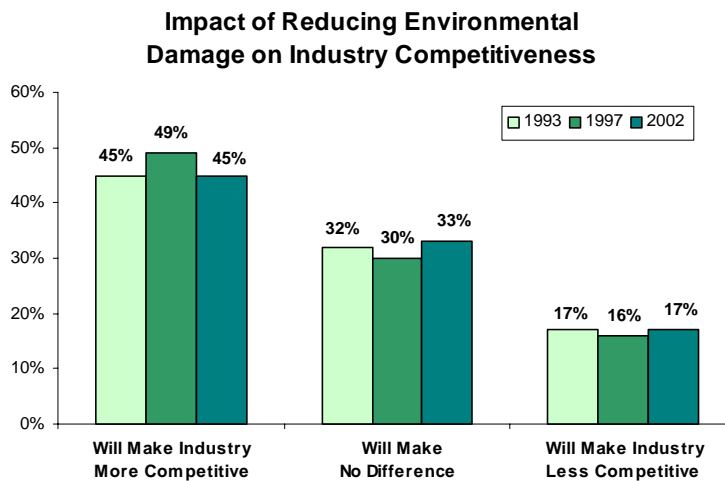
Along with growing concern about the environmental damage caused by the country's **oil and gas sector**, there is a declining belief in this industry as committed to reducing these impacts. Only a small majority (54%) of Canadians now hold this view, down 7 points since 1997, and below the level recorded in 1993. This decline is evident across the country, but most noticeably in Quebec (down 11) and the Prairies (down 12). As with forestry, Quebecers (37%) are least likely to give industry credit in this area, and this gap with other Canadians has widened over the past five years.

Fewer than half believe that either the **mining** (51%) or **coal** (44%) industries are very or somewhat committed to reducing their environmental impacts, both down over the past five years (down 6 and 4 points, respectively) and now below the levels recorded in 1993. Opinions about both industries have declined most noticeably in Atlantic Canada (down 13-16 points), while the drop for mining is also steep in Quebec (down 13) and for coal in the Prairies (down 10). Quebecers are less likely than other Canadians to give either industry credit for being committed in this area.

## Environmental Clean-up and Economic Competitiveness

**Canadians continue to believe that resource industries can improve their economic competitiveness by investing in reducing the environmental damage caused by their operations.**

While the public has yet to be convinced that resource industries are fully committed to reducing the impacts of their operations, most continue to believe that adopting environmentally-responsible practices is economically viable, if not desirable. This view has weakened marginally since 1997, but close to half (45%) of Canadians continue to say that making a financial commitment in reducing environmental damage will help resource industries become more competitive in the marketplace over the long term. This is down from 49 percent who expressed this opinion five years ago and now at the same level as recorded in 1993. By comparison, fewer than one in five (17%, up 1) maintain that such investment would make industry less competitive, while twice as many (33%, up 3) believe it would make no difference either way. Few (5%) could not offer an opinion on this question. *(Question 15)*



Views on this question are largely consistent across the country, but belief in the economic benefits of environmental investments is somewhat more widespread among women, younger residents and those living in rural communities. The decline in this perspective is most evident among urban residents (40%, down 12 points), those with an university degree (down 7) and those with household incomes under \$60,000 (down 6).

When asked *why* this type of investment would have a positive impact on industry competitiveness (without offering prompted responses), Canadians continue emphasize benefits that have more to do with image than substance. The most common reasons are that such investments would improve companies' public image (29%, up 5 point since 1997), to be responsive to public opinion (19%, down 3) and because more people would buy their products or services (18%, up 2).

By comparison, fewer feel companies would benefit from such actions because it would make resources last longer (10%, down 5), because they should do it (7%, up 1), would result in less pollution (6%, unchanged) or would result in better products (4%, down 2). One in six (14%, down 1) are unable to offer any reason why they think resource industries would increase their competitiveness through reducing their impact on the environment. (*Question 16*)

The smaller group (17% of the population) who maintain that environmental clean-up investments would **harm** industry competitiveness are most apt to feel that such actions would be detrimental because it would mean the cost of products would go up (35%, up 14 points since 1997). Others maintain this view because they believe such investments would make companies less competitive in general (23%, unchanged), because the capital investment costs are too high (21%, down 4) or because Canadian companies could not compete with foreign companies (15% up 1). One in ten (12%, down 10) from this group could not provide give any reasons for their view on this issue. (*Question 17*)

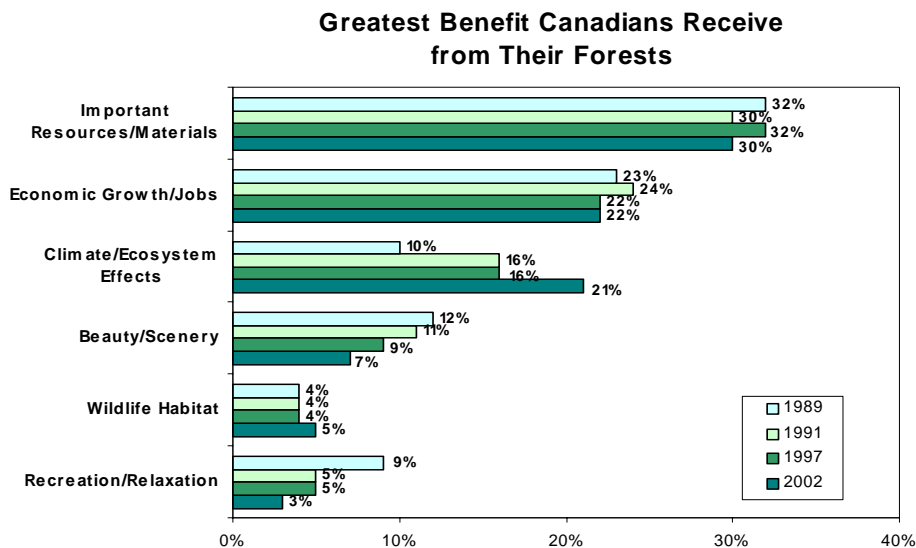
## Forestry and Mining Sectors

### Forest Benefits

**Canadians are most likely to value the country's forest resources as an important source of raw materials, economic growth and jobs. At the same time there is increasing recognition of the climatic and ecosystem benefits that forests provide.**

Forests have long played a vital role to Canadians. Historically, forests were valued for their economic contribution, providing an essential source of raw materials (e.g. for construction, products and fuel), as well as a source of livelihood. Forests have also served as an important setting for recreational pursuits, as well as a quiet refuge from the hectic pace that accompanied the country's urbanization (as can be seen from the growth and continued value placed on the "cottage" experience). More recently, Canadians have also begun to appreciate the role that forest ecosystems play in providing habitat for wildlife and regulating climate.

How does the public value the country's forest resources today? The current survey asked citizens to identify (unprompted) what they consider to be the greatest benefit that Canadians receive from their forests (based on a question included on previous national surveys conducted in 1989 and 1991). The results show that there has been strikingly little change in the public's view on this issue over the past 13 years, with the exception of a growing focus on the ecosystem and climate benefits.



As before, Canadians are most likely to think of forests as providing an important source of resources or materials (30%), although this has declined marginally (down 2 points) since 1997. More than one in five (22%, unchanged) continue to see the primary benefit coming from forests as a source of economic growth and jobs, while almost as many (21%, up 5) now identify climatic and ecosystem benefits (e.g. improving air quality, regulating climate). By comparison, there continues to be a declining emphasis on the scenic (7%, down 2) and recreational (3%, down 2) benefits of forests. (*Question 19*)

As in 1997, the emphasis on material/resource benefits is most evident in Atlantic Canada and Quebec, as well as among rural residents and those with less education and income. Since 1997, mention of this type of benefit has declined primarily in Ontario and among urban residents across the country. British Columbians continue to be most apt to focus on the economic benefits of forests (39%), but this has declined marginally (down 2), while the opposite trend is evident in Atlantic Canada (21%, up 7). Identification of ecosystem/climate benefits is highest in Ontario (30%) and among urban residents (25%), but the strongest growth in this opinion is evident in the Prairies (22%, up 9) as well as among urban residents (up 8).

