

**FINAL
REPORT**

National Climate Change Adaptation
Benchmark Survey

Prepared for:

Natural Resources Canada
por@nrcan.gc.ca

April 2010

Ce rapport est aussi disponible en français sur demande.

Contract number: 23483-090364 001 CY

Contract date: 2009-02-24

Fieldwork completed date: 2009-11-13



ENVIRONICS
RESEARCH GROUP

336 MacLaren Street
Ottawa, ON K2P 0M6

pn 6463

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EXECUTIVE SUMMARY

Research purpose and objectives

Canadians have historically adapted well to their climate, but future climate changes are predicted to create conditions beyond those experienced historically resulting in increased risks, and in some cases benefits, across regions and sectors in Canada. Both internationally and domestically, a consensus has formed around the need to begin now to adapt to the impacts of a changing climate. Adaptation can reduce vulnerability to climate change and allow Canadians to take advantage of potential opportunities.

Natural Resources Canada (NRCan) commissioned this survey in 2009 to establish a benchmark to be used to evaluate progress over time on climate change adaptation and for Government of Canada adaptation programming and initiatives. The survey targeted key government and business decision-makers and gathered information about their awareness and understanding of the potential impacts of climate change and adaptation as a response measure, and whether and how their organizations are currently adapting. This research may also be used to inform future policy and programming decisions on adaptation.

Methodology

The 2009 research consisted of two phases:

- A qualitative exploration of the views of 24 key informants conducted from May 5 to July 22, 2009 to gauge the questions that would be used in the quantitative survey; and
- A quantitative phase involving telephone interviews with 503 senior respondents in businesses, municipal governments and provincial governments between October 7 and November 13, 2009. This was a strategically selected, rather than strictly random, sample that was stratified to ensure representation across each of the 10 provinces and three territories, as well as by type of organization. Because the types of organizations vary a great deal, analysis is generally conducted by group type rather than by region or for the sample as a whole.

Phase 1: Qualitative: Environics conducted in-depth telephone interviews with 24 senior officials in provincial and municipal governments, and with business representatives in selected sectors. The objective of this phase was to inform the survey design by examining the terminology commonly used

around climate change adaptation by the target audience, and the extent to which questions about adaptation would be understood. Participants received the list of questions in advance. Interviews were carried out by experienced senior client service staff of Environics, in the official language of choice of the respondent. Interviewing commenced on May 5 and continued until July 22, 2009.

Phase 2: Quantitative: The objective of the quantitative phase was to expand the scope of information collected, and generate quantifiable data that can be extrapolated to the target populations across the country. The survey was designed to complete interviews with a representative sample of decision-makers in selected government and business sectors. The survey was conducted from central telephone facilities in Toronto and Montreal, between October 7 and November 13, 2009.

The national business sample of 302 provides results accurate to within plus or minus 5.6 percentage points in 19 out of 20 samples. The national municipal government sample of 174 provides results accurate to within plus or minus 7.4 percentage points in 19 out of 20 samples. The provincial government list represented an attempted census of qualifying departments and thus a margin of sampling error should not be cited. A more detailed description of the methodology used to conduct this survey is presented at the back of the full report, along with a copy of the questionnaire (see Appendix E).

This research will be used as a benchmark to measure ongoing program initiatives, to assess progress made on climate change adaptation, as well as to inform future policy and programming decisions on adaptation. The total expenditure for this research was \$98,755.85 (GST excluded).

Key findings

Awareness and understanding of climate change

The majority of respondents demonstrate an awareness of what climate change is and can identify potential impacts on their region in the next 20 years. A strong majority of business and government organizations – over eight in ten – have a view that climate change is happening now.

Likelihood and timing of impact of climate change on organizations

Among those who say climate change is, or will be, a reality, seven in ten business respondents say climate change will have an impact on their own organizations. Opinion is divided as to whether the impact of climate change is being felt now or will be felt in the future.

Perceived seriousness of impact of climate change on organizations

Majorities of municipal governments and businesses perceive that climate change is a significant, but not the most serious, challenge facing their organization.

Specific impacts of climate change on organizations

Among those who report that climate change will impact their organization, two-thirds of business respondents say that climate change will have mainly negative impacts on their organizations – primarily water level/supply impacts and more extreme weather conditions.

Current climate change adaptation activities of organizations

Understanding of the term *climate change adaptation* centres around the idea that it is a responsive action and that there is a need to accept change and to learn to work successfully in a new climate environment.

About half of the respondents report that their organization is currently doing something to adapt to climate change. When describing their actions, the majority of respondents cited climate change mitigation activities (e.g., focus on reducing greenhouse gases), while a minority described adaptation activities (e.g., focus on reducing climate change impacts).

Future climate change adaptation activities of organizations

Most provincial government respondents, but fewer municipal or business respondents report specific plans for *future* actions designed to help their organizations adapt to a changing climate.

Consideration of a changing climate in decision-making and planning

Most provincial government representatives, but fewer municipal governments or businesses, say their organization takes a changing climate into consideration in decision-making and planning activities; this has happened primarily within the past five years.

Specific impacts of climate change on organizational decision-making

Among those who consider climate change in organizational decision-making, climate change is most often a consideration in the area of long-term planning and/or policy decisions and less often in the area of risk management planning.

Barriers to incorporating climate change considerations in decision-making

Cost was reported to be the greatest barrier to climate change becoming a more important consideration in decision-making in both the public and private sectors. Competing organizational priorities and a lack of climate change expertise were said to be less of an issue for business than for governments.

Sources of information on climate change

Municipal and provincial governments primarily get climate change information from government and other scientific sources; business respondents are most likely to mention getting their information from the media.

Interest in decision-making tools and technical resources

About half of municipal and provincial government respondents, and a quarter of business respondents, indicate that their organizations could use decision-making tools or technical resources that would assist them in addressing the impacts of climate change.

Additional comments

Respondents express a need for better information and for additional funding to help their organizations adapt to climate change.

RÉSUMÉ DU RAPPORT

But et objectifs de la recherche

La population canadienne s'est toujours bien adaptée à son climat, mais on prévoit que les changements climatiques à venir créeront de nouvelles conditions qui augmenteront les risques et, dans certains cas, les possibilités avantages, dans l'ensemble des secteurs et régions du Canada. On s'entend pour dire, tant au niveau international que national, qu'il faut commencer dès maintenant à s'adapter aux répercussions des changements climatiques. Les mesures d'adaptation peuvent atténuer la vulnérabilité à de tels changements et permettre aux Canadiens et aux Canadiennes de tirer profit d'éventuelles occasions.

En 2009, Ressources naturelles Canada (RNCan) a demandé que soit effectué le présent sondage lequel constituerait un point de référence dans l'évaluation des progrès réalisés relativement à l'adaptation aux changements climatiques au fil du temps et qui pourrait également être utile dans le cadre des programmes et initiatives du gouvernement canadien en matière d'adaptation. Le sondage visait les principaux décideurs gouvernementaux et d'entreprises et a permis de recueillir des renseignements sur le degré de sensibilisation et de connaissance de ces derniers relativement aux répercussions éventuelles des changements climatiques et aux mesures d'adaptation comme moyen d'intervention et de vérifier si leur organisation avait pris des mesures d'adaptation et quelles étaient ces mesures. La présente recherche peut également s'avérer utile dans la prise de décisions éclairées en matière de politique et de programmes sur les mesures d'adaptation.

Méthodologie

La recherche effectuée en 2009 comportait deux volets :

- Une étude qualitative de l'opinion de 24 sujets clés interviewés entre le 5 mai et le 22 juillet 2009 afin d'évaluer les questions qui figureraient dans le sondage quantitatif;
- Une étude quantitative qui comportait une entrevue téléphonique auprès de 503 cadres supérieurs d'entreprises et de gouvernements municipaux et provinciaux effectuée entre le 7 octobre et le 13 novembre 2009. Les répondants ont été choisis de façon stratégique plutôt que strictement aléatoire et selon un échantillon stratifié, de manière à assurer une représentation de l'ensemble des 10 provinces et des trois territoires, ainsi que par type d'organisation. Les types d'organisation varient énormément de sorte que, en règle générale,

L'analyse est effectuée par type de groupe plutôt que par région ou relativement à l'ensemble de l'échantillon.

Étape 1 : Étude qualitative : Environics a effectué une entrevue téléphonique en profondeur auprès de 24 hauts fonctionnaires de gouvernements provinciaux et municipaux et auprès de représentants d'entreprises dans certains secteurs désignés. Cette étape avait pour objet de faciliter la conception du sondage au moyen d'un examen des termes généralement employés par le groupe cible en matière d'adaptation aux changements climatiques et d'évaluer dans quelle mesure les questions relatives à l'adaptation seraient comprises. Les participants ont reçu une liste des questions au préalable. Les entrevues ont été menées par des employés d'expérience du service à la clientèle d'Environics, dans la langue officielle de chaque répondant. Les entrevues ont débuté le 5 mai et se sont poursuivies jusqu'au 22 juillet 2009.

Étape 2 : Étude quantitative : Le volet quantitatif avait pour objet d'élargir le cadre des renseignements recueillis et de produire des données quantifiables susceptibles, par extrapolation, d'être appliquées aux populations cibles dans tout le pays. Le sondage a été conçu de manière à ce que des entrevues soient effectuées auprès d'un échantillon représentatif de décideurs de divers secteurs gouvernementaux et d'entreprises. Les entrevues ont été réalisées à partir de centres d'appel à Toronto et à Montréal entre le 7 octobre et le 13 novembre 2009.

Les résultats obtenus auprès de l'échantillon national d'entreprises, formé de 302 répondants, sont précis à plus ou moins 5,6 points de pourcentage pour 19 échantillons sur 20. Les résultats tirés de l'échantillon des gouvernements municipaux, formé de 174 répondants, sont précis à plus ou moins 7,4 points de pourcentage pour 19 échantillons sur 20. La liste des gouvernements provinciaux résultait d'une tentative de recenser les ministères admissibles et, par voie de conséquence, il n'est pas opportun de préciser la marge d'erreur. On trouvera une description plus détaillée de la méthodologie appliquée dans le présent sondage de même qu'un exemplaire du questionnaire utilisé à la fin du rapport complet (se reporter à l'Annexe E).

La présente recherche servira de point de référence pour évaluer les initiatives de programmes en cours et les progrès réalisés en matière d'adaptation aux changements climatiques et pour permettre la prise de décisions plus éclairées à l'avenir en matière de politique et de programmation relatives aux mesures d'adaptation. En tout, le projet a coûté 98 755.85\$ (sans la TPS).

Principales conclusions

Sensibilisation aux changements climatiques et compréhension du phénomène

La majorité des répondants sont sensibles aux changements climatiques et peuvent préciser l'impact éventuel de ces changements dans leur région au cours des 20 prochaines années. Une forte majorité d'organisations gouvernementales et d'entreprises, soit huit sur dix, estiment que les changements climatiques se manifestent déjà.

Probabilité et moment de l'impact des changements climatiques sur les organisations

Parmi ceux et celles qui affirment que les changements climatiques se produisent déjà ou se produiront à l'avenir, sept des dix répondants d'entreprises affirment que les changements climatiques auront un impact sur leur propre organisation. Les répondants ne s'entendent pas sur la question de savoir si les répercussions se font déjà sentir ou si elles se feront sentir à l'avenir.

Perception de la gravité de l'impact des changements climatiques sur les organisations

Une majorité des répondants d'entreprises et de gouvernements municipaux estiment que même si les changements climatiques constituent un défi de taille pour leur organisation, il ne s'agit pas du défi le plus important.

Impact précis des changements climatiques sur les organisations

Parmi ceux et celles qui sont d'avis que les changements climatiques auront un impact sur leur organisation, les deux tiers des répondants d'entreprises disent que l'impact sera surtout négatif, principalement en raison de l'élévation du niveau de l'eau, son approvisionnement, ainsi que les conditions météorologiques exceptionnelles qu'entraîneront les changements.

Activités d'adaptation aux changements climatiques en cours dans les organisations

L'expression « adaptation aux changements climatiques » s'entend d'activités réactives et englobe également la nécessité d'accepter ces changements et d'apprendre à exercer efficacement ses fonctions dans un nouvel environnement climatique.

Environ la moitié des répondants affirment que leur organisation a déjà adopté des mesures d'adaptation aux changements climatiques. En décrivant ces mesures, une majorité de répondants mentionnent des activités visant à atténuer les effets du changement climatique (p. ex., axées sur la réduction des gaz à effet de serre), alors qu'une minorité d'entre eux décrivent des activités d'adaptation (p. ex., axées sur la réduction de l'impact des changements climatiques).

Activités futures des organisations en matière d'adaptation aux changements climatiques

La plupart des répondants de gouvernements provinciaux, mais un plus petit nombre de répondants de municipalités ou d'entreprises affirment disposer de plans précis quant aux activités futures qui aideront leur organisation à s'adapter aux changements climatiques.

Prise en compte des changements climatiques dans les processus décisionnels et de planification

La plupart des répondants de gouvernements provinciaux, mais un plus petit nombre de répondants de gouvernements municipaux ou d'entreprises disent que leur organisation tient compte des changements climatiques dans ses processus décisionnels et de planification, principalement depuis les cinq dernières années.

Impact précis des changements climatiques sur le processus décisionnel des organisations

Dans le cas des répondants qui tiennent compte des changements climatiques dans le processus décisionnel de leur organisation, il s'agit le plus souvent de décisions relatives à la planification à long terme ou de décisions de politique et plus rarement de planification de la gestion des risques.