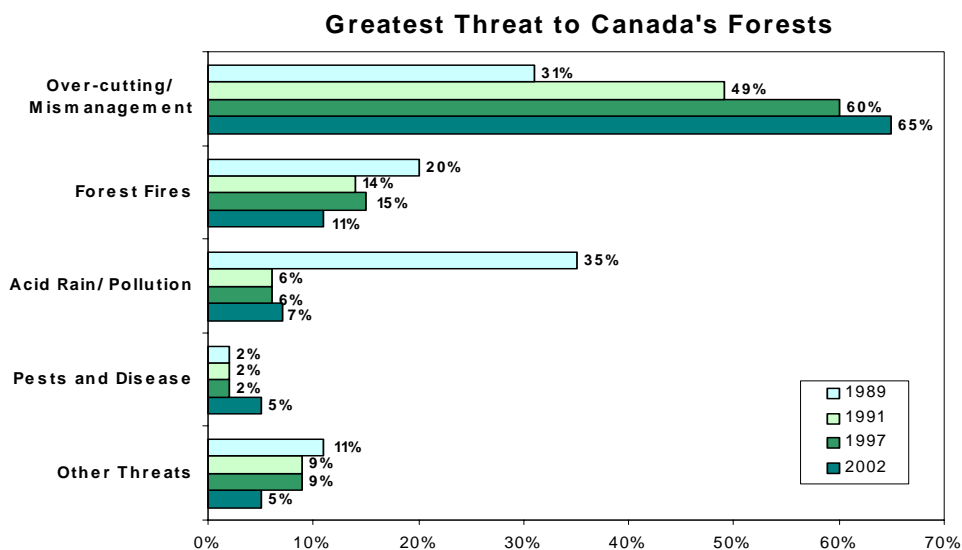
## Forest Threats

**The public considers industry management practices, such as over-cutting and clear-cutting, to be the primary threat facing the country's forests today.**

The survey also examined what the public considers to be the greatest threats to the country's forests today, and reveals a continuing focus on concerns about how industry and governments are managing this resource.

When asked to identify the greatest threat to our forests (unprompted), almost two-thirds (65%) of Canadians now mention concerns pertaining to forest management, principally over-cutting (45%, up 6 points since 1997), clear-cutting (9%, down 1), lack of replantation (6%, unchanged) and poor forest management generally (5%, unchanged). Public focus on this threat has more than doubled since 1989, when only 31 percent of Canadians voiced this concern.

By comparison, the public is much less apt to identify natural threats in the form of forest fires (11%, down 4) or pests and disease (5%, up 3). The most significant trend in the past nine years is the sharp drop in focus given by Canadians to pollution (including acid rain) as a major threat to forests, now mentioned by only seven percent, compared with 35 percent in 1989. Only seven percent of the public could not identify any type of forest threat. (*Question 20*)

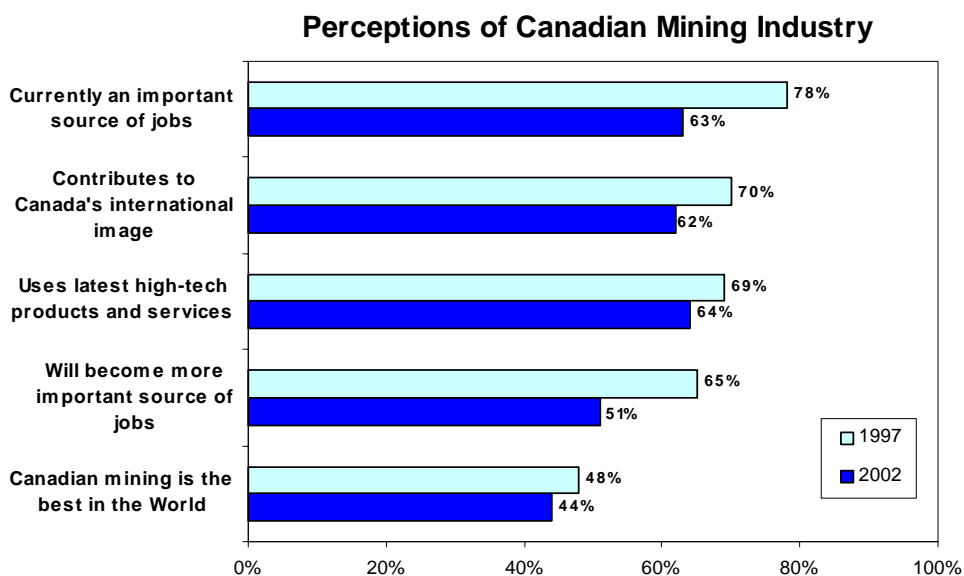


Over-cutting is the dominant threat identified across the country, but the increasing focus on this issue has occurred only in eastern Canada, particularly Atlantic Canada (52%, up 16) and Quebec (48%, up 12), and to a lesser extent in Ontario (45%, up 5). Concern about over-cutting has declined since 1997 in the Prairies and in B.C. (where pests and disease has jumped to the number two concern at 18%, up 15 points). Across the country, mention of overcutting has risen most prominently among citizens 18 to 34 years of age (53%, up 12).

## Economic Contribution of Canada's Mining Industry

**The Canadian mining industry has lost significant ground since 1997 in terms of being viewed by the public as an important part of the economy and a leading edge industry.**

Mining has played a significant role in the Canadian economy for more than a century, but it has not enjoyed the public profile as other resource industries such as forestry or oil and gas. Following modest gains in its image among Canadians earlier in the 1990s, this industry has lost significant ground over the past five years. This is most evident in terms of how the public views mining as a source of employment. Since 1997, there has been a major decline in the percentage of Canadians who agree with the statement that *"today the Canadian mining industry is an important source of jobs for Canadians"* (63%, down 15 points), and only half now agree that *"the Canadian mining industry will be an important source of jobs for Canadians"* (51%, down 14). This trend is evident across the country, but particularly in Ontario as well as the Prairie provinces (in the case of current jobs). (*Questions 22b,c*)



The public is also somewhat less likely than before to see the mining as a leading edge industry. Fewer than two in three agree that *"the Canadian mining industry uses the latest high-technology products and services to do its job"* (64%, down 5), or *"the reputation of the our mining industry contributes to Canada's image on the international scene"* (62%, down 8). The drop in this latter statement is also most evident in Ontario (down 14) and the Prairies (down 15). (*Questions 22a,e*)

Finally, Canadians are now less inclined to agree that "*the Canadian mining industry is the best in the world*" (44, down 4), compared with those who disagree (30%, down 2) and those who cannot say either way (26%, up 6). Atlantic Canadians (49%) continue to hold the most positive view of the industry in this respect, and this has held over the past five years. (*Question 22d*)

On all statements, the mining industry enjoys a more positive image among men and citizens with lower levels of education and income, although less so than was the case in 1997.



## Energy Sources and Energy Use

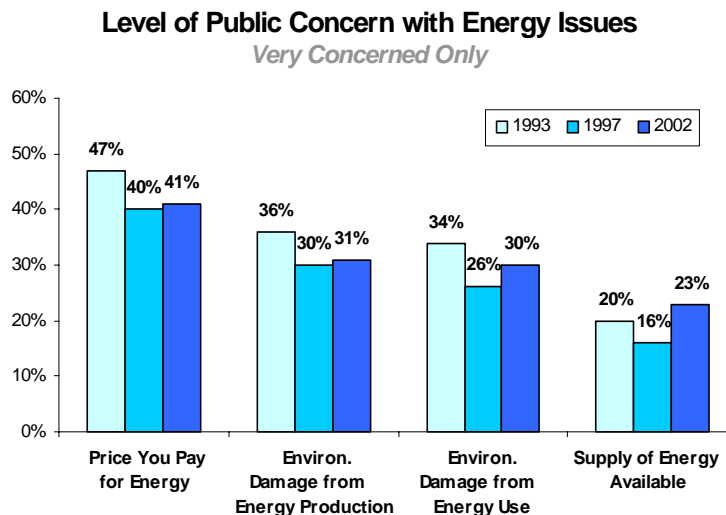
Energy has not been a high profile issue on the public agenda for most of the past two decades, apart from specific projects (e.g. Hibernia) or short term events (occasional jumps in gas prices).

Increasing attention has occurred on such issues as climate change and urban air quality, but the "energy" dimension of these issues has so far remained secondary. More recently, there has been a growing focus on supply issues, resulting from such developments as the deregulation of the electricity market in some provinces (e.g. Alberta, Ontario) and rising U.S. imports of Canadian resources.

### Public Concerns About Energy

**Cost continues to be Canadians' dominant energy-related concern, but since 1997 there has been a growing focus on the environmental impacts of consumption and the supply of energy available.**

Consistent with previous research, when Canadians think about energy issues, they continue to be most likely to be concerned about the price they pay, followed by environmental impacts, and then supply. At the national level, there has been little change in the degree of concern expressed about the first two of these issues (following significant declines earlier in the decade), with a modest rise in attention to energy supply.



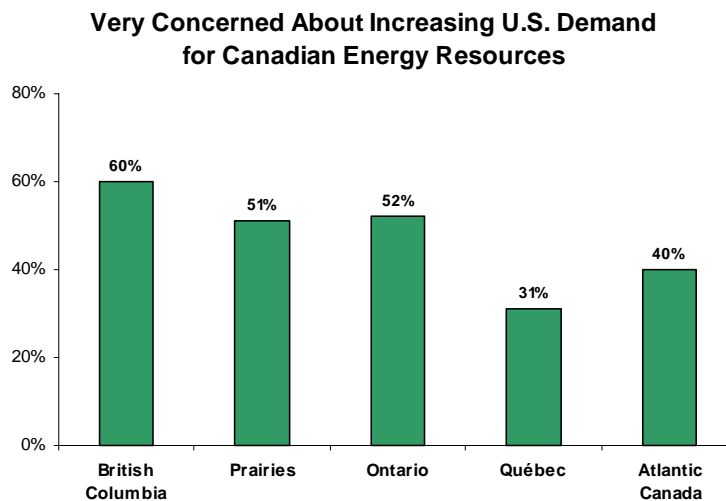
As in 1997, four in ten (41%) Canadians say they are very concerned about **the price they pay for energy** (up 1 point), while an equal number are somewhat concerned (40%), and less than half as many are either not very (13%) or not at all (5%) concerned. Across the country, however, there has been a significant drop in such concerns among Atlantic Canadians (40%, down 22 points), while declining marginally in Quebec (34%, down 3) where there continues to be the least worry about energy prices. By comparison, such concerns have increased noticeably in Ontario (45%, up 7) and are at a similar level in the Prairies (46%, up 3). Since 1997, concerns about energy prices have

declined in rural parts of Canada (down 9) while rising among residents of communities between 10,000 and 100,000 (up 3) (reversing the trend observed earlier in the decade). (*Question 32a*)

There has also been little change in concerns about **the environmental damage caused by energy production**, with three in ten (31% up 1) saying this of significant concern to them. Regionally, however, this concern has declined in Atlantic Canada (down 6), while increasing modestly elsewhere in the country. As before, concerns about such damage are most evident in Ontario (37%), while least so in Quebec (26%) where hydro-electric power is prevalent. (*Question 32b*)

More notable is the fact that the public is now as likely to be very concerned about **environmental impacts of the energy they use** (30%, up 4), although this figure remains below the level recorded in 1993. Such rising concerns are particularly evident in Quebec (26%, up 9) and the Prairies (30%, up 7), but continue to be most widespread in Ontario (35%, up 4). Growing concern about consumer impacts from energy consumption has taken place across all demographic groups, with such concerns most likely to be expressed by women and Canadians in the top income bracket. (*Question 32c*)

As before, Canadians are least likely to be very concerned about **the supply of energy available**, but this view has increased noticeably over the past five years (23%, up 7), and is now above the level recorded in 1993. Such concerns are most evident in western Canada (up 10 points), although less than one in four residents of the Prairies (24%) or B.C. (25%) express significant concerns about this issue. Quebecers (18%, up 5) continue to be less likely than other Canadians to be worried about energy supply. This growth in concern about energy supply has occurred across the population, but more noticeably among older citizens, perhaps because of their memories of the energy crises of the 1970s. (*Question 32d*)



Increasing concerns about energy supply could be driven, in part, by the growing U.S. interest in Canadian natural gas and other energy resources. Close to half (46%) of Canadians say they are very concerned about increasing U.S. demand for Canadian energy resources, while another third (33%) are somewhat concerned. Such concern is more evident in Ontario, the Prairies and B.C., than in Quebec or Atlantic Canada. This opinion also rises along with Canadians' level of education, household income and age. (*Question 32e*)

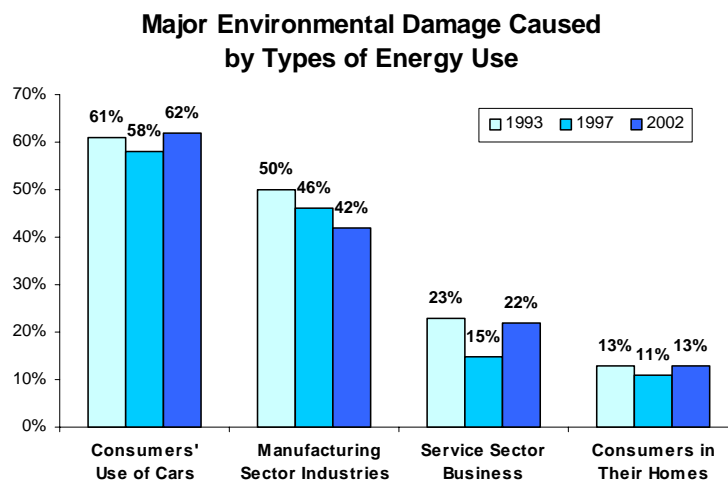
## Environmental Impacts of Energy Use

**Most consumers recognize the significant environment damage caused by vehicle use, but few believe the same degree of impact results from use of energy in the home.**

As in previous waves, the survey also focused on public perceptions about the environmental impacts of four different types of energy consumption, by consumers and businesses. The latest results indicate a modestly growing awareness over the past five years of the fact that energy consumption does affect the environment, but only rising back to the levels recorded in 1993.

Six in ten (62%) of Canadians believe that major environmental damage is caused by **consumers' use of automobiles**, which is up four points since 1997, but just barely above the 61 percent recorded earlier in the decade. Most the remainder say such consumption causes moderate damage (28%), while less than one in ten maintain it results in minor (8%) or no (1%) damage at all. (*Question 33b*)

Increasing perceptions of major damage from this activity has occurred exclusively in eastern Canada (up 9) and Ontario (up 6), while actually declining in the Prairie provinces (down 3) and B.C. (down 1). In 2002, Quebecers (71%) are most likely to hold this view, while Prairie residents (48%) are least apt to agree. What is notable is that there is only a modest difference between those living in rural areas and those in major urban centres, where the air quality effects of vehicle use are most apparent. As before, women and Canadians with higher levels of education are among those most likely to ascribe major damage from automobile use.