Obstacles à la prise en compte des changements climatiques dans le processus décisionnel

Selon les résultats du sondage, les coûts constituent le principal obstacle à ce que les changements climatiques soient un facteur plus important dans le processus décisionnel, tant dans le secteur privé que dans le secteur public. Les priorités organisationnelles concurrentes et un manque d'expertise en matière de changements climatiques sont, selon les répondants, des facteurs moins importants dans les entreprises qu'au sein des gouvernements.

Sources d'information sur les changements climatiques

En règle générale, les gouvernements municipaux et provinciaux se renseignent sur les changements climatiques auprès de diverses sources, notamment gouvernementales et scientifiques, alors que les répondants d'entreprises sont plus susceptibles de dire que les médias sont leur principale source d'information.

Intérêt porté aux outils de prise de décision et aux ressources techniques

Environ la moitié des répondants de gouvernements provinciaux et municipaux ainsi qu'un quart des répondants d'entreprises mentionnent que leur organisation bénéficierait d'outils de prise de décision

ou de ressources techniques qui servirait d'appui afin d'adresser les questions liées à l'impact des changements climatiques.

Observations supplémentaires

Les répondants expriment le besoin de disposer de meilleurs renseignements et de financement supplémentaire pour faciliter l'adaptation de leur organisation aux changements climatiques.

I. INTRODUCTION

Climate affects all aspects of the lives of Canadians, with its influences being felt in the environmental, economic and social realms. Climate affects agricultural practices, forestry productivity, water availability, and both human and ecosystem health, to name a few areas. Some of the anticipated negative impacts of climate change include increased frequency and severity of extreme weather events (e.g., heat waves, droughts, intense storms), thawing of permafrost, loss of sea ice and rising sea levels. Anticipated benefits include reduced domestic heating costs in the winter and increased crop productivity for the agriculture sector in some regions of the country. While mitigation of climate change focuses on actions to reduce greenhouse emissions, adaptation is taking action to reduce the risks due to a changing climate and to take advantage of benefits that may arise from a warmer climate.

Natural Resources Canada commissioned this benchmark survey to determine the level of awareness and understanding of climate change impacts and adaptation, and to determine the current level of implementation of adaptation in decision-making and barriers to implementation. The research was aimed at municipal and provincial government and business decision-makers. The results of this research will be used as a benchmark to evaluate program impact, to help assess progress made on climate change adaptation, as well as to inform future policy and programming decisions on adaptation.

A more detailed description of the methodology used to conduct this study is provided at the back of this report, along with a copy of the research instruments (see Appendix E).

This report begins with an Executive Summary presenting highlights from the research, followed by a detailed analysis of the survey data.

Under each chart and table is listed the question wording and the size of the subsamples in those cases where not all respondents were asked the question. Unless otherwise noted, all results are expressed as a percentage. Some tables and graphics may not add to 100 percent due to rounding, and the nets of responses shown in tables may not add to their component parts due to rounding or multiple mentions.

II. AWARENESS AND UNDERSTANDING OF CLIMATE CHANGE

A. Awareness of climate change

The majority of respondents demonstrate an awareness of what climate change is and can identify potential impacts on their region in the next 20 years. A strong majority of business and government respondents have the view that climate change is happening now.

A strong majority of business and government respondents – over eight in ten – are able to accurately link the term “climate change” to projected climate changes, and identify the impacts of a changing climate. The majority are able to form an opinion about the most serious impact and about the extent of the impact that a changing climate will have in their region in the next 20 years. Among those who state that climate change will impact their organization, two-thirds of business respondents think climate change will have mainly negative impacts.

First responses to the term “climate change.” All respondents were initially asked what they first think of when they hear the term “climate change.” The first response, for respondents from all three types of organizations, is “warmer temperatures/warmer weather.” Fewer mention the term “global warming” specifically, and fewer yet mention other factors, such as weather becoming more unpredictable, an increase in air pollution, more extreme weather events or melting ice caps. Doubts about the validity of climate change are expressed by seven percent of business respondents as their first thought, but this is not echoed by government respondents. First response linking of climate change to warming trends/global warming echoes the qualitative findings. [Q5](#)

Warmer temperature/weather is the top response across all regions of the country. Those who cite that climate change will have a moderate or minor impact on their region are more likely to give this response than those who say it will have a major impact; the latter tend to give a broader range of responses, including less rain/drought and impact on the permafrost. As expected, those who say that climate change will have only a minor or no impact on their region are the most likely to express scepticism as their first impression.

When prompted for additional impressions of what the term “climate change” means, the pattern of mentions remains unchanged.

First response to the term “climate change” (unaided)

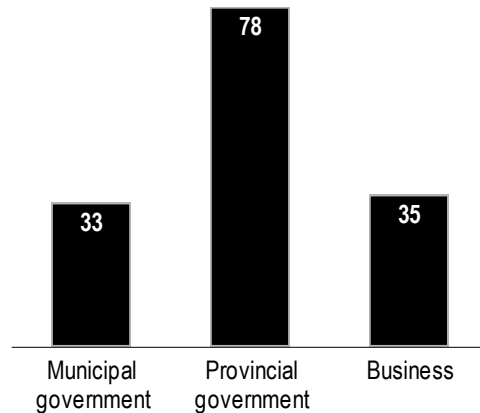
By organization type	Municipal government (n=174) %	Provincial government (n=27 ^a) %	Business (n=302) %
Water temperatures/warmer weather	30	15	25
Weather more unpredictable	10	7	7
Global warming/GHG/CO2	7	4	15
More air pollution/lower air quality	5	7	7
Weather events more extreme	5	11	3
Happening/must be addressed/crisis	5	11	2
Impacts on business/industry/operations/economy	4	–	2
Melting ice caps	3	4	4
Scepticism/confusion/need more information/debate/facts	3	4	3
Don't believe it/scam/false/media hype/exaggerated/science disproved	2	–	7
Colder temperatures/colder weather	2	4	3
Need for mitigation/go green/energy/water/conservation/reduce emissions/cap & trade	2	–	3
Water levels are higher	2	4	1
More rain	2	–	1
Earth Day/Greenpeace/Al Gore/David Suzuki/activists	2	–	1
Impacts on wildlife/habitat/environment	1	4	2
Long-term problem/affect on future generations	1	7	1
Humans are to blame/responsible	1	–	1
Impacts on human beings/social impacts/health	1	4	1
Not man-made/natural occurrence/normal fluctuations/happening for years	1	–	2
Less rain/drought	1	–	1
More flooding/more severe flooding	1	–	–
More ice/snow	1	–	–
Sustainability	1	4	–
Impacts on transportation/winter roads	1	4	–
Kyoto protocol/politicians/George Bush/political will	1	–	*
Water levels are lower	1	–	–
Other	1	8	3
dk/na	3	–	6

* Less than one percent / ^a Very small base (<50) – extreme caution is advised in interpreting results

Q5. What do you first think of when you hear the term “climate change”? What’s the next thing that comes to mind related to climate change?

Organization’s position on climate change. Business and government executives were asked if their organization has a position on the climate change issue. Eight in ten provincial government representatives indicate that there is an organizational position, but this is only the case in one-third of businesses or municipal governments. [Q8a](#)

Organization has a position on climate change
 % YES – By type of organization



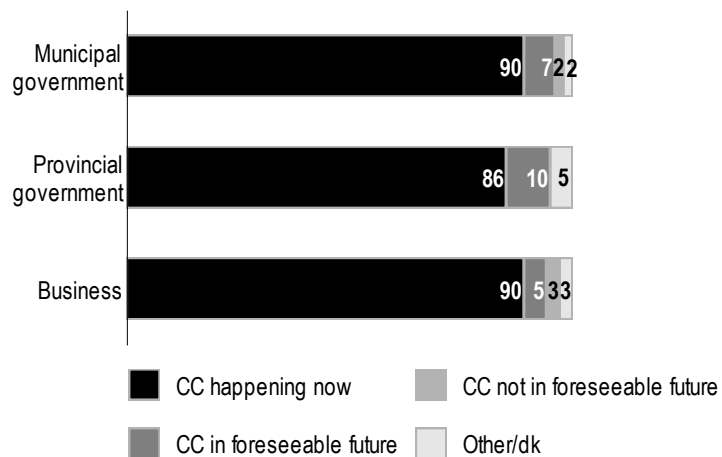
Q8a. Does your organization have a position on the climate change issue?

Regionally, the results are similar, with somewhat higher proportions of respondents from British Columbia and the Atlantic region reporting that their organization has a position. Organizations are more likely to have a position on the climate change issue if the respondent thinks that climate change will have a major impact on their region (or, in the case of businesses, in the regions where the company operates).

Those who said their organization has a position (n=185) were asked to indicate that position. The vast majority (89% of all who were asked) say that their organization thinks climate change is happening right now. Not unexpectedly, there is a very high correlation between personal and organizational positions regarding climate change: almost all of those working in organizations with an official position that climate change is happening *now* also indicate that they share that view personally. [Q8b](#)

Organizational position on climate change

By type of organization



Subsample: Those who think climate change is happening or will happen in the future, excluding those who think a changing climate will have a neutral or no impact on their organization.

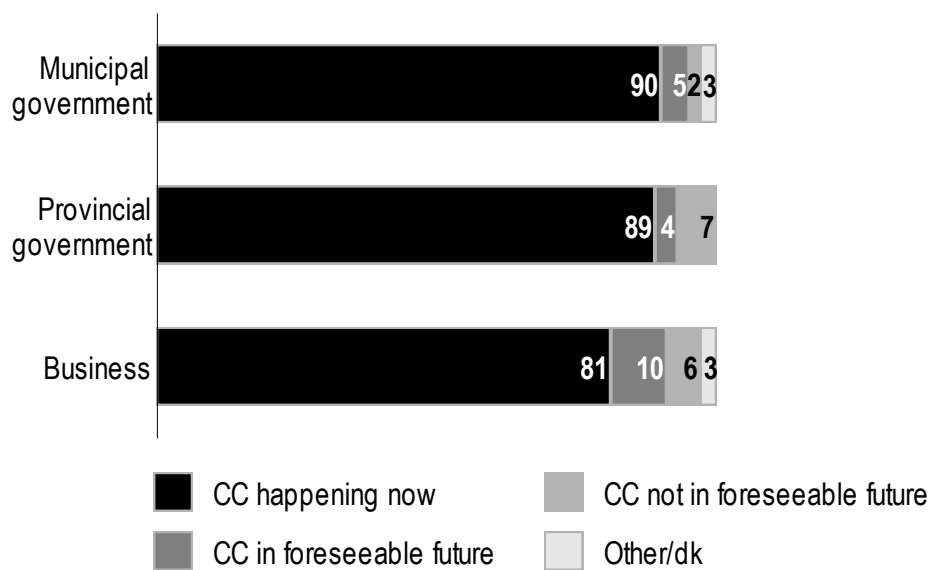
(Municipal government n=58; Provincial government n=21^a, Business n=106)

^a Very small base (<50) – extreme caution is advised in interpreting results

Q8b Is your organization’s position based on the belief that…?

Personal position on climate change. Organization representatives were asked which of three options best describes their own personal position on climate change. That climate change is happening right now is the dominant opinion for those in municipal (90%) and provincial (89%) governments, and also those in the target industries (81%). Business operators are slightly more likely than government representatives to think that climate change is not yet happening but will in the foreseeable future (10%, vs. 5% municipal government and 4% provincial). Only a small proportion give other responses: that climate change will not happen in the foreseeable future, or that it is happening but the cause is uncertain. Q6

Personal position on climate change
By type of organization

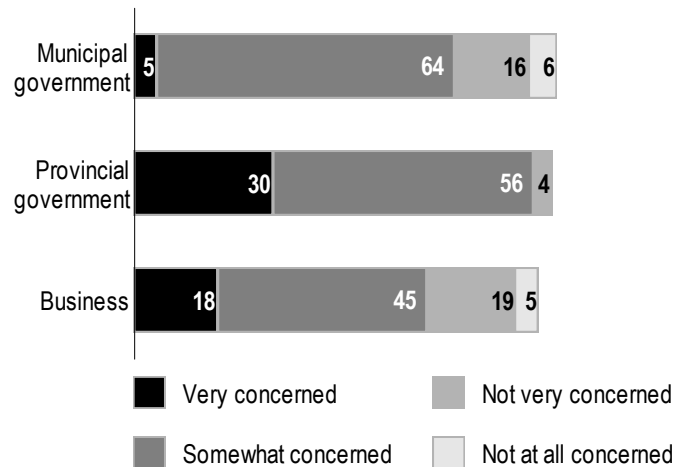


Q6. Which of the following best describes your OWN personal position on climate change ...?

That climate change is happening *now* is the majority view across the country. While this view is almost universal among representatives of organizations who think climate change will have a major or moderate impact on their region, it is also the majority view of those who feel it will have only a minor or no impact. Belief that climate change is a current phenomenon is higher among those whose organizations consider climate change in decision-making (92%) than those who do not (78%); the latter are more likely to think that climate change will not happen imminently, or not to provide a response to this question.

Client or stakeholder concern about climate change. All respondents were asked the extent to which they would say their clients or stakeholders are concerned about climate change. The majority of each type of organization say their clients are at least somewhat concerned (86% for provincial governments, 69% of municipal governments, and 63% of businesses), but are more likely to indicate moderate than elevated concern. [Q9](#)

Client/stakeholder level of concern about climate change
By type of organization



Q9. What about your clients or stakeholders? Would you say that they are generally very concerned, somewhat concerned, not very concerned or not at all concerned about climate change?

Three in ten provincial government representatives (30%) say their stakeholders are very concerned about climate change, a much higher proportion than for businesses (18%) and municipal governments (5%). It should be noted that, while 90 percent of municipal government representatives and 79 percent of businesses identify their stakeholders as being either the general public or customers, provincial governments are considerably more likely to name internal stakeholders, such as senior ministry officials, or various other parts of the government infrastructure. This difference in stakeholder type may explain the relative difference in level of concern noted above.

Level of respondent concern about climate change is quite consistent across the country, with concern being somewhat higher in the North, and lower in the Prairies. Higher levels of client concern are expressed by those who think that the impact of climate change on their region will be major, and those already considering climate change in decision-making.

Provincial government mandates involving climate change. The qualitative research findings strongly suggested that employees in provincial departments or agencies tasked with managing climate change for their constituents and clients would have difficulty in responding to many of the questions related to climate change impacts on their specific organization, as they are generally unable to avoid responding in general for their province or stakeholders, rather than giving the particulars of their immediate department or agency.

Provincial government representatives in the survey (n=27) were asked if addressing climate change issues is a part of their organization’s current mandate: three-quarters (n=20) say that it is. These respondents were not asked certain questions regarding operational reactions to climate change, as their approaches are understood from the qualitative research to be very different from those of business or municipal organizations. [Q8c](#)

B. Impacts of climate change on regions in the next 20 years

Perceptions regarding the most serious specific impact of a changing climate in their region.

Those who think that climate change is happening (or will happen) were asked, top-of-mind, what they think will be the most serious impact of a changing climate over the next 20 years in the areas of the country in which they operate. [Q10](#)

Municipal government administrators and managers are most likely to mention effects on agriculture and impacts on the water supply; smaller but significant proportions also mention changing water levels/erosion, more severe weather, economic impacts, flooding and droughts. Business operators and government officials have similar concerns. Provincial government representatives are most likely to mention changing water levels/erosion; effects on wildlife are also an important concern for this group, and smaller proportions mention the threat of more severe weather.

Respondents from all three types of organizations mention other environmental impacts, such as melting permafrost, forest fires, heat waves and extreme cold. Very few spontaneously mention any human health impacts, pollution or infrastructure issues.

Respondents on the two coasts – British Columbia and the Atlantic region – are more likely than average to mention rising sea levels and the resultant erosion of coastline.

Most serious impact of a changing climate over the next 20 years (unaided)

Total mentions – By target group

	Municipal government (n=165) %	Provincial government (n=25 ^a) %	Business (n=276) %
Other environmental impacts (e.g., melting permafrost, forest fires, heat waves, extreme cold)	32	40	30
Effects on agriculture (growing season, crop failures)	24	12	14
Impacts on water supply	19	8	14
Changing sea/lake levels/coastal erosion	16	32	12
More frequent/severe weather events/storms	14	16	15
Economic effects (loss of productivity, negative trade impacts, increased trade opportunities)	13	12	15
Flooding	11	12	5
Droughts	10	12	8
Effects on wildlife (changing migration patterns, species loss, invasive species, habitat loss)	8	20	11
Effects on tourism related to poorer weather	5	8	7
Human health impacts	4	4	5
Changing lifestyle/population behavioural patterns (various)	4	–	2
Infrastructure (damage to roads/buildings/accessibility issues)	4	–	1
Other mentions	5	4	10
No one most serious impact	–	4	3
dk/na	8	4	12

* Less than one percent / ^a Very small base (<50) – extreme caution is advised in interpreting results

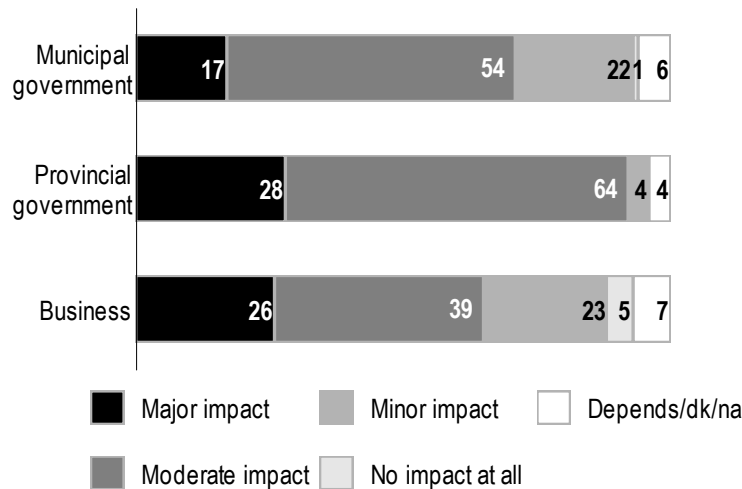
Subsample: Those who think climate change is happening or will happen in the future

Q10. Thinking about (IF GOVERNMENT: your region/IF BUSINESS: the regions of Canada in which your organization operates), what do you think will be the most serious impact of a changing climate over the next 20 years? What do you think will be the next-most serious impact?

Perceptions regarding the extent of the impact of a changing climate. Among those who think climate change is either happening now or will happen, two-thirds or more say the impact on their region of operations will be at least moderate, Concern that the impact will be major in scope is greater among provincial government (28%) and business representatives (26%) than among municipal government employees (17%). Very few think there will be no impacts of climate change felt in the next 20 years. Q11

Extent of impact a changing climate will have on regions in the next 20 years

By type of organization



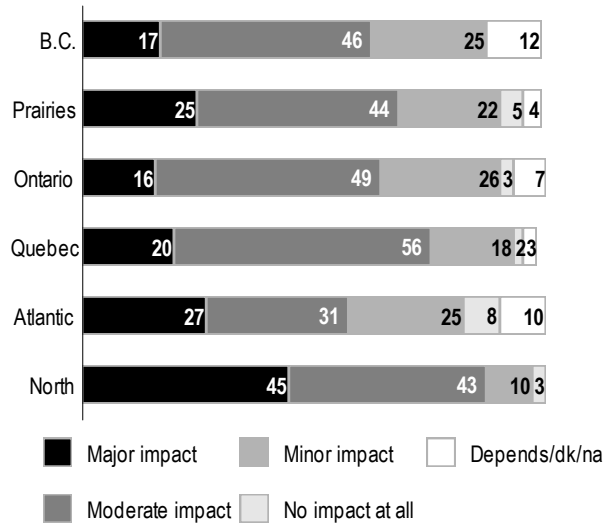
Subsample: Those who think climate change is happening or will happen in the future (Municipal government n=165; Provincial government n=25^a, Business n=276)

^a Very small base (<50) – extreme caution is advised in interpreting results

Q11. How MUCH of an impact will a changing climate will have on (IF GOVERNMENT: your region/IF BUSINESS: the regions of Canada in which your organization operates) in the next 20 years? Would you say it will have a...?

As may be expected, there are some regional variations, with concern about major impacts being most pronounced in the North, where 45 percent of respondents think there will be major impacts in that time frame. Quebec residents also express the view that there will be at least moderate impacts to a greater extent than those located in other provinces.

Extent of impact a changing climate will have on regions in the next 20 years
By region



Subsample: Those who think climate change is happening or will happen in the future (n=466)

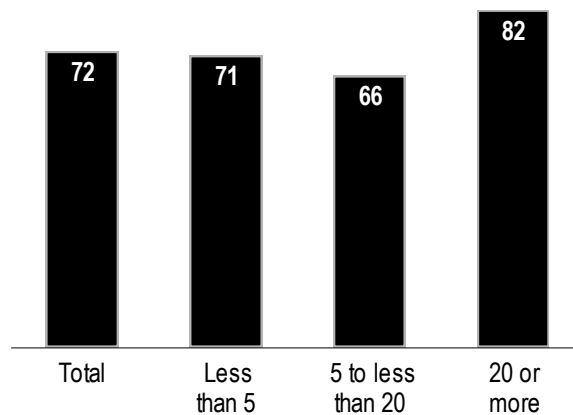
Q11. How MUCH of an impact will a changing climate will have on (IF GOVERNMENT: your region/IF BUSINESS: the regions of Canada in which your organization operates) in the next 20 years? Would you say it will have a...?

C. Likelihood and timing of impact of climate change on organizations

Among those who say climate change is, or will be, a reality, seven in ten business respondents say climate change will have an impact on their own organizations. Opinion is divided as to whether the impact is being felt now or will be felt in the future.

The perceived impact of climate change on organizations. Among those who say climate change is happening, or will happen in the future, 72 percent of businesses in the selected industries think that climate change will have an impact on their own organizations.¹ Agreement is somewhat higher among larger businesses (20 or more employees) than smaller ones, but at least two-thirds of these also agree there will be organizational ramifications. Even among those who think the impact of climate change on their region will be minimal or non-existent, half think it will have an impact on their organizations. This level of agreement is typical regardless of region. Q12

Changing climate will impact business
 YES – Business – By number of employees



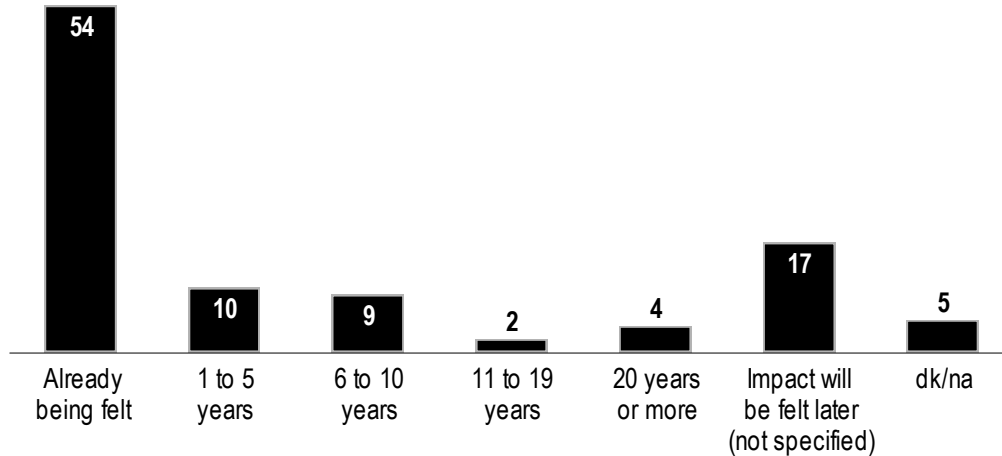
Subsample: Businesses that think climate change is happening or will happen in the future (n=276)

Q12. Do you believe that a changing climate will have any impact on YOUR ORGANIZATION?

¹ The question was also asked of five provincial government respondents whose organizations are not tasked with addressing climate change, but the results are not included here because the subsample is too small for meaningful analysis. Municipal government respondents were not asked this question.

Perceived timing of impact. Businesses who think that climate change will have an impact on their own organizations were asked to indicate when those impacts will be felt, if not being felt already. Over half (54%) say the impact is already being felt; a total of 25 percent specify a future time in which the impact will be experienced (an average of 10 years), and another 17 percent say the impact will be felt sometime in the future but do not volunteer a time frame. [Q13](#)

When climate change will impact business
Business 2009



Subsample: Businesses that think climate change will impact their organization (n=198)

Q13. Is this impact already being felt, or will it occur later? IF LATER, ASK: How many years from now do you believe your organization will start to see impacts from a changing climate?

Stating that impacts are already being felt is fairly stable across the country, ranging from six in ten respondents in the Atlantic region, Quebec and Alberta to half of businesses in the Prairies, Ontario, B.C. and the North. Those who stated the impact of climate change on their region will be major are more likely than others to say that those impacts are already being felt.

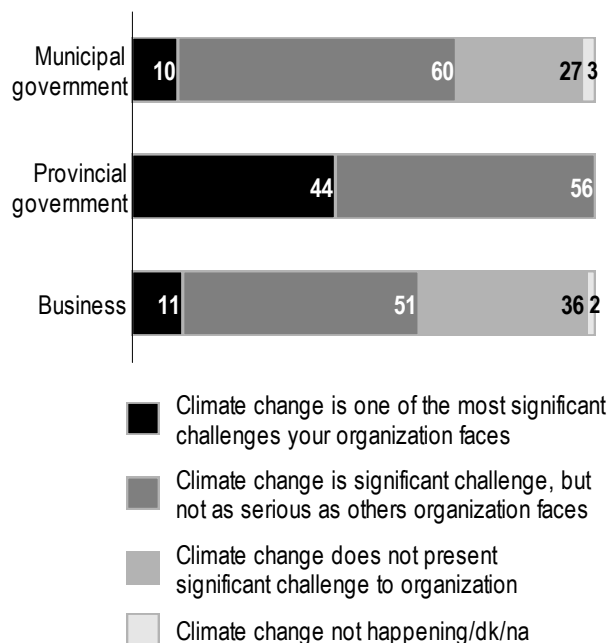
D. Perceived seriousness of impact of climate change on organizations

Majorities of municipal governments and businesses perceive that climate change is a significant, but not the most serious, challenge facing their organization.