Canadians are less likely than before to believe that major environmental damage is caused by **manufacturing sector industries** (42%, down 4), continuing a downward trend dating back to 1993. Most of this decline has taken place in the Prairies (38%, down 8) and B.C. (34%, down 12), while remaining considerably higher in Ontario (46%, down 1) and eastern Canada (44%, down 1). This view has diminished among residents in communities of 10,000 and over (down 7), while rising among those living in rural areas (up 3). (*Question 33c*)

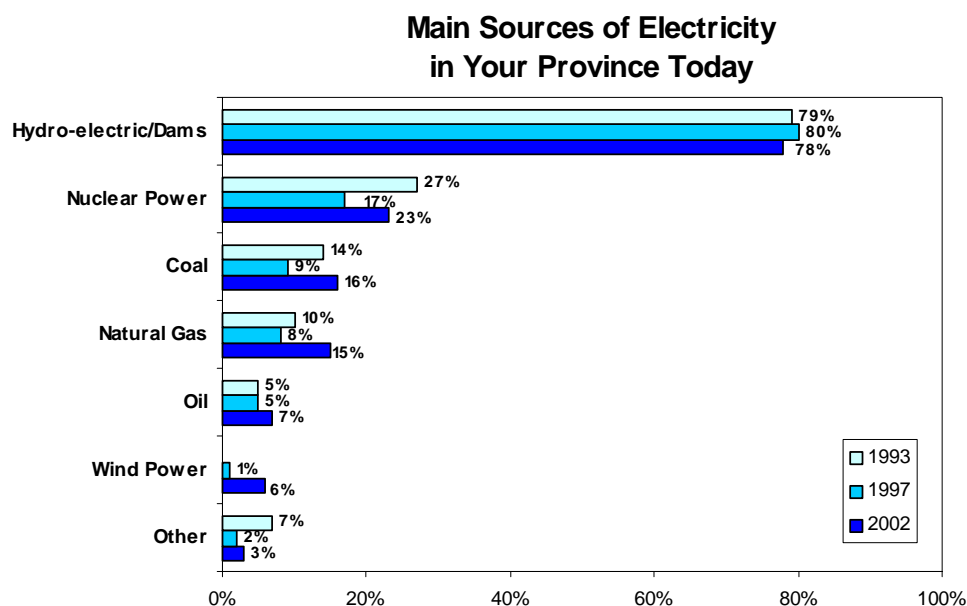
The opposite trend is evident in how the public views the environmental impacts of **service sector businesses**. While little more than one in five (22%) say such industries cause major damage, this percentage is up seven points since 1997, returning to the level recorded four years earlier. Most Canadians continue to believe this sector causes moderate (42%, up 1) or minor (29%, down 4) damage to the environment. In this case, the rise in perceptions of major damage are most evident in Quebec (24%, up 11) and Ontario (25%, up 9), while continuing to be lowest in B.C. (12%, up 2). (*Question 33d*)

Finally, few Canadians (13%) believe their own **consumption of energy in the home** has major environmental consequences (up 2 points since 1997 and returning to 1993 level). Most, however, acknowledge that such consumption causes moderate (43%, up 4) or minor (35%, down 1) damage, while a declining number (8%, down 4) maintain there is no damage at all. Almost all of the increase in perceptions of major environmental damage from this source has taken place in Ontario (16%, up 7), but this is only marginally higher than the percentage expressing this opinion in 1993. There is little difference in the perceptions of urban and rural residents on this issue. (*Question 33a*)

### Awareness of Provincial Sources of Electric Power

**Canadians continue to exhibit limited understanding of the sources of electric power to their homes, with close to eight in ten across the country identifying hydro-electric power as the primary source.**

The survey probed further into public perceptions about the environmental impacts of household energy consumption by examining the extent to which Canadians link their own consumption to its environmental consequences. Limited awareness of this link can be explained in terms of how little people understand how the electricity they use is generated.



When asked to identify the main sources of electricity for their province (unprompted), most Canadians continue to identify hydro-electric power (78%), largely unchanged over the past eight years (This response is predominant even when the initial response is further probed to ensure that survey respondents properly understand what is meant by hydro-electric power). (*Question 25*)

While hydro-electric power is understandably the primary response given by residents in Quebec (92%) and B.C. (93%) (where this is a correct response), it is also identified by more than three-quarters of Ontarians (78%) and a majority of residents living in Atlantic Canada (57%) and the Prairies (60%) (with these latter two regions accounting for all of the decline since 1997, reversing a trend recorded earlier in the decade). The continuing focus on hydro-electric is likely reinforced by the fact that most provincial utilities across Canada, and even electricity itself, is typically defined by the term "hydro."

While no other source of electrical power has nearly as much public profile, identification of all other sources has increased over the past five years, which may signal a growing understanding of this industry. Almost one in four (23%) mention nuclear power, mostly by Ontario residents (51%, up 9 points), followed by those living in Atlantic Canada (17%, up 4) and Quebec (14%, up 11). Coal is most widely identified as a provincial source of electricity in the Prairies (38%, up 16) and Atlantic Canada (32%, up 6), while mention of natural gas is up across the country, but most significantly in the Prairie provinces (28%, up 13). Also of note is the emerging profile given to wind energy as a source of electricity, primarily by Prairie province residents (13%, up 11 points since 1997).

When consumers are asked which of these sources they named is most likely to be supplying power *to their own household*, again hydro-electric continues to be the primary response (74%, down 2 points since 1997). This source is mentioned by almost all residents in Quebec (96%) and B.C. (96%), and to a considerably lesser extent in Ontario (61%), while having declined noticeably in the Prairies (54%, down 13). Few identify other sources, including nuclear power (mostly in Ontario, 26%), coal (mostly in Atlantic Canada and the Prairies (22%)) and natural gas (primarily in the Prairies, 15%). (*Question 26*)

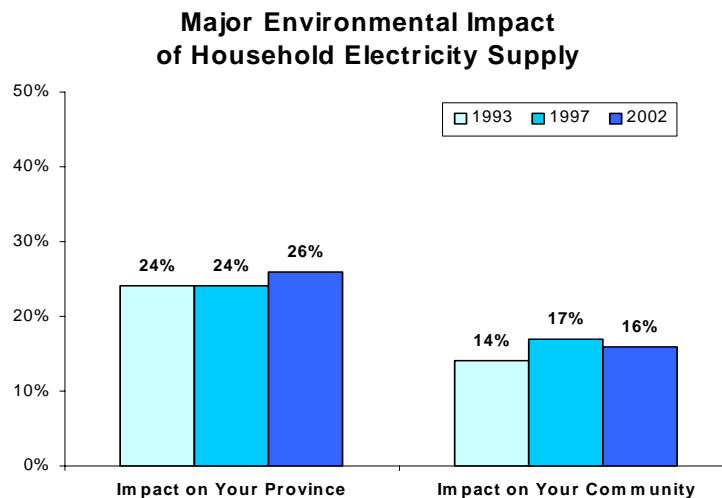
## Environmental Impacts of Local Energy Generation

### **Few consumers believe the generation of electrical power that supplies their home has major environmental impacts on either the province or their own community.**

The survey asked those citizens who could identify a source of electrical power for their household about the extent to which that source of generation is affecting the quality of the environment, both locally and across their province. As in the two previous waves, relatively few Canadians believe the source of energy they rely on themselves is one that has major environmental consequences. This view is consistent with the fact that most consumers believe their homes are supplied by hydro-electric power, which is considered the cleanest of energy sources.

One in four (26%) Canadians say the source of electricity supplying their household has a major impact on environmental quality **in their province**, up marginally from 1997 and 1993 (up 2). Most

continue to maintain this source has moderate (30%, down 3) or minor (32%, up 3) environmental impacts, while another 11 percent insist it has none at all. Despite the variation in both actual and perceived sources of electricity by region, there is relatively little difference in views on this question across the country. Since 1997, however, perceptions of major damage have increased noticeably in Atlantic Canada (28%, up 8) (where coal and oil are more prevalent) while dropping in B.C. (17%, down 10) (where almost all residents identify hydro-electric as their source of power. (*Question 27b*)



Consumers are even less likely to believe that their source of electricity is responsible for major environmental effects in **their local community** (16%, down 1), essentially unchanged since 1997. Another one in five (21%, up 1) feel there are moderate impacts, while the majority maintain these are minor (35%, up 4) or nonexistent (28%, down 1). Once again, likelihood of identifying major environmental effects is lowest in B.C. (8%), having declined in that province by almost half (down 7), while a smaller decline is evident in the Prairie provinces (13%, down 4). It is women and Canadians at the lowest income bracket who are most likely to say that their power source has a major effect on environmental quality at both the provincial and community levels. (*Question 27a*)