Comparative seriousness of the challenge of climate change. Among respondents who think that climate change is (or will be) a reality, majorities of municipal government (60%) and business (51%) representatives personally feel that climate change is a significant, but not the most serious, challenge facing their organization. Moreover, they are noticeably more likely to think that climate change does *not* pose a significant challenge to their organizations (27% of municipal government respondents and 36% of business respondents) than they are to see it as the most serious challenge (10% and 11%, respectively). Provincial government respondents are much more likely than average to say that they, personally, see climate change as the most serious challenge facing their organization (44%, compared to 56% who say it is a significant but not the *most* serious challenge, and none who dismiss it as an insignificant challenge). Given that the vast majority of these provincial governments indicate climate change is part of their mandate, this focus is understandable. Q16

Personal assessment about climate change as an organizational challenge

By type of organization 2009



Subsample: Those who think climate change is happening or will happen in the future (Municipal government n=165; Provincial government n=25^a, Business n=276)

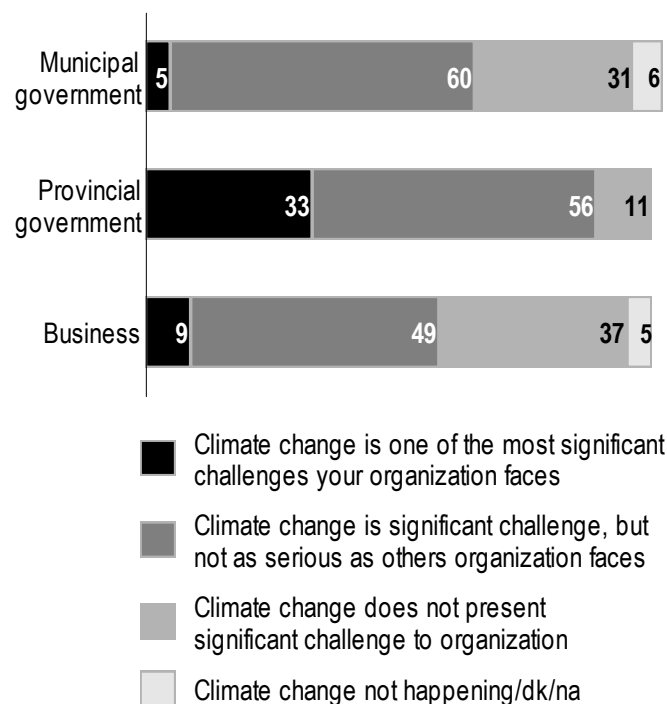
^a Very small base (<50) – extreme caution is advised in interpreting results

Q16. Considering all the challenges that your organization faces now and will face in the near future, which of the following best describes how you PERSONALLY feel?

Respondents were also asked to indicate, regardless of their *personal* views, what their *organization's* view is regarding climate change as an organizational challenge. Perceptions of the point of view of their organization are similar to personal viewpoints, although fewer municipal and provincial government employees say that it is the most important organizational challenge when compared to their personal perceptions. Even among those who think that the impact of climate change on their region will be minimal or non-existent, four in ten, each, still indicate it is their personal view, and that of their organization, that climate change represents a significant organizational challenge. Q17

Organizational view about climate change as an organizational challenge

By type of organization 2009



Subsample: Those who think climate change is happening or will happen in the future OR does not have a position on climate change (Municipal government n=173; Provincial government n=27^a, Business n=299)

^a Very small base (<50) – extreme caution is advised in interpreting results

Q17. Regardless of your PERSONAL views, which of the following best describes your ORGANIZATION'S view regarding climate change? Is it that...

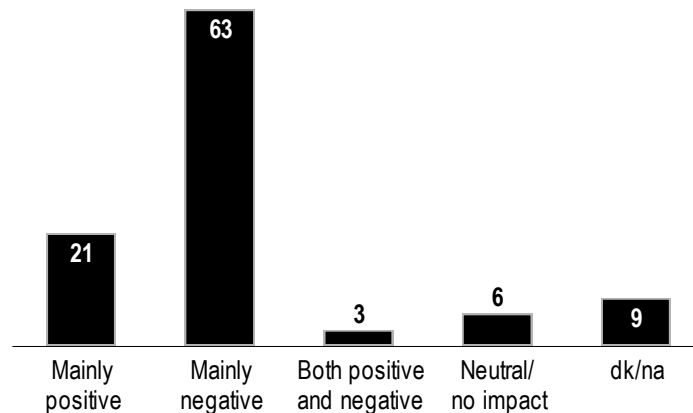
Regionally, Atlantic Canadians are somewhat more likely to say that they personally and their organization sees climate change as one of their most significant organizational challenges, while Prairie respondents are the most likely to say that climate change does not present a significant challenge, in either their personal view or in the view of their organization.

E. Specific impacts of climate change on organization

Among those who report that climate change will impact their organization, two-thirds of business respondents say that climate change will have mainly negative impacts on their organizations – primarily water level/supply impacts and more extreme weather conditions.

Overall nature of impact on organization. Among those who think climate change will impact their organization, 63 percent of business representatives feel that climate change will have mainly negative impacts on their organizations; 21 percent think the impacts will be mostly positive, and three percent predict a mix of positive and negative impacts. Six percent say the impacts will be neutral and nine percent offer no opinion on the question.² Q14

If climate change impact on business will be mainly negative or positive
Business 2009



Subsample: Businesses that think climate change will impact their organization (n=198)

Q14. Overall, do you believe that a changing climate will have a (mainly negative or mainly positive/mainly positive or mainly negative) impact on your organization?

Saying that a changing climate will have a mainly negative impact is the dominant view across the country, with somewhat higher proportions of organizations in Atlantic Canada (77%) and Quebec (77%) saying this than those located elsewhere. Businesses with larger operating budgets (\$500,000 or more – 28%) are more likely than businesses with fewer resources (15%) to say there will be a mainly positive organizational impact from a changing climate.

² The question was also asked of five provincial government respondents whose organizations are not tasked with addressing climate change, but the results are not included here because the subsample is too small for meaningful analysis. Municipal government respondents were not asked this question.

Expected negative impacts on organization. Among those who think climate change will have an impact on their organization, the most often predicted negative impacts are: changing water levels (mentioned most often by municipal governments and least often by businesses); extreme weather conditions; reduced business opportunities (mentioned less often by municipal government respondents); changes in recreation patterns; personal health emergencies/disasters (mentioned less by business respondents); negative impacts on wildlife habitat; increased energy/operating costs; infrastructure costs (mentioned less by businesses); negative impacts on agriculture (mentioned most by municipal governments); and the cost of mitigation efforts (e.g., recycling costs). Q15b

Negative climate change impacts/risks for organization

By organization type 2009	Municipal government (n=165) %	Provincial government (n=25 ^a) %	Business (n=265) %
Changing water levels/water supply/floods	32	20	11
Impacts on health/well-being/chance of emergencies/disasters	25	20	8
Extreme/unpredictable/worse weather	23	20	16
Infrastructure impacts/costs (e.g., roads, buildings, sewers)	22	16	6
Negative impact on agriculture/drought	22	12	6
Wildlife/habitat disruption/invasive species	17	16	13
Increased costs for energy/production/operating costs	13	16	15
Cost of mitigation efforts (e.g., recycling, retrofitting)	12	16	6
Change in recreation/tourism patterns	12	16	17
Reduced business opportunities/income/customers	9	24	21
Reduced economic base/tax base/people will leave	8	12	3
New policies/regulations/legislation/higher taxes	6	8	3
Shorter operating season	5	4	5
Air quality/pollution/smog	3	4	2
Change in transportation patterns	2	8	4
Other	1	4	3
None/nothing	5	–	14
dk/na	13	8	8

^a Very small base (<50) – extreme caution is advised in interpreting results

Subsample: Those who think climate change is happening or will happen in the future, excluding those who think a changing climate will have a neutral or no impact on their organization

Q15b. *What, specifically, are some of the negative impacts or risks for your organization resulting from a changing climate?*
 PROBE: *Any others?*

There are some regional patterns of response. Reduced business opportunities are mentioned by higher proportions of Prairies respondents (of which a notable number are in agriculture-related industries), while Ontarians are the most likely to mention increased energy costs, and Northerners are the most likely to mention infrastructure impacts.

Expected positive impacts on organizations. Among all respondents who think climate change is, or will be, a reality and who think it will have some type of organizational impact, the most often predicted positive impacts are warmer weather/lower energy costs (mentioned most often by municipal governments). Also mentioned by significant proportions are longer operating seasons (mentioned less by provincial government respondents); more green technology (mentioned more by provincial government respondents); increased tourism opportunities; and increased income opportunities. About two in ten of each type of organization cannot name a potential positive impact of climate change. Q15a

Positive climate change impacts/opportunities for organizations

By organization type 2009	Municipal government (n=165) %	Provincial government (n=25 ^a) %	Business (n=265) %
Warmer weather/winters/means lower energy costs/improved transportation	28	16	18
Earlier/longer operating season	18	4	15
Plant diversity/increased agricultural yields	13	16	3
More green technology/fuel use/alternatives	11	24	12
Increased recreation/tourism-related activities/business	10	4	13
Increased business opportunities/revenue (including mitigation or adaptation services/consultation)	7	16	12
Increased awareness of the issue/more planning/buy-in	6	20	2
Opportunity to change/diversity/collaborate/innovate/access new tech.	4	16	3
More research available/statistics/information/training	3	4	3
Government funding for mitigation/adaptation	3	12	2
Animal diversity/variation/better conditions for livestock/wildlife	2	4	*
Other	1	–	1
None/nothing	21	16	25
dk/na	21	–	16

* Less than one percent / ^a Very small base (<50) – extreme caution is advised in interpreting results

Subsample: Those who think climate change is happening or will happen in the future, excluding those who think a changing climate will have a neutral or no impact on their organization

Q15a. What, specifically, are some of the positive impacts or opportunities for your organization resulting from a changing climate? PROBE: Any others?

Unlike mentions of negative impacts, there are no notable regional patterns of response for positive impacts. Northerners are the most likely to mention increased recreation and tourism opportunities, and Ontarians and Manitobans the most likely to mention earlier or longer operating seasons.

III. ADAPTATION ACTIONS

A. Understanding of “climate change adaptation”

Understanding of the term *climate change adaptation* centres on the idea that it is a responsive action, and that there is a need to accept change and to learn to work successfully in a new climate environment.

When asked, in an open-ended manner, what the term “climate change adaptation” means to them, the largest proportions of respondents volunteer fairly general, reactive responses that centre on accepting change and learning to work successfully in a new climate or environment. This echoes the findings of the qualitative research. Considerably fewer make statements about being proactive, but these mentions are still quite general in nature. Provincial governments are more likely than others to mention the need to draw up an action plan. Also mentioned by smaller proportions of all three organization types is the need to be energy efficient and reduce one’s carbon footprint, and the need to make proactive changes to slow the effects, which are both mitigation- rather than adaptation-focused responses. [Q19a](#)

What the phrase “climate change adaptation” means (unaided)

All mentions – By organization type

	Municipal government (n=172) %	Provincial government (n=27 ^a) %	Business (n=297) %
Acceptance of change/living/working successfully in a new climate/ environment (reactive)	45	44	42
Taking action/changing behaviour/business practices/lifestyles/ culture – general (proactive)	24	33	20
Being more energy-efficient/using alternate energy source(s)/reduction of carbon footprint	19	7	14
Drawing up an action plan/future scenarios/how to prepare/react	10	37	3
Making proactive changes/to slow the progression/attempt to avoid	8	15	6
Higher costs of operation/budgeting	2	4	1
Important/disastrous implications/not to be ignored	1	4	3
Warmer temperatures/unpredictable weather patterns	–	–	4
Other	3	4	1
None/nothing	4	–	5
dk/na	8	–	14

^a Very small base (<50) – extreme caution is advised in interpreting results

Subsample: Those who think their organizations think climate change is happening

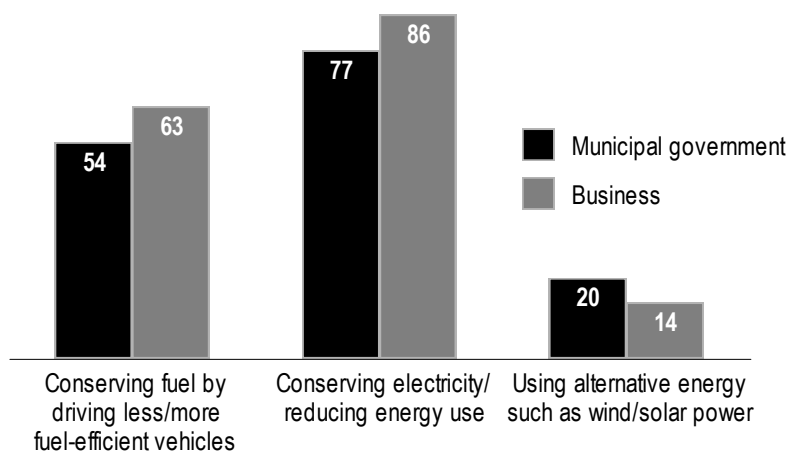
19a. What does the phrase “climate change adaptation” mean to you? PROBE: Anything else?

B. Current climate change mitigation activities of organizations

Reported mitigation efforts within organizations. The qualitative research conducted prior to the survey questionnaire development confirmed that respondents in both businesses and governments are not at all clear about the distinction between climate change *mitigation* and *adaptation*. It was felt that a question about mitigation might help to increase understanding of the difference, and thus make answers to questions about adaptation activities more meaningful. It was also useful to confirm that mitigation activities are widespread while, in comparison, adaptation efforts are just beginning.

When business and municipal respondents whose organization report that climate change will have an impact were asked about specific mitigation activities, 86 percent of businesses and 77 percent of municipal governments report that their organization is making efforts to reduce its contribution to climate change by conserving electricity or reducing energy use.³ Smaller majorities – 63 percent of business and 54 percent of municipal government representatives – say their organizations are conserving fuel by driving less or using more fuel-efficient vehicles. Relatively few – 14 percent of business respondents and 20 percent of municipal government respondents – report that their organizations are using alternative forms of energy, such as wind or solar power. [Q18a-c](#)

Organization’s climate change mitigation activities % YES – By type of organization



Q18. Organizations can respond to a changing climate in a number of ways. One type of response is to reduce the organization’s contribution to climate change (for example, by reducing greenhouse gas emissions or dependence on fossil fuels). This type of response is called MITIGATION. Is your organization currently doing any of the following to reduce its contribution to climate change?

Subsample: Businesses (n=297) and municipalities (n=172) whose organization thinks climate change is happening or will happen in the future

³ The question was also asked of seven provincial government respondents whose organizations are not tasked with addressing climate change, but the results are not included here because the subsample is too small for meaningful analysis.

Business and municipal government representatives were then asked, in an open-ended question, if their organizations have undertaken *other* kinds of climate change mitigation activities. While majorities indicate they have not undertaken any additional mitigation, 43 percent of businesses and 39 percent of municipal governments volunteered a range of mitigation efforts. In both cases, they were most likely to mention an activity related to fuel conservation or use of alternative energy; both types of respondent also mentioned efforts related to recycling. Municipal government respondents also reported efforts related to urban design and planning.

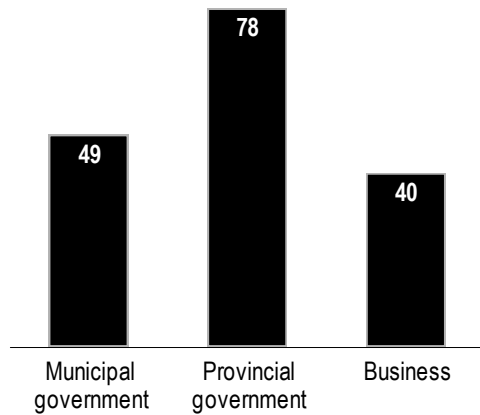
Undertaking action to help organization/stakeholders adapt to climate change.

About half of the respondents report that their organization is currently doing something to adapt to climate change. When describing their actions, the majority cite climate change mitigation activities (e.g., focus on reducing greenhouse gases), and, the minority described adaptation activities (e.g., focus on reducing climate change impacts).

Those whose organizations think climate change is happening were told that organizations can adapt to a changing climate in a number of ways: by taking action to reduce the negative impacts or to try to take advantage of any opportunities a changing climate may offer. Forty-nine percent of municipal governments and 40 percent of businesses report their organization *is* currently doing something to adapt to the risks and opportunities resulting from a changing climate. Among provincial governments, 78 percent report their department or agency is either doing something to adapt to the risks and opportunities, or doing something to assist their stakeholders to adapt. [Q19b](#)

Organizations doing something to adapt/assist others to adapt to risks/opportunities of a changing climate

% YES – By type of organization



Subsample: Businesses (n=297), municipalities (n=172) and provincial governments (n=27^a) whose organization thinks climate change is happening or will happen in the future

^a Very small base (<50) – extreme caution is advised in interpreting results

19b. Organizations can adapt to a changing climate in a number of ways. They can take action to reduce the negative impacts of climate change or try to take advantage of any opportunities a changing climate may offer. Is your organization currently doing anything to [adapt to/ assist your stakeholders in adapting to] the risks and opportunities resulting from a changing climate?

As anticipated from the qualitative research, municipal government and business respondents who claimed their organizations are engaged in adaptation activities primarily point to mitigation-type activities, such as reducing energy use, researching/converting to alternative energy sources and/or other planning activities. The volunteered responses from provincial government respondents indicate that their governments are oriented more toward adaption, primarily in the areas of water/wildlife habitat, planning in general and emergency/disaster planning. However, four in ten provincial government respondents also mention some kind of mitigation activity when asked about adaptation. [Q19c](#)

Organization activities cited as “adaptation”

By organization type	Municipal gov. (n=85) %	Provincial gov. (n=21 ^a) %	Business (n=118) %
NET: ADAPTATION	28	57	18
Reducing water use/water conservation	9	10	7
Environmental/storm water/habitat protection	8	38	2
Emergency response/disaster planning	8	19	–
Adapting specific activities due to changing weather (e.g., mowing, snow removal)	5	5	4
Planning/researching (adaptation-related)	5	24	–
Creating/extending recreation/tourism programs	1	5	6
NET: MITIGATION	68	38	73
Reducing energy use/efficiency/conservation	35	5	25
Researching/convertng to/using alternative energy sources (e.g., wind, natural gas, nuclear)	22	14	14
Planning/researching (mitigation-related)	19	19	11
Reducing driving/reducing fuel use/public transportation	13	10	14
Conduct eco-audits/emissions audits/emissions reduction	12	14	4
Converting to eco-friendly products/processes/technologies	11	10	16
Recycling/reducing waste of materials	8	–	14
Raising awareness (employees/client/public) re energy use/resource conservation/green living	–	5	2
Planning/research (general)	12	33	3
Education/training (general)	6	5	3
Other	1	5	4
None/dk	1	5	7

^a Very small base (<50) – extreme caution is advised in interpreting results
 Subsample: Those whose organizations are engaged in adaptation activities

*Q19c What, specifically, is your organization currently doing to ADAPT to a changing climate? PROBE: Anything else?
 Provincial government: What, specifically, is your organization currently doing to assist your stakeholders in adapting to the risks and opportunities resulting from a changing climate)?*

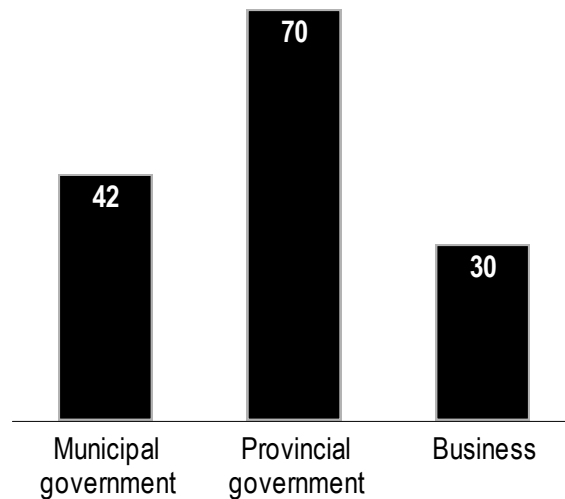
C. Future climate change adaptation activities of organizations

The majority of provincial government respondents, but fewer municipal government and business respondents, report specific plans for *future* actions designed to help their organizations adapt to a changing climate.

Future plans designed to help organization adapt to climate change. Among respondents whose organizations think climate change is happening, 42 percent of municipal government and 30 percent of business representatives report that their organizations have specific plans for future actions designed to help them adapt to the risks and opportunities provided by a changing climate. Among provincial government respondents who say their department considers climate change a reality, 70 percent also say their organization has specific plans for future adaptation actions. Q21

Organization has specific plans for future adaptation actions

YES – By type of organization 2009



Subsample: Municipalities (n=172), provincial governments (n=27^a) and businesses (n=297) whose organization thinks climate change is happening or will happen in the future.

^a Very small base (<50) – extreme caution is advised in interpreting results

Q21. BUSINESS/MUNICIPAL SAMPLE OR PROVINCIAL GOVERNMENT ORGANIZATION:
Does your organization have any specific plans for FUTURE actions designed to ADAPT to the risks and opportunities provided by a changing climate?

When asked to indicate what types of future adaptation activities are planned, the pattern of response is similar to that found for reported current activities. Municipal government and business representatives who had said that their organizations will be engaged in future *adaptation* activities primarily

cite *mitigation* activities, such as reducing energy use, converting to alternative energy sources, and developing mitigation-oriented policies. The volunteered responses from provincial government respondents indicate that their departments or agencies are oriented more toward actual adaption, primarily in the area of education; they also mention the development of climate change action strategies and data collection activities. Q22

Future organization activities cited as “adaptation”

By organization type	Municipal government (n=72) %	Provincial government (n=19 ^a) %	Business (n=88) %
NET: ADAPTATION	25	37	11
Environment/wildlife/ecology programs/planning	10	5	9
Develop policies/regulations (re adaptation)	8	16	1
Emergency preparedness programs/planning	7	5	1
Education on adaptation	3	21	1
NET: MITIGATION	63	21	64
Energy reduction/retrofitting/audit/planning	26	11	20
Alternative energy programs/planning	22	5	22
Develop policies/regulations (re mitigation)	18	5	5
Vehicle use reduction/alternate transportation/hybrids/eco auto	10	16	15
Green/sustainable programs/technologies/planning	8	5	13
Green construction/LEED programs	8	–	1
Recycling programs	4	–	2
Subsidize mitigation/penalize overusers	4	–	1
Water reduction/reuse programs	3	–	1
Education on mitigation	1	–	2
Data collection/research/planning phase	14	21	9
Climate change action strategy (participate in/developing)	11	32	7
Education/training (general)	1	16	2
Working with industry (general)	3	11	1
Other	1	–	5
dk/na	1	–	9

^a Very small base (<50) – extreme caution is advised in interpreting results

Subsample: Organizations planning adaptation activities

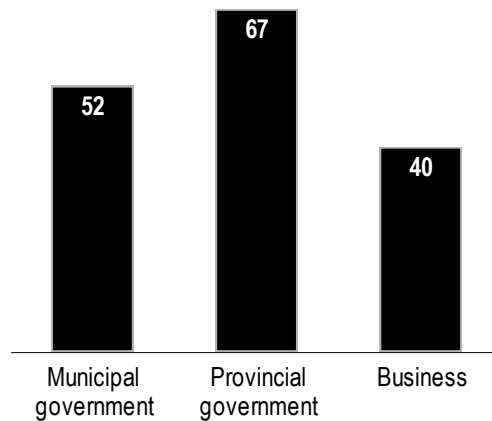
Q22. What actions are specifically planned? PROBE: Anything else?

D. Consideration of a changing climate in decision-making and planning

Most provincial government representatives, but half or fewer of those in municipal governments or businesses, say their organization takes a changing climate into consideration in its decision-making and planning activities; this has happened primarily within the past five years.

Incidence of taking climate change into consideration when making decisions. Provincial government respondents (67%) are more likely than municipal government respondents (52%) or business respondents (40%) to say their organization takes a changing climate into consideration in its decision-making and planning activities. Q23

Organization/department considers a changing climate in its decision-making and planning
 YES – By type of organization 2009

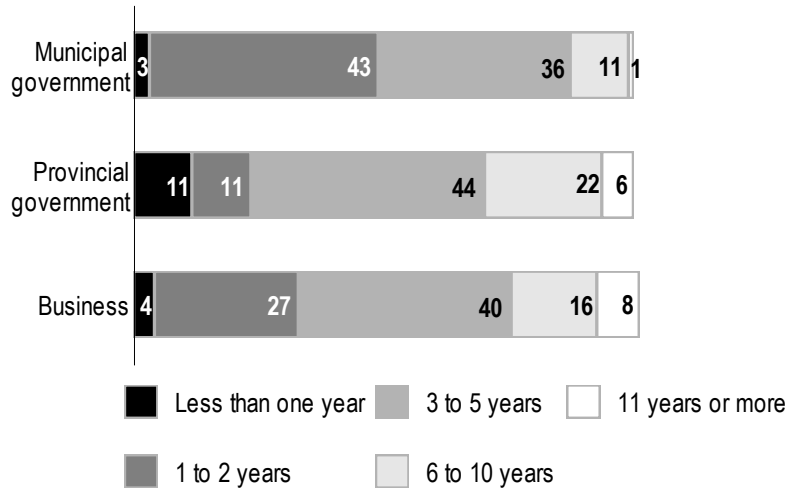


Q23. (PROVINCIAL GOVERNMENT ORGANIZATIONS): Other than in the formulation of policy designed to help your stakeholders address climate change,
 (ALL) Does your organization or department consider a changing climate in its decision-making and planning?

The organizations most likely to indicate that climate change is considered in decision-making and planning are located in the North, the Atlantic region and B.C., and those who think that the impact of climate change on their region will be either major or moderate.

Among those who indicate that climate change influences their organization’s decision-making and planning activities, provincial governments and businesses report this has been the case for a longer time (an average of 5.4 and 5.5 years, respectively) than is reported by municipal government representatives (an average of 3.4 years). Q24

Length of time organizations have been considering a changing climate in decision-making
By type of organization 2009



Subsample: Those whose organizations consider a changing climate in decision-making and planning (Municipal governments n=90; provincial governments n=18^a; businesses n=122)

^a Very small base (<50) – extreme caution is advised in interpreting results

Q24. For how long has your organization been considering a changing climate in its decision-making?

E. Specific impacts of climate change on organizational decision-making

Among those who consider climate change in organizational decision-making, climate change is most often a consideration in the area of long-term planning and/or policy decisions and least often in the area of risk management planning.