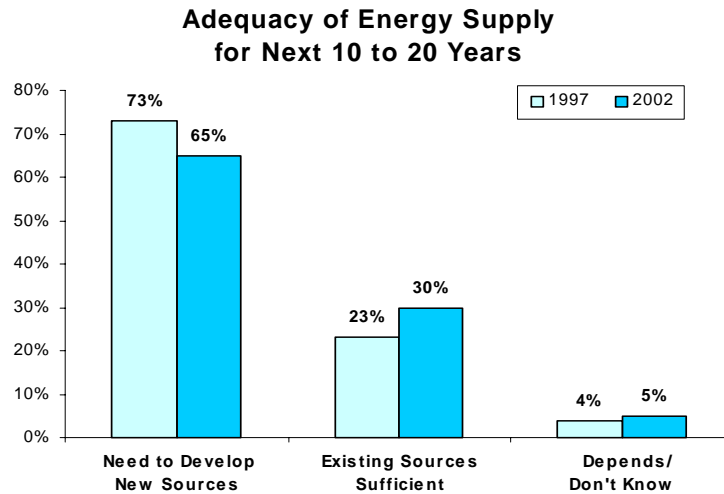
### Adequacy of Energy Supplies

**Two-thirds of Canadians believe the country needs to develop new sources of energy supply over the next 10 to 20 years, with clean sources such as wind, solar and hydro-electric power the most favoured options.**

While few Canadians appear to be visibly concerned about the country's supply of energy, there is widespread agreement that there is a need for Canada to develop new sources over the next 10 to 20 years, although this view is not as widely held as it was five years ago. Two-thirds (65%) of citizens express this view (down 8 points since 1997), compared with 30 percent who believe the country already has sufficient sources of energy to meet its needs over this period of time. (*Question 30b*)

Perspectives on this question vary noticeably across the country. The need for new energy sources has become much more pronounced in Atlantic Canada over the past five years (76%, up 12 points),

likely due to the substantial growth in that region's oil and gas sector (which holds considerable promise for lowering energy costs and fuelling a growing regional economy). In contrast, the need to develop new sources has declined significantly in Quebec (59%, down 24) and B.C. (66%, down 17), regions that already rely heavily on relatively clean and abundant hydro-electric power. Across demographic groups, this same downward trend is most evident among men and those with lower levels of education and income.



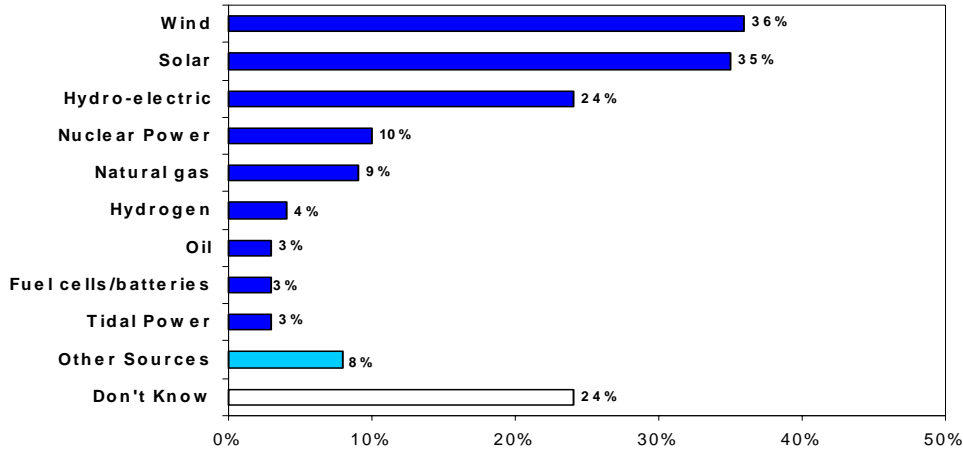
Those who believe the country needs to develop new sources of power were also asked to identify (unprompted) what type or types of energy sources would offer the best option for Canada over the next 20 years. More than three-quarters of this group were able to provide at least one response to this question, and by far the most popular options were new types of "clean" energy, including wind power (36%) and solar power (35%), followed by hydro-electric power (24%) (the cleanest of the current sources). (*Question 30.1*)

One in ten express a preference for nuclear power (10%) or natural gas (9%), while smaller percentages identify such options as hydrogen, oil, fuel cells, tidal power (*Note: This question was not included in previous waves, although a similar question was asked with respect to provincial energy supply*).

Public support for the development of new forms of clean energy is evident across the country, but is particular strong in western Canada. Close to half of Prairie and B.C. residents identify wind (without prompting) as an attractive option, while at least four in ten from these regions also identify solar power. These options are also of greater interest among Canadians with higher levels of education and income. Atlantic Canadians are among those most likely to advocate new sources of hydro-electric power (36%) and natural gas (18%).

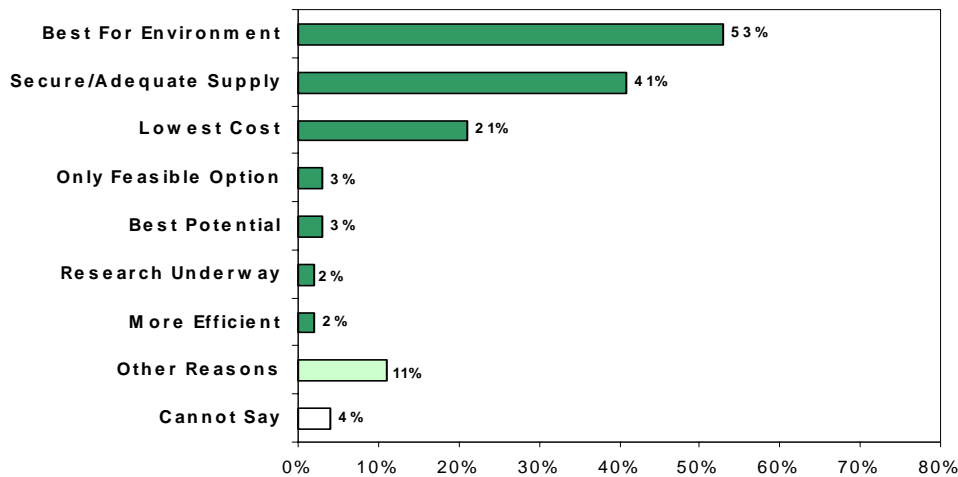
Further development of nuclear power is most apt to be supported in Ontario (15%), but is well down the list of preferred options among residents of that province. Support for nuclear power also increases modestly along with socio-economic status.

### Best New Sources of Energy Over Next 20 Years



Canadians who could identify new sources of energy were also asked *why* they believe these are the country's best options for the next 20 years. Given the type of sources mentioned, it is no surprise that citizens are most likely to choose options because they believe they are best for the environment (53%). A significant minority (41%) identify a preferred option because it provides the most secure supply, while one in five (21%) cite low cost or cost-effectiveness as the primary criterion. Other reasons (none mentioned by more a handful) include being the only feasible option, being the most efficient and providing export opportunities. (*Question 30.2*)

### Reason for Choosing Best New Energy Source



When the responses to these reasons are examined by specific source advocated yields further insight into the public's perceptions about the development of new energy sources. The popularity of wind and solar can be explained by the fact that a majority of Canadians who identify these sources see them as both best for the environment and available in plentiful supply. This is also the case with hydro-electric and nuclear power, although somewhat less emphasis is given to the supply

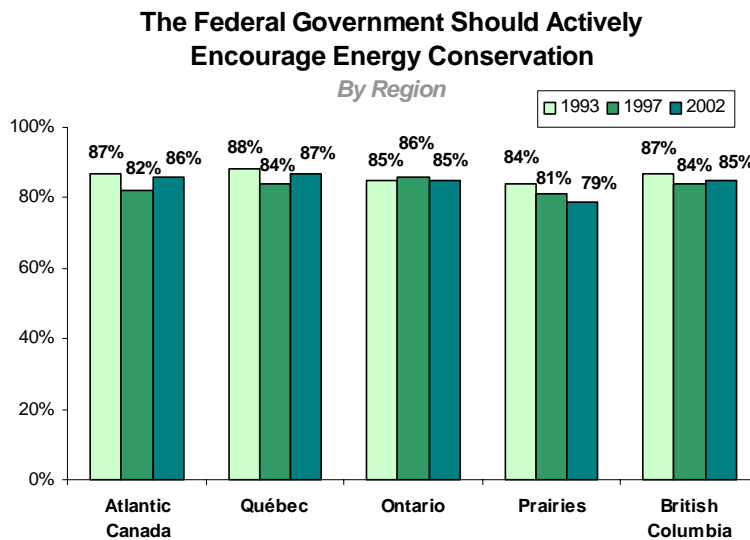


advantages of these options. Those who see natural gas as the best option are most likely to see the advantage as one of a secure supply, although environmental and cost benefits are also prominent among this group. Cost is the third most important reason across all of the new energy source options identified.