Areas influenced by climate change considerations. Respondents who indicated that climate change influences their organization's decision-making and planning activities were asked to indicate in which of four areas this occurs, and also asked to provide other unprompted examples. It should be noted that climate change is a greater consideration in public sector decision-making than in private sector organizations.⁴ Q26

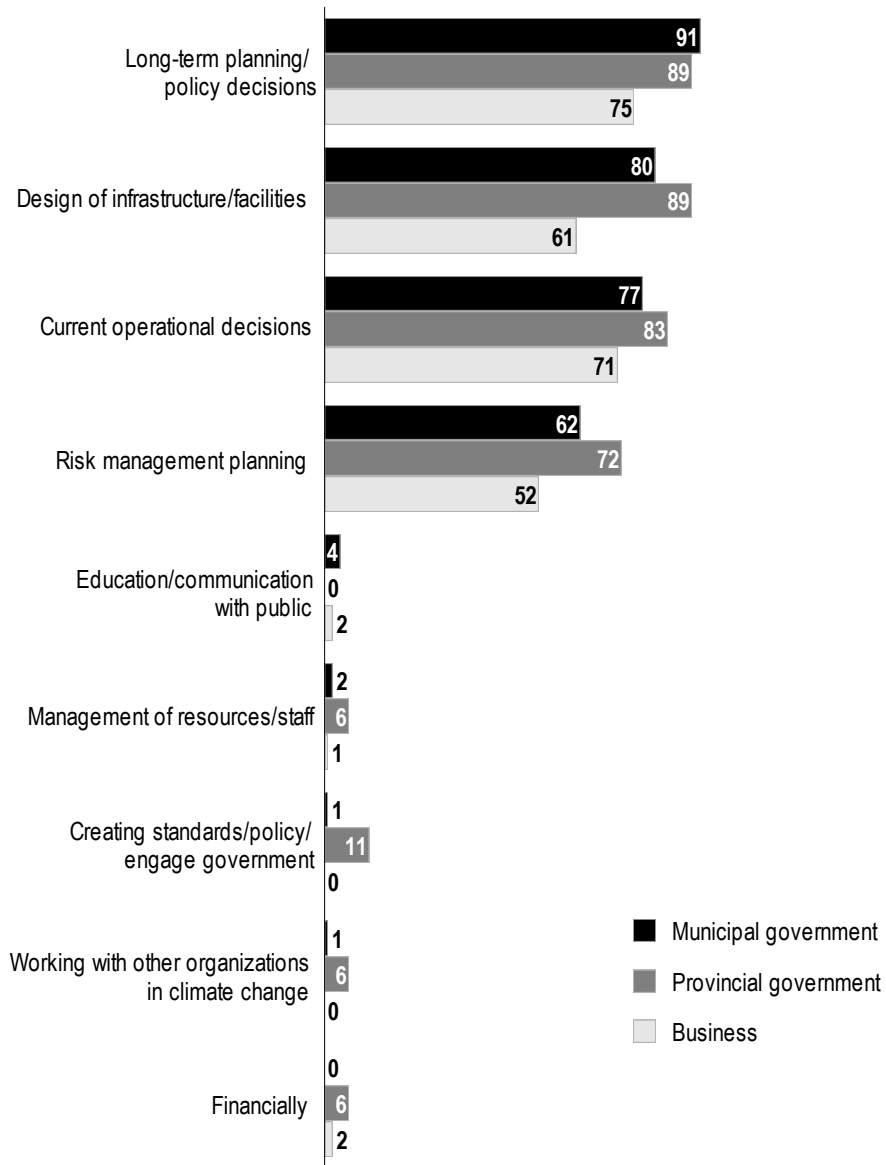
- Municipal government representatives are more likely to say climate change is a consideration in the areas of long-term planning and/or policy decisions (91%), in the design of infrastructure or facilities (80%), or in current operational decisions (77%) than in risk management planning (62%).
- Provincial government representatives indicate that climate change is an equally important consideration in all four areas (with about seven to nine in ten, each, indicating climate change influences decisions in these areas).
- Business representatives indicate the climate change is more relevant in the areas of long-term planning and/or policy decisions (75%) and in current operational decisions (71%) than in either the areas of the design of infrastructure or facilities (61%), or in risk management planning (52%).

Only very small proportions offer any additional ways in which their organization takes climate change into account: in education or communications, in staff and resource management, financially, in creation of standards, and in working with other organizations.

⁴ Interpretation of the results of this question must take into account the fact that many organizations cited both mitigation and adaptation actions in responses to earlier questions on adaptation action.

Ways organizations take climate change into account in planning/decision-making

By type of organization



Subsample: Those whose organizations consider a changing climate in decision-making and planning (Municipal governments n=90; provincial governments n=18^a; businesses n=122)

^a Very small base (<50) – extreme caution is advised in interpreting results

Q26. In which of the following ways does your organization take climate change into account in its planning or decision-making ... In long-term planning and/or policy decisions ... In current operational decisions ... In risk management planning ... In the design of infrastructure or facilities ... In other ways?

F. Barriers to incorporating climate change considerations in decision-making

Cost is the greatest barrier to climate change becoming a more important consideration in decision-making in both public and private sectors. Competing organizational priorities and a lack of climate change expertise are less of an issue for business than for governments.

Barriers to climate change being a greater consideration in decision-making. Municipal and provincial government representatives were asked to indicate if several specific factors represent barriers to their organization better taking climate change into account in its decision-making. Majorities say that the cost of adapting to the impacts of a changing climate (60% and 74%, respectively) and competing organizational priorities (56% and 67%, respectively) are significant barriers. A minority cite a lack of expertise to address the impacts of a changing climate (43% and 30%, respectively) and the complexity of policy change processes (39% and 41%, respectively). Fewer still say that not knowing the benefits of adapting to a changing climate (31% and 22%, respectively), the need to have other departments/organizations act first (28% and 30%, respectively), and lack of information about impacts (26% and 19%, respectively) are significant barriers.⁵ Q33

Barriers to taking climate change into account in decision-making

Significant barrier – By type of government	Municipal government (n=174) %	Provincial government (n=27 ^a) %
Cost of adapting to impacts of climate change	60	74
Competing organizational priorities	56	67
Lack of expertise to address impacts of climate change	43	30
Complexity of policy change processes	39	41
Not knowing benefits of adapting to climate change	31	22
Need to have other departments/organizations act first	28	30
Lack of information about climate change and its impacts	26	19

^a Very small base (<50) – extreme caution is advised in interpreting results

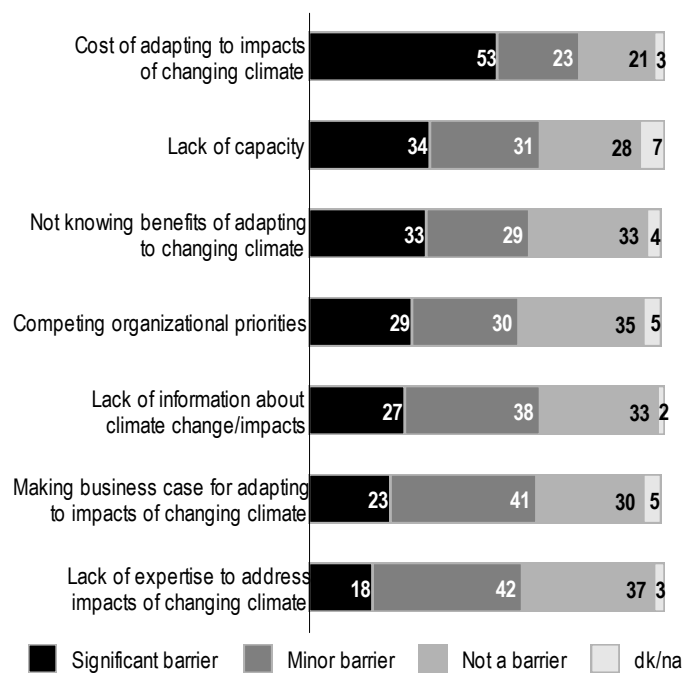
Subsample: Those who either personally think, or whose organizations think, that climate change is happening or will happen in the future

Q33. To what extent does each of the following represent a barrier to your organization better taking climate change into account in its decision-making? For each one I read, please tell me how much of a barrier it represents to your organization.

⁵ Interpretation of the results of this question must take into account the fact that many organizations cited both mitigation and adaptation actions in responses to earlier questions on adaptation action.

The cost of adapting to the impacts of a changing climate also emerges as the leading obstacle among business operators and executives (53% of whom say this is a significant barrier). One-third say the same about lack of capacity (34%) and not knowing the benefits of adapting to a changing climate (33%), nearly three in ten say the same about lack of information (27%) and two in ten say the same about making a business case for adapting to the impacts of a changing climate (23%). Business representatives are noticeably less likely than those in government organizations to say that competing organizational priorities (29%) and a lack of expertise to address the impacts of a changing climate (18%) are significant barriers.

Barriers to taking climate change into account in decision-making Business



Subsample: Business respondents who either personally think, or whose organizations think, that climate change is happening or will happen in the future (n=299)

Q33. To what extent does each of the following represent a barrier to your organization better taking climate change into account in its decision-making? For each one I read, please tell me how much of a barrier it represents to your organization.

Those who personally think, or whose organizations think, that climate change is a reality were asked, in an open-ended question, if any *other* barriers or challenges limit their organization’s ability to make decisions about adapting to climate change. Each organization type provides some additional consideration (55% of municipal governments, 59% of provincial governments and 40% of businesses). The most often cited additional barriers volunteered by all types of respondents centre around issues related to a lack of funding. Municipal government respondents are more likely than others to mention the need for more education/more reliable information. The need for more government policies or political will is more frequently mentioned by governments themselves than by businesses. Mentions of other barriers are fairly small and similar across the three organizational types. Q34

Other barriers to taking climate change into account in decision-making/planning⁶

By organization type

	Municipal government (n=174) %	Provincial government (n=27 ^a) %	Business (n=299) %
Financial/lack of revenue/economic downturn	26	26	20
Knowledge/education/reliable information	17	7	6
Government policy/political will/co-operation	14	22	6
Limited resources/staff/time	10	15	7
Leadership/plan/course of action	6	15	3
Local resistance/others not willing to change	5	4	1
Other crucial priorities	3	–	2
Other	2	–	4
None	30	19	42
dk/na	15	22	18

^a Very small base (<50) – extreme caution is advised in interpreting results

Subsample: Those who personally think, or whose organizations think, that climate change is happening or will happen in the future

Q34. *What other barriers or challenges, if any, limit your organization’s ability to make decisions about adapting to climate change?*

⁶ Interpretation of the results of this question must take into account the fact that many organizations cited both mitigation and adaptation actions in responses to earlier questions on adaptation action

Those who indicated that lack of information was a significant barrier to their organization better taking climate change into account in decision-making (n=131) were asked to indicate, specifically, what types of information they lack.⁷ Among these, the largest proportions talk about the need for more reliable climate change information, for information on impacts that are specific to their region, for projections of future impacts/forecasts and for best practices information. Q35

Informational barriers to taking climate change into account in decision-making/planning

By organization type 2009

	Municipal government (n=46 ^a) %	Business (n=80) %
More reliable information	30	26
Information on impacts specific to region	30	19
Best practices information	28	4
Projections of future impacts/forecasts	20	15
Relevant case studies/examples of what other organizations like ours are doing	13	6
General/unbiased information	11	5
Technical information	9	1
Benefits/cost benefits of adaptation	7	6
Where to locate/access information	4	3
Resource sharing/co-ordination	4	–
Training information	2	1
Financial/costs/risk management/funding	2	10
Other	4	4
None	–	4
dk/na	7	21

^a Very small base (<50) – extreme caution is advised in interpreting results

Subsample: Those who personally think, or whose organizations think, that climate change is happening or will happen in the future, and who indicate that lack of information is a significant barrier to climate change becoming a more influential factor in decision-making

Q35. Specifically, what types of information do you lack?

⁷ The question was also asked of five provincial government respondents, but the results are not included here because the subsample is too small for meaningful analysis.

IV. SOURCES OF INFORMATION

A. Sources of information on climate change

Municipal and provincial governments primarily get climate change information from government and other scientific sources; business respondents are most likely to mention getting their information from the media.

It is important to understand where organizations get their information about climate change, as this provides an indication both of the validity of the information and indicates which channels will be most effective for future information dissemination. Survey respondents who personally think, and who say their organization thinks, that climate change is a reality were asked to indicate, in an unprompted manner, their organization's sources of information regarding climate change. [Q29](#)

The results indicate that government organizations rely on mainly government and other scientific sources of information on climate change, while businesses are considerably more reliant on the media. Sixty-four percent of municipal and 63 percent of provincial government representatives get climate change information from a variety of government sources, while 38 percent of municipal governments and only four percent of provincial governments mention the media as a source. The opposite pattern of response is found among business respondents: 60 percent get their information from the media and just 16 percent indicate getting information from government sources. However, 21 percent of businesses do mention getting information from scientific journals or magazines.

Provincial governments are more likely than others to say they get information from their own internal sources, from private sector industry data, and/or from workshops/seminars/expert consultations. Municipal governments are more likely than others to use the Internet for climate change information, but are less likely to use scientific journals.

Organizational sources of climate change information

By organization type	Municipal government (n=174) %	Provincial government (n=27 ^a) %	Business (n=299) %
The media	38	4	60
NET: Government sources	64	63	16
Other government agency website/mail (unspecified)	35	26	7
Ministry of the Environment (provincial/federal)	26	37	9
Municipal associations/reports/flyers	17	–	*
Public information reports – not online	2	7	1
Environment division/committee/manager	2	–	*
Other government sources	2	8	*
Scientific journals/magazines	9	19	21
NET: Internet sources (non-government)	21	7	9
AOL	7	4	3
Private sector/industry data online (various)	4	–	*
MSN	3	–	1
Google	2	–	2
Other online sources	6	4	3
Internal/our own information/data	14	41	7
Private sector/industry data (various)	13	30	3
Academic journals/universities	10	22	2
Industry associations/conferences	9	11	12
Not-for-profit organizations (e.g., Pollution Probe)	9	7	3
Workshops/seminars/expert consultation (non-government)	7	22	2
Municipal associations/reports/flyers (not online or government)	5	–	–
Word-of-mouth	3	–	5
Public information reports (general - not online or government)	2	–	2
Research (general - not online or government)	2	–	1
Environment division/committee/manager (not online or government)	1	4	1
Other mentions	1	4	–
No information at organizational level	5	–	7
dk/na	3	7	5

* Less than one percent / ^a Very small base (<50) – extreme caution is advised in interpreting results

Subsample: Those who either personally think, or whose organizations think, that climate change is happening or will happen in the future

Q29. What are your organization's sources of information regarding climate change? PROBE: Any other sources?

B. Interest in decision-making tools and technical resources

About half of municipal and provincial government respondents, and a quarter of business respondents, indicate that their organizations could use decision-making tools or technical resources that would assist them in addressing the impacts of climate change.

Need for decision-making tools or technical resources. When asked in an open-ended question to describe decision-making tools or technical resources that would assist their organization in addressing the impacts of climate change, very few indicate anything at all, and mentions are quite general and no dominant tools or resources emerge. This echoes the findings of the qualitative research, in which a similar question was asked, and reflects the fact that little is yet known about climate change adaptation, so that many organizations have yet to understand the scope of either their needs or what resource possibilities there may be for addressing them. [Q36](#)

Business respondents are much less likely than others to volunteer one or more specific resources (25%, compared to 59% of provincial government respondents and 46% of municipal government respondents). The most mentioned needs are for more information, for emissions-related tools to tests, and for improved access to existing information or to expertise. Small proportions also mention a need for educational presentations or other communications products, analysis and implementation funding, and various methods (including guides to help analysis or decision-making). There are no spontaneous mentions of regulations, codes or standards.

Needed decision-making tools/technical resources

By organization type

	Municipal government (n=174) %	Provincial government (n=27 ^a) %	Business (n=299) %
Emissions-related tools/tests	8	19	3
More information (new science, local information, etc.)	7	4	5
Improved access to existing info. (one-stop shopping, etc.)	6	7	5
Access to expertise/expert consultation	5	11	3
Education/presentations (communications products)	5	4	2
Funding to assist in analysis and implementation of solutions	5	4	2
Policy frameworks (to better guide decision-making)	5	4	*
Methods (incl. guides to help analysis or decision-making)	3	11	1
Examples of what others have done/best practices/case studies	3	4	1
Models (improvements in or access to)	2	–	*
Data/quantifiable information/specific data	1	7	1
Regulations	–	–	–
Codes and standards	–	–	–
Other	6	–	4
None/no other tools needed	29	15	59
dk/na	25	26	16

* Less than one percent /^a Very small base (<50) – extreme caution is advised in interpreting results

Subsample: Those who personally think, or whose organizations think, that climate change is happening or will happen in the future

Q36. Are there any decision-making tools or technical resources that would assist your organization in addressing the impacts of climate change? PROBE: Any other types?

C. Additional comments

Respondents express a need for better information and for additional funding to help their organizations adapt to climate change.

Final comments on what would help organizations. When asked in an open-ended question for any final comments about what would help organizations such as theirs to face the challenges associated with a changing climate, approximately half volunteer a comment (60% of municipal government respondents, 44% of provincial government respondents and 47% of business respondents). The most often volunteered comments are related to the need for better information/education and the need for greater financial support in general; notable proportions also make mention of some aspect of climate change policies or laws, and specific mention of “green” funding for mitigation activities. [Q37](#)

Final comments on how organizations can be helped to face the challenges associated with climate change

By organization type	Municipal government (n=174) %	Provincial government (n=27 ^a) %	Business (n=299) %
More accurate/straightforward information/education	29	19	17
Need external funding/more financial support	29	15	10
Governmental climate change policies/laws/political agenda	16	11	12
Financial incentives to encourage/assist in ‘going green’	7	4	10
Other	1	–	3
None	32	41	43
dk/na	8	15	10

^a Very small base (<50) – extreme caution is advised in interpreting results

Subsample: Those who personally think, or whose organizations think, that climate change is happening or will happen in the future

Q37. Do you have any final comments about what would help organizations such as yours to face the challenges associated with a changing climate?

V. CONCLUSIONS

The benchmark survey found that the majority of respondents demonstrate an awareness of what climate change is, can identify potential impacts on their region in the next 20 years, and have a view that climate change is happening now. However, the concept of climate change adaptation is currently quite abstract and the risks to organizations over the long term are not well-understood.

The survey concludes that few organizations (outside of provincial government departments tasked with climate change responsibilities) currently understand the need for climate change adaptation, and climate change adaptation is not yet routinely being taken into account in decision-making and planning. An important challenge facing climate change adaptation-focused programming is to build understanding of adaptation and its related risks and benefits.

The following recommendations are presented for consideration in conducting future iterations of this research:

1. The number of provincial and territorial governments is relatively small, and they are vastly different from each other depending on the portfolio and the population of the jurisdiction. It is recommended that future research examine this audience using qualitative methods, to obtain richer detail.
2. The main difference between municipalities is due to population size. Small municipalities tend to be quite similar in their concerns, limitations and practices regardless of location, but larger municipalities are quite different from one another. Municipal quotas should be set by community size and broadly by region, rather than being based on quotas for coverage within all P/T jurisdictions.
3. It is recommended that NRCan re-examine the government/business distribution of interviews for future research, to ensure there is adequate representation of the broad range of related businesses (based on employee size, type of industry and location) versus the finite proportion of relevant government organizations.

VI. RESEARCH METHODOLOGY

Target population and sample development

A key objective for this assignment was to identify appropriate individuals in the target population, namely municipalities, provinces and private sector businesses in sectors that will be affected by climate change. There were two main challenges to sampling for this project:

- 1) One of the most significant challenges in conducting this type of research is the development of an appropriately representative population database of qualified respondents, in the absence of comprehensive lists. The target population consisted of key Canadian representatives in public and private sectors, in a position to influence long-term investment or policy decisions with respect to: disaster management, physical infrastructure, natural resource management (including water resources, agriculture, tourism, forestry, fisheries, mining, wildlife, energy management) and land-use planning.
- 2) A second sample-related challenge was that persons at the decision-making level, especially those working in smaller organizations and in the public sector, are often difficult to reach and, due to the nature of their work commitments, may not be available even though an appointment or expression of interest is made. These challenges were overcome through allowing as long a field period as possible given the reporting deadlines of the study, and increasing the number of attempts to solicit co-operation.

The sample frame for this research was developed from multiple sources. To allow a prompt start to the qualitative part of the project, Environics began with preliminary lists of government and business organizations operating in specific regions of the country and in sectors identified by NRCan.

The level of individual sought was identified by NRCan:

- ADMs and/or Directors in provincial and territorial ministries responsible for natural resources (agriculture, fisheries, forestry, mining, etc.) as well as other ministries that would be likely to be affected by climate change (transport, public safety, tourism, etc.).
- In municipal levels of government, individuals with titles of municipal administrator, Chief Administrative Officer (CAO), Directors of Planning, and/or Town Managers – all depending on the size of the municipality.
- For businesses, owner/operator or other senior executive responsible for planning.

The following sample sources were used for the survey phase:

Provincial government departments. Environics used provincial government websites to research a list of provincial and territorial government departments, based on direction from NRCan.

Departments and agencies were identified if they were responsible for environmental and natural resource portfolios, municipalities, travel and tourism, agriculture/food, forestry, fisheries and aquaculture, energy/mines, public safety, transportation and infrastructure, parks, and Aboriginal affairs. The final list was approved by NRCan. As this was essentially a census of identified qualifying departments, a margin of sampling error should not be cited.

During the qualitative research phase, it was found that many departments referred interviewers to their lead department on the climate change issue rather than answering the survey themselves. The same thing happened during the quantitative phase. Thus the final number of provincial government representatives was smaller than originally planned, with a sample of 27. As this was essentially a census of identified qualifying departments, a margin of sampling error should not be cited.

The samples for **municipal governments** and **businesses** were purchased lists. The source for both was Scott's Directories:

- **Scott's Canadian Municipalities**, which contains contacts from over 3,500+ municipalities, cities, towns and villages across Canada; and
- *Scott's National Business Directory*, from which potential respondent firms were selected by standard industrial codes (SICs), matching as closely as possible the industries and services identified by NRCan as being targeted for this research.

Scott's is a Canadian firm, founded in 1957. Scott's listings are drawn from a main database, supported by a full-time editorial team that speaks directly to companies and professionals in all major industries across Canada. The databases are exclusively compiled and 100 percent verified by an experienced in-house bilingual editorial team, which directly contacts every business and professional published in the databank. To ensure the legitimacy and accuracy of the data, Scott's verifies information with various affiliations and alliances, including industry-related associations and government agencies. Scott's invests in excess of \$1 million per year to maintain the accuracy of the database. Scott's completes a full data verification cycle every 12 months.

Qualitative Phase

Environics conducted in-depth telephone interviews with 24 senior officials in provincial and municipal governments and with businesses in selected sectors. Participants received the list of questions in advance. Interviews were carried out by experienced senior client service staff of Environics, in the official language of choice of the respondent. Interviewing commenced on May 5 and continued until July 22, 2009.

The distribution of the in-depth interviews was as follows, developed in consultation with NRCan:

GOVERNMENT (15)	PROV/TERR	MUNICIPAL	OTHER (e.g., Aboriginal)
Atlantic	1	1	
Quebec	1	1	
Ontario	1	2	
Prairies	1	1	1
BC	1	1	
North	1	1	1
Total	15		

BUSINESS (10)	PROFIT	NOT-FOR- PROFIT
Atlantic	1	
Quebec	1	1
Ontario	1	1
Prairies	1	
BC	1	1
North	1	
Total	9	

At the time the qualitative research ended, 24 interviews had been completed, covering all regions and organization types, and the decision was made to divert effort to the quantitative survey.

Environics made multiple attempts to reach persons in identified ministries, municipalities and businesses before replacing them with a regional and type equivalent. The recruitment screener is shown in Appendix A.

The discussion guide for the in-depth interviews was developed by Environics in consultation with NRCan and is shown in Appendix C. The guide included specific climate change-related knowledge and behaviour questions, to test appropriateness of question content and terminology for the quantitative phase. The interview guide was approved by NRCan and translated prior to any French interviews being conducted. The interviews ranged from 20 minutes to about one hour in length.

The business and not-for-profit respondents were offered a monetary incentive of \$100 for their participation in the study. Government respondents did not receive financial compensation. All respondents (government and business) were sent a copy of a synthesis report provided by NRCan: *From Impacts to Adaptation: Canada in a Changing Climate 2007*, along with a thank-you letter (see Appendix D).

Quantitative phase

The objective of the quantitative phase was to expand the scope of information collected, and generate quantifiable data that can be extrapolated to the target populations across the country. The survey was designed to complete interviews with a representative sample of decision-makers in selected government and business sectors (see Target population section on p.45). The sample was drawn from all parts of the country to the degree possible based on availability of sample identified by online and directory research carried out by Environics and from purchased lists. Environics provided a specific sample distribution by region for the business sample (n=300) and the government sample (n=200) covering all provinces and territories (smaller regions were over-sampled.)

All potential respondents were screened to ensure that they were a senior decision-maker responsible for policies and planning for the selected organization. Those who indicated that their organization is not currently addressing climate change were told they could still participate if they wished. Provincial government officials who tried to refer the interviewer to a central ministry responsible for climate change for the province were told the survey was still relevant to their department. Provincial departments and municipal governments that were interviewed during the qualitative phase were removed from the sample.

Final sample distribution

Jurisdiction	Organization Type	Target	Completed	Jurisdiction	Organization Type	Target	Completed
NF		15	15	SK		33	33
provincial		2	2	provincial		2	2
municipal		3	3	municipal		11	11
business		10	10	business		20	20
PE		10	10	AB		70	70
provincial		2	2	provincial		3	3
municipal		3	3	municipal		27	27
business		5	5	business		40	40
NS		15	15	BC		75	75
provincial		2	2	provincial		3	3
municipal		3	3	municipal		27	27
business		10	10	business		45	45
NB		15	16	YK		13	13
provincial		2	2	territorial		1	1
municipal		3	4	municipal		4	4
business		10	10	business		8	8
QC		90	92	NWT		14	14
provincial		3	3	territorial		1	1
municipal		32	32	municipal		4	4
business		55	57	business		9	9
ON		110	110	NU		13	13
provincial		3	3	territorial		1	1
municipal		42	42	municipal		4	4
business		65	65	business		8	8
MB		27	27				
provincial		2	2	TOTAL PROV/TERR		27	27
municipal		10	10	TOTAL MUNICIPAL		173	174
business		15	15	TOTAL BUSINESS		300	302

The exact distribution of the universe of qualifying organizations (provincial and municipal governments and businesses) as defined by NRCan is not known, therefore weighting has not been applied: an unknown population makes it impossible to determine an appropriate basis on which to weight. NRCan provided quotas for regional/provincial coverage for the three types of organizations (municipal governments, provincial governments and businesses). For the business completions, the industry types represented reflect the proportions of those industries in the sample. Targets were not set for business completions by industry or by employee size, as these vary substantially by region and by industry, with the majority of businesses in the designated SICs being very small (five or fewer

employees), as is the case with all Canadian businesses. As well, the number of small municipalities far exceeds the number of large ones. These proportions are reflected in the survey population.