## Federal Government Role in Energy Conservation

**Canadians strongly endorse an active role by the federal government to promote energy conservation, with growing support for using tax incentives as a strategy to encourage consumers and businesses to reduce their energy use.**

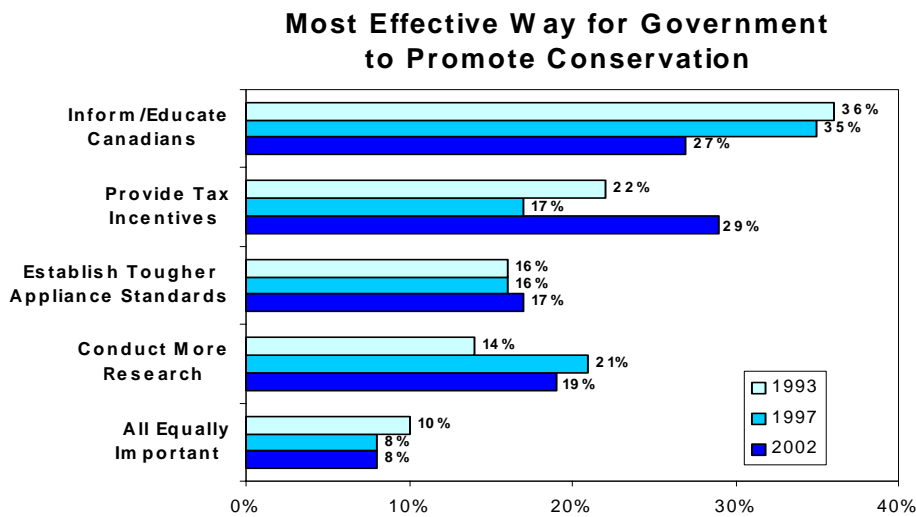
While there is little consensus among Canadians on most of the issues addressed in this survey, there continues to be widespread public support across the country for an active federal government role in promoting energy conservation. More than eight in ten (84%) continue to say that the federal government should actively encourage Canadians to change the way they use energy, unchanged from 1997. This view is widespread across the country (marginally lower in the Prairies) and as before is particularly strong among citizens with higher levels of education and income. (*Question 34*)



While public support for an active government role remains constant, there has been a noticeable shift in the past five years in *how* Canadians believe this can best be accomplished. When asked which of four specific strategies would be most effective in promoting energy conservation, the public is now most likely to identify **tax incentives to promote more efforts by citizens and businesses** (29%, up 11 points since 1997).

By comparison, Canadians are now less likely than before to see **informing and educating Canadians** as the best approach (27%, down 8), and fewer still advocate either **conducting more scientific research to improve energy efficiency** (19%, down 2) or **establishing tougher efficiency standards on major appliances** (17%, up 1). Close to one in ten (8%, unchanged) continue to

volunteer (insist) that all four approaches are equally important for the government to adopt in encouraging the public to reduce energy consumption. (*Question 35*)



As before, opinions on this question are generally consistent across the population. Tax incentives are most popular among those who stand to gain the most from this strategy (i.e. higher income households), while information and education is most likely to be favoured by those with the least formal education. Insistence that all four approaches need to be given equal priority continues to increase along with education and household income.

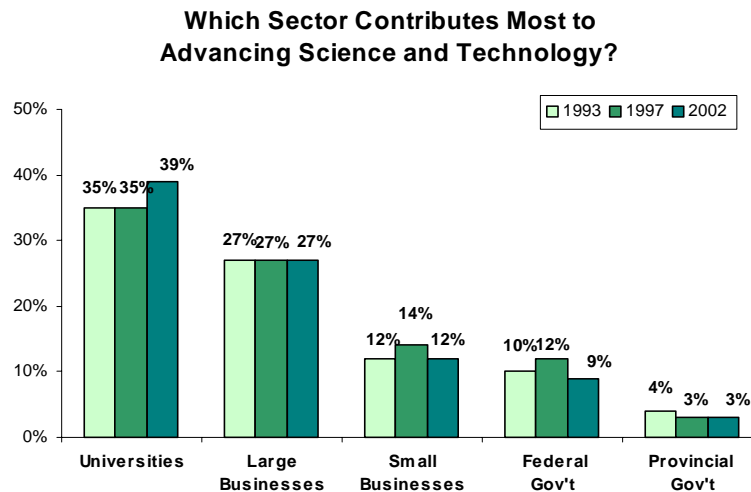
## Science and Technology in the Resource Sector

Science and technology plays a critical role in all sectors of the economy, including the resource sector. This latest survey shows reveals that Canadians' recognition of the role of S&T, including the federal government's contribution, has evolved little over the past five years.

### Sectoral Contribution to Science and Technology Advancement

**The public is most likely to see Canadian universities as contributing the most to science and technology innovation, followed by large businesses and to a lesser extent small business, the federal government and provincial governments.**

The survey probed public opinions about where science and technology innovation is taking place in Canada today, in terms of the relative contribution of universities, business and government. Consistent with previous waves, the public continues to be most likely to see Canadian universities as contributing the most to S&T in the country (39%), and this percentage has risen modestly since 1997 (up 4 points). More than one in four (27%, unchanged) believe that large businesses and corporations contribute the most, while fewer assign this role to small business (12%, down 2), the federal government (9%, down 3) or provincial governments (3%, unchanged). (*Question 37*)



While there has been little change on this question nationally, there have been some notable regional shifts since 1997. The increase in focus on universities is most significant in Quebec (up 11 points), where there has been a reduced emphasis on large and small businesses as engines of innovation (reversing the trend observed between 1993 and 1997). The opposite trend is apparent in Ontario and Atlantic Canada, where the shift since 1997 has been from universities to large businesses and corporations. Identification of the federal government as the lead contributor to S&T innovation continues to be highest among Atlantic Canadians (17%), and has declined since 1997 most noticeably in Ontario (7%, down 5) and the Prairies (7%, down 6).

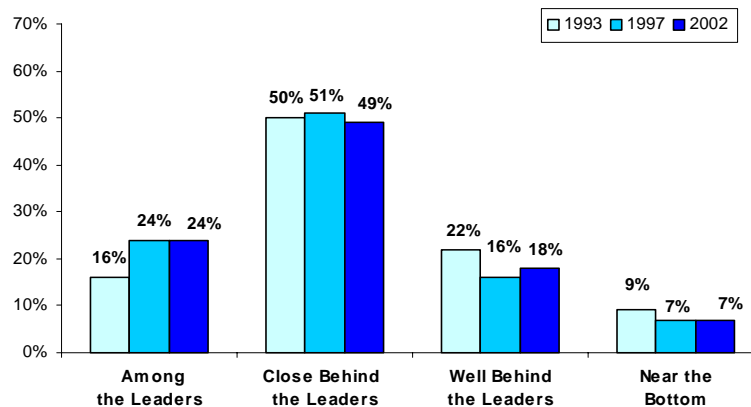
Survey respondents were also asked which sector contributes *the least* to advancing S&T. Consistent with the previous results, Canadians are most likely to name small business as contributing the least (34%, down 2), followed by the federal government (20%, unchanged), provincial governments (19%, unchanged), large businesses/corporations (12%, up 2) and universities (4%, down 2). As with the previous question, views on this issue have changed little since 1993. Since 1997, belief that the federal government contributes the least to S&T innovation has increased in Ontario (24%, up 8) while decreasing in all other regions. (*Question 38*)

## Canada's International Standing

**A majority believe that Canada compares favourably with other industrialized nations in terms of science and technology innovation, but as in 1997 only one in four believes the country is among the leaders.**

At an international level, how does the public think Canada stands relative to other leading industrialized countries in terms of science and technology? As before, Canadians are more positive than negative in their assessment of the country's international standing, although there has been no improvement in such opinions over the past five years (as there was earlier in the decade). One in four (24%) continue to rate Canada as "among the leaders" in S&T innovation, while another half (49%) place the country "close behind the leaders." The remainder consider Canada to be "well behind the leaders"(18%) or "near the bottom" among industrialized countries (7%), while very few (2%) are unable to provide any response. (*Question 39*)

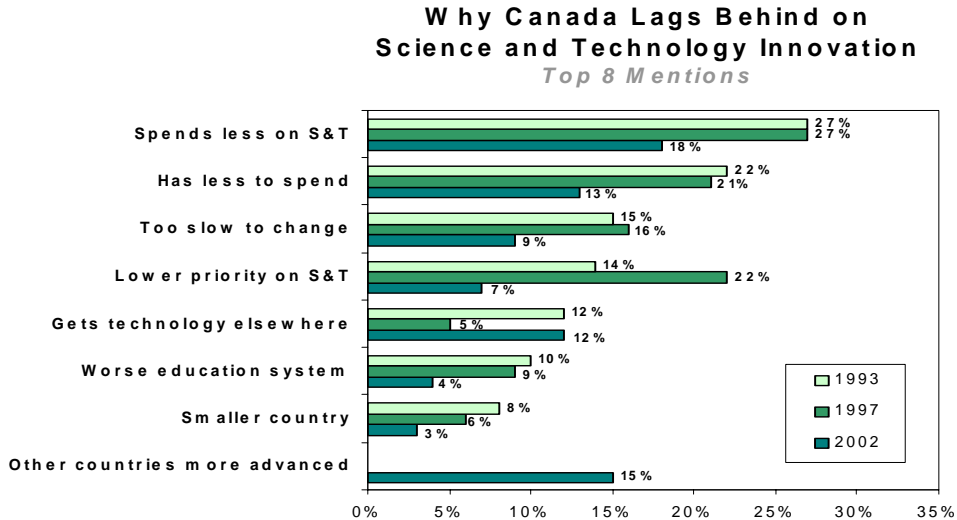
**How Canada Compares with Other Countries on S&T Innovation**



Public views on this question are generally consistent across the country. Quebecers continue to be less likely than others to place Canada among the leaders (18%), although are no more likely to see the country as well behind or near the bottom of the pack.

Those who feel Canada is lagging behind other industrialized nations in S&T were also asked to indicate *why* they held this view. As before, those who feel Canada is behind are most likely to say this is because the country spends less on S&T than other countries (18%) or has less to spend (13%),

but mention of both reasons have declined since 1997. Canadians are also less likely than before to believe the problem is due to the country being too conservative or slow to change (9%, down 7), because Canada places a lower priority on S&T than other countries (7%, down 15, reversing an upward trend recorded earlier) or because the country has a worse education system (4%, down 5). (Question 40)



What has increased over the past five years is a focus on how other industrialized countries are advancing rather than how Canada is falling behind. Since 1997, a growing number of citizens feel Canada is lagging behind because it gets its technology from other countries (12%, up 7) or because other countries are simply more advanced (15%, up 15).

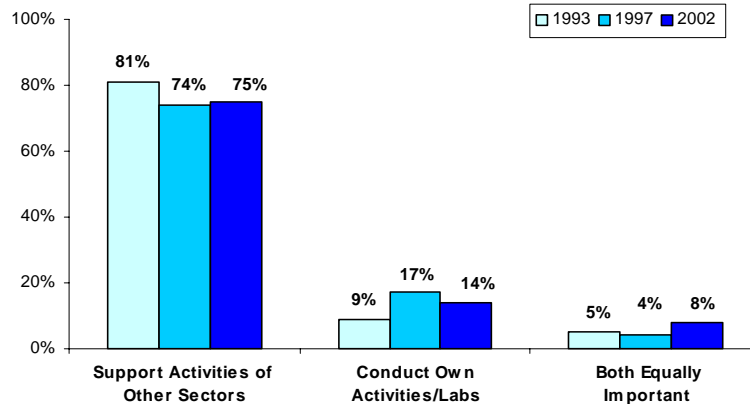
## Federal Government Role in Promoting Science and Technology

**Canadians continue to believe the federal government can best promote S&T innovation by supporting the activities of other sectors. At the same time, there is an increasing desire for such support to be directed at quality of life rather than economic goals.**

What role should the federal government be playing in promoting science and technology innovation in Canada? When given a choice between two broad options, a strong majority (75%, up 1 since 1997) continue to say the government's role is to support the activities of private industry, business and universities, compared with only 14 percent (down 3) who say it is more important for the government to conduct S&T activities through its own government-operated facilities. A small but increasing number insist that both roles are equally important (8%, up 4). (Question 41)

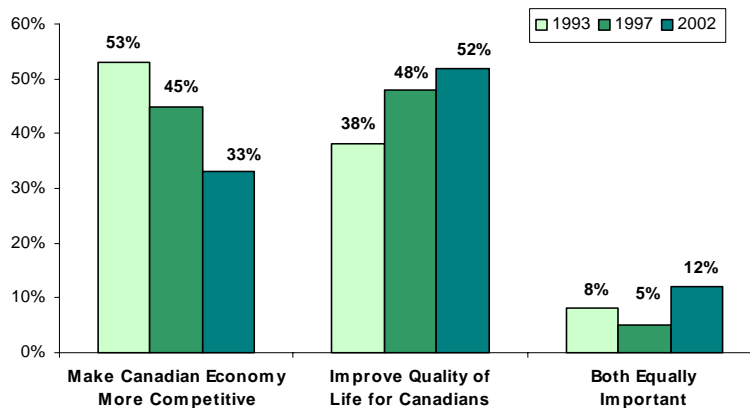
This perspective is consistent across the country, but it is in Quebec and Atlantic Canada where the shift is most evident away from direct government activity to either supporting other sectors or giving equal priority to both roles. As before, support for direct government activity decreases as both education level and household income increase.

### How Should the Federal Government Promote Science and Technology?



Canadians were also asked about the relative priority with respect to where government-sponsored S&T activity should be directed. As before, there is no public consensus on this issue, but the latest results reveal a continuing upward trend in favour of quality of life over economic goals. More than half (52%) now say that the top priority for government-sponsored S&T should be improving the quality of life for Canadians (up 4 points since 1997), while fewer now believe the focus should be on making the Canadian economy more competitive (33%, down 12). Also significant since 1997 is the rise in the proportion who volunteer that both priorities merit equal priority (12%, up 7). This trend is consistent with other research indicating that, with the economy in strong shape, the public is looking more to government to focus its attention on other issues that affect them personally, such as health care, education and transportation. (*Question 42*)

### Greater Priority for Government-Sponsored Science and Technology



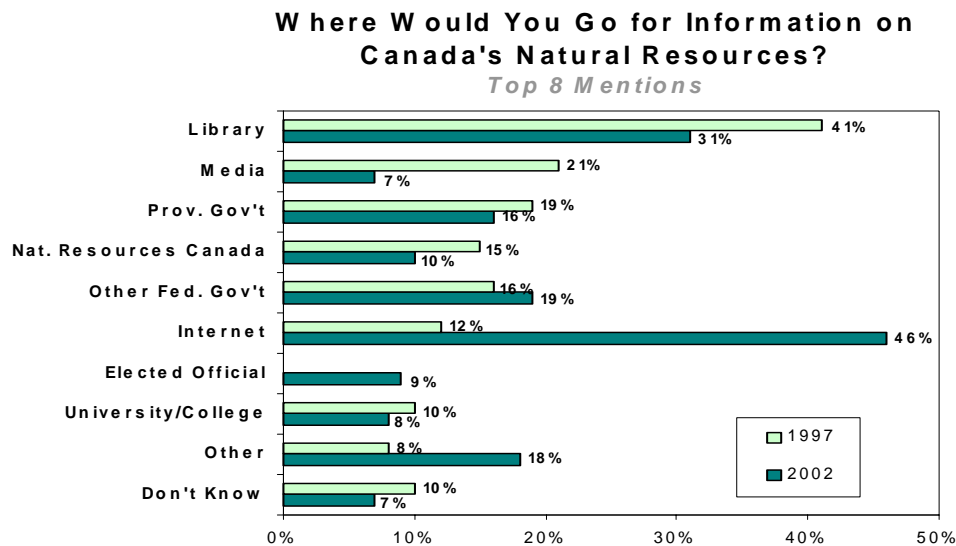
The emphasis on quality of life over economic priorities for government-sponsored S&T is strong across the country, but continues to be most widespread among women and lower income citizens. Since 1997, the shift toward quality of life goals is most noticeable in Quebec and Ontario.

## Sources of Information About Natural Resource Issues

**The Internet is now the most widely recognized source of information about natural resource issues. While Natural Resources Canada is not "top of mind", the Department continues to enjoy a high degree of public credibility.**

What Canadians understand about the country's natural resources depends in large part on where and how they obtain information about this sector. The survey briefly addressed where the public might seek such information today.

As in many other areas, the Internet has emerged in the past few years as a primary source of information for many citizens. When asked (unprompted) where they might go to get information about Canada's natural resources, almost half (46%) identify the Internet as a likely source they would use, up from only 12 percent in 1997 (*This question was not included on the 1993 survey*). By comparison, libraries (the principal source identified five years ago), is now mentioned by only three in ten as a likely source for information on this topic (31%, down 10). Also falling in prominence is the media (e.g. TV, radio, newspapers), which is now identified by only seven percent of Canadians (down 14 points). This emphasis given to the Internet is particularly striking given that only six in ten Canadians currently have regular access to the web. (*Question 44.1*)



Government sources figure prominently in response to this question, although only one in ten (10%, down 5) specifically name Natural Resources Canada. Others mention other federal departments (or the government generally) (19%, up 3), provincial government departments or agencies (16%, down 3), or their local elected officials (9%, up 9). By comparison, few mention universities (8%), the private sector (4%), municipal government (4%) or resource/conservation centres (2%).

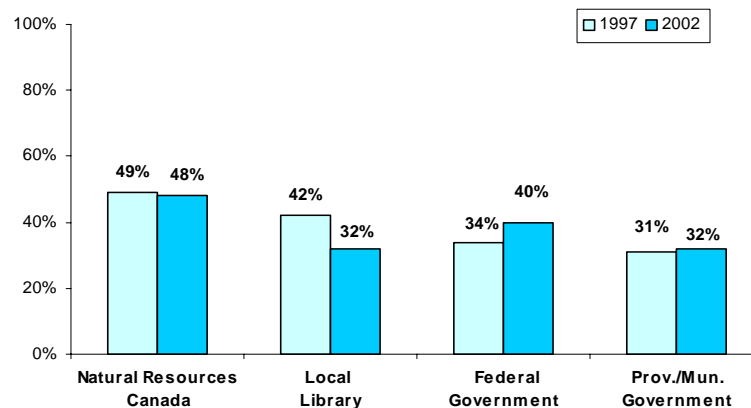
The emphasis given to the Internet has risen across the country, but as in 1997 it remains much lower in Quebec (17%, up 11 points), where government sources are much more apt to be mentioned as a primary source of information on natural resource issues. Nationally, the focus on the Internet has

increased more significantly along with education and household income, thereby widening the gap that already exists across socio-economic strata. Citizens with less education and income are somewhat more likely to identify government sources for such information, but it is these groups that are also least apt to know of any source they would use.

Specific mention of Natural Resources Canada has declined marginally in all regions but continues to be highest in Quebec (14%, down 6) and Canadians in the lowest income bracket (12%, down 5).

While **Natural Resources Canada** is hardly top of mind for most Canadians, the Department is widely considered to be a valued source of information on natural resource issues. When specifically prompted, almost half (48%) say the Department is a very important source of information to Canadians on natural resource topics, with most of the remainder considering it to be somewhat important (38%). Views on this question are essentially unchanged since 1997. As before, residents of Atlantic Canada (56%) and Ontario (53%) are most likely to see the department as a very important information source, while those living in Quebec (40%) are least apt to share this view. Views on this question do not vary across demographic strata of the population. (*Question 44.2a*)

**Very Important Sources of Information on Natural Resources**



By comparison, four in ten (40%) Canadians now say the **federal government** in general is a very important source of information on natural resource topics, up six percentage points since 1997. This rise is most noticeable in Atlantic Canada (55%, up 10), but is up in every region and demographic subgroup. This view is less widespread in Quebec (34%) and the Prairies (36%). (*Question 44.2b*)

Barely one in three consider either their **local library** (32%) or their **provincial or municipal government** (32%) to be very important information sources on this topic, with the former declining noticeably (down 10 points) since 1997. This decline is most evident in western Canada as well as in non-rural parts of the country. As before, those most likely to consider libraries as an important source include urban residents, those with less education and income, women and those aged 55 and over. Priority given to provincial and local governments has increased noticeably in Atlantic Canada (up 9) and among those with the least education (up 11), while at the same time declining among those in the lowest income bracket (down 6). This source is most apt to be identified as very important by Atlantic Canadians, women and citizens 55 and over. (*Questions 44.2c,d*)



## Survey Methodology

### Questionnaire Design

The questionnaire used for this survey consisted of questions included in the 1997 version, including a couple of new or revised questions. A number of questions from the previous waves were not included in the current survey because of budget constraints. Prior to being finalized, the survey was pre-tested on a small number of respondents.

### Sample Design and Selection

The sample for this study was designed to complete interviews with a representative sample of 1,500 adult Canadians from households selected randomly across the country. The sample was stratified by province to ensure adequate sub-samples for meaningful regional analysis.

The sample was drawn using SurveySampler technology which ensures that all residential listings in Canada have an opportunity to be selected for inclusion in the survey. 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 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 and French by telephone using computer-assisted-telephone-interviewing (CATI) technology, from Decima's facilities in Ottawa, Toronto and Montreal, between February 25 to March 3, 2002. 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 23 minutes.

### Completion Results

A total of 17,877 telephone numbers were dialled, from which 1,502 interviews were completed. Among eligible households that were successfully contacted, the effective completion rate was 22 percent (the number of completed interviews (1,502) divided by the total sample (17,877) minus ineligible numbers (3,265) and those of unknown eligibility that could not be contacted during the interview period (7,768)).

### Sample Distribution

A sample of 1,502 drawn from the Canadian population would be expected to provide results accurate to within plus or minus 2.1 percent in 95 out of 100 samples. The margin of sampling error will be greater for regional and provincial sub-samples, as presented below.

### Sample Distribution by Region

Region/Province	Unweighted Sample	Margin of Error <sup>1</sup>
Atlantic Canada	200	+/- 6.9%
Québec	325	+/- 5.4%
Ontario	476	+/- 4.5%
Prairies	250	+/- 6.2%
British Columbia	251	+/- 6.2%
<b>CANADA</b>	1,502	+/- 2.5%

<sup>1</sup> 95% Confidence Level

## Sample Characteristics

The characteristics of the final sample are presented below, in terms of the distribution across region and demographic strata, and how they compare with the population. The banner tables provided under separate cover present the results for all survey questions by each of these categories (as well as others)

### Sample Distribution by Population Characteristics

	Sample <sup>1</sup> %	Population <sup>2</sup> %
<b>Region/Province</b>		
Atlantic	8	8
Québec	24	24
Ontario	38	38
Prairies	17	17
British Columbia	13	13
<b>Education Level</b>		
Grade School/Some High School	17	35
Complete High School	29	18
Some College/University	26	33
University	28	13
<b>Gender</b>		
Male	48	49
Female	52	51
<b>Age</b>		
18 – 34	33	31
35 - 54	39	41
55+	28	28
<b>Mother Tongue</b>		
English	63	60
French	27	24
Other	10	16

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

<sup>2</sup> 1996 or 2001 census