Brief profile of respondent characteristics

Interviews were conducted in all 10 provinces and each of the three territories: Atlantic Canada (11%), Quebec (18%), Ontario (22%), Manitoba (5%), Saskatchewan (7%), Alberta (14%), British Columbia (15%), and the Territories (9%). Most of the interviews were conducted in English (82%). The remainder were conducted in French. By design, a majority of 60 percent of the respondents were from the business sector; five percent were from provincial government departments and 35 percent were from municipality governments. For more details on the regional composition of the sample, please see the Research Methodology chapter.

The sample was composed primarily of male respondents (69%), and this was particularly true among business respondents. This is typical for a survey of government professionals and business leaders of the types of job titles indicated by NRCan as qualifying for the survey:

- Among business respondents, the majority describe their job title as that of owner/partner (38%) or manager/supervisor (30%); 11 percent say their title is that of president/vice-president/chairman and the remainder report a range of other titles.
- Among municipal government respondents, the largest proportions describe themselves as Chief Administrative Officers (25%), directors (21%), administrators/clerks/treasurers/secretaries (16%), or managers/supervisors (14%).
- Provincial government respondents primarily describe themselves as directors (52%), analysts (15%), managers/supervisors (11%) or Assistant Deputy Ministers (11%). The remainder reported a range of other titles.

When respondents were asked in an open-ended question to describe their main clients or stakeholders, business respondents primarily name the general public (53%), and/or clients/customers (26%). Municipal government respondents primarily name the general public (87%); provincial government respondents also name the general public (44%), as well as senior ministry officials (30%).

Municipal government respondents report working for municipalities that have populations, on average, of 17,906 residents; 50 percent report being in rural districts of fewer than 5,000 residents. This reflects the distribution of municipalities across the country.

Business respondents report working at locations with an average of 105 employees; a plurality of 39 percent report fewer than five employees, a total of 35 percent report between five and 19 employees, a total of 17 percent report between 20 and 100 employees, and seven percent report working in locations with more than 100 employees.

A total of 22 percent of business respondents report that their operating units/groups/divisions have annual operating budgets of less than \$100,000, including less than \$10,000 (2%), \$10,000 to under \$50,000 (11%) and \$50,000 to under \$100,000 (9%). A total of 33 percent report annual operating budgets of \$100,000 to under \$1 million, including \$100,000 to under \$500,000 (25%) and \$500,000 to under \$1 million (8%). A total of 28 percent report annual operating budgets of \$1 million or more, including \$1 million to under \$5 million (19%) and in excess of \$5 million (9%). Sixteen percent offer no response to the question.

Questionnaire design

The questionnaire incorporated information gleaned from the qualitative research, utilizing primarily structured questions providing for fully quantifiable results. The questionnaire also contained a number of “open-ended” questions in which respondents were invited to offer more detailed comments; these responses were subsequently content-coded into relevant themes and thus made quantifiable as well.

The survey instrument was finalized on discussion with NRCan and included the following topic sections:

- Organization profile;
- Awareness and opinions (personal and organization-level) about climate change;
- Impacts of climate change on organizational decision-making; and
- Barriers to incorporating climate change considerations in decision-making.

As mentioned on page 9 of this report, provincial government respondents whose organization is tasked with addressing climate change were not asked certain questions, and special wording was occasionally employed for this audience, as the qualitative research indicated that their understanding and responses were likely to be significantly different from other types of respondents. Respondents

who did not think that climate change will happen, and who indicated this is also their organization's position and who do not take climate change into account in decision-making were not asked questions about climate change decisions. See the questionnaire in Appendix E for specific skip patterns.

Pre-test. Prior to finalizing the survey for field, Environics conducted a pre-test from August 31 to September 2, 2009. This consisted of telephone recruitment interviews in the same manner as for the full survey, but with a small sample of respondents. The interviews were recorded and the recordings audited by Environics' senior research consultants. Following the pre-test, Environics provided NRCan with an assessment of the pre-test results, and recommendations on changes to the questionnaire. In particular, the questionnaire required cuts to bring it to the budgeted length. Adjustments were also made to the introduction of the survey, to better identify qualifying respondents and solicit cooperation. After the pre-test changes were incorporated, the survey began with a "soft launch," a slower start to allow for further assessment of the length and take-up.

As the available sample was limited, the decision was made to call back the pre-test respondents to ask them the revised questions, and their responses are included in the data.

Fieldwork

The survey was conducted from Environics' central facilities in Toronto and Montreal, from October 7 to November 13, 2009. Field supervisors were present at all times to ensure accurate interviewing and recording of responses. A minimum of 10 percent of each interviewer's work was unobtrusively monitored for quality control in accordance with the standards set out by the Marketing Research and Intelligence Association (MRIA). The average length of time required to complete the interviews was 18 minutes. Numerous callbacks were made to reach each respondent selected in the sample, and such calls were made at different times of the day and days of the week, to maximize the chances of connecting with the respondent. In a number of cases numerous appointments were required to complete the survey, as respondents were senior executives and the survey was often postponed due to urgent work demands.

All surveys were conducted in respondents' official language of choice. This survey was registered with the Marketing Research and Intelligence Association (MRIA)'s registration system, which permits the public to verify survey calls, inform themselves about the industry and/or register a complaint.

Completion results

A total of 4,516 unique telephone numbers was dialled for this survey (many were attempted numerous times) and a total of 503 interviews completed. The margin of error for the full sample is ± 4.4 percentage points, 19 times in 20. The margins of error are wider for regional and organization type subsamples.

The table on the following page shows the calculated response rates for the total sample and by organization type.

Completion results

	TOTAL N	Municipal N	Provincial N	Business N
Total sample dialled	4,516	1,056	74	3,386
UNRESOLVED NUMBERS (U)	1,403	409	20	974
Busy	43	16	1	26
No answer	465	108	1	356
Voicemail	895	285	18	592
RESOLVED NUMBERS (Total minus Unresolved)	3,113	647	54	2,412
OUT OF SCOPE (Invalid/non-eligible)	633	142	1	490
Residential	88	74	0	14
Not-in-service	475	49	1	425
Fax/modem	70	19	0	51
IN SCOPE NON-RESPONDING (IS)	1,822	297	24	1,501
Refusals – organization/gatekeeper	69	14	2	53
Refusals – respondent	660	83	7	570
Language barrier	16	1	0	15
Callback missed/respondent not available	1,051	198	13	840
Break-offs (interview not completed)	26	1	2	23
IN SCOPE RESPONDING (R)	658	208	29	421
Disqualified	0	0	0	0
Quota filled	155	34	2	119
Completed	503	174	27	302
RESPONSE RATE [R / (U + IS + R)]	17%	23%	40%	15%

Sources of survey error

As with all surveys, there are four notable areas of potential error applicable to this survey:

- **Sampling error** is the calculated statistical imprecision due to interviewing a random sample instead of the entire population. The margin of error provides an estimate of how much the results of the sample may differ due to chance when compared to what would have been found if the entire population was interviewed.
- **Coverage error:** The current survey may have excluded some businesses not yet listed in the directory used as the sample source. Coverage error also includes people who are not available at the time of attempted contact because they are on vacation or sick or on parental leave, along with a variety of other reasons that they are unreachable for the period the interviewing (with callbacks) takes place. In this survey, attempts were made to identify knowledgeable replacements within the organization whenever possible.
- **Measurement error** is error or bias that occurs when surveys do not measure what they are intended to measure. This type of error results from flaws in the instrument, question wording, translation issues, question order, interviewer error, timing, question response options, etc. This questionnaire was designed to minimize coverage error to the extent possible.
- **Non-response error** results from not being able to interview people who would be eligible to take the survey. Many businesses have voicemail and caller ID that prevent easy contact; other people simply do not want to respond to calls sometimes because the endless stream of telemarketing appeals makes them wary of answering. Non-response bias is the difference in responses of those people who complete the survey vs. those who refuse to do so for any reason. For example, a small number of provincial jurisdictions have a policy that departments should refer any enquiries about climate change to a central responsible agency (e.g., a Department of the Environment or of Natural Resources) and, based on this, some chose not to participate, despite attempts to convince them that answers pertaining to their individual department were relevant and desirable.

APPENDICES

- A) Qualitative findings
- B) Qualitative recruitment screener (English and French)
- C) In-depth interview discussion guide (English and French)
- D) Thank you letter to qualitative respondents (English and French)
- E) Survey questionnaire (English and French)
- F) Standard Industrial Classification Codes used for business survey sample
- G) Full data tables – provided under separate cover

QUALITATIVE FINDINGS

QUALITATIVE RESEARCH SUMMARY OF FINDINGS

Broad views of climate change

Businesses

To most participants, climate change means “global warming.” Mention was also made of melting ice caps and changing ecosystems (such as effects on animal and bird migrations). Some participants mentioned more variable/unpredictable weather and more severe weather events. Almost all business participants are convinced climate change is real, but a small number are unsure as to whether human activity is the cause.

Almost all business participants feel they are well-informed about climate change (more so than the average person), but are not experts. The weight of evidence is the greatest factor that has influenced participants’ thinking on the subject. However, it should be noted that the survey findings indicate business respondents are most likely to get their information on climate change from the media, which could be more subjective than scientific or government reports.

A number of local impacts on climate change are noted, including:

- more storms/unpredictable weather
- erratic growing season
- changing water levels

Some say they have seen no local impacts as yet. Most expect that impacts will become more apparent/intensify over the next 10-20 years.

Some say they can identify no particular risks or benefits for their business associated with climate change. Risks associated with climate change include:

- increased cost of doing business
- changes in wildlife movement patterns (hunting lodge example)
- industry might not survive/crop failures (maple syrup example)
- laws put into place to battle climate change might be too restrictive/force costs upward

Business benefits associated with climate change include:

- increase in business opportunities (sales)
- benefits to agriculture stemming from more places where crops will grow/more variety in types of plants supported
- less snow cover – easier for businesses that operate outside in winter

Most participants cannot separate “adaptation” from “mitigation (i.e., they give examples of mitigation when asked for examples of adaptation).

Governments

To most participants, climate change was defined in terms of ecosystem changes (new/invasive species in the local area, changes in migration patterns, warming of the planet, etc.) The following were also mentioned:

- changing weather patterns
- more severe weather events
- water temperature changes and sea level rise
- effects on permafrost

Most are convinced climate change is real, but some note that not all in their departments agree. Almost all have basic confidence in the science.

Government participants are split between those who feel they have above-average (but not expert) knowledge and those who describe their level of knowledge as “moderate”. Most who discuss the knowledge level of their clients/stakeholders say it varies, while some note their level of knowledge is high.

The weight of evidence is the greatest factor that has influenced participants’ thinking on the subject (more than any one incident or writer/commentator). The Intergovernmental Panel on Climate Change (IPCC) was noted as an influence, as was the “Villeneuve Report”.

A small number say they have seen no local impacts as yet. A number of local impacts on climate change are noted, including:

- beetle infestations of various types
- other ecosystem impacts (most notably new/invasive species, such as fish)
- more severe weather events (such as flooding)
- changing weather patterns (such as less snow) and their impacts on tourism and agriculture
- low water levels
- increases in smog and in vector-borne diseases

A small number can identify no particular risks or benefits to government associated with climate change. The biggest risk associated with climate change (mentioned by many municipalities) is the impact on infrastructure and the concomitant threat to human safety (having to rebuild or shore up bridges and roads against flooding, for example). Other risks associated with climate change include:

- impacts on disaster preparedness plans
- loss of wetlands
- impact on agriculture of less rain and smaller snow pack
- risks on native species from species invasion
- need for water rationing
- economic impact to tax base of loss of business (skiing in Mont-Tremblant, for example)

Benefits associated with climate change include:

- faster tree growth
- more growing days and opportunities to plant more varieties of crops
- opportunity for new fish species to be farmed

Most government participants think of adaptation as a process of being prepared to handle what comes, or “rolling with the punches,” without being more specific.

Other examples include:

- helping coastal communities deal with changes to coastline
- having an action or contingency plan
- specific actions like planting more shade trees

Most participants cannot separate “adaptation” from “mitigation” (i.e., they give examples of mitigation when asked for examples of adaptation). Those who can distinguish sometimes mention that, while mitigation is in progress, adaptation is in its formative stages or is a new concept for their jurisdiction.

Organizational response/planning

Businesses

Most participants do not have any formal mechanisms to include consideration of climate change in their decision-making (and smaller firms may have no formal decision-making processes at all). However, a number note that climate change is an important factor in their decisions, even if it is not formally considered.

Some business participants cite examples of adaptations they have made or changes they have made to mitigate their contribution to climate change; these vary according to the individual business. A couple of businesses note that they have changed their business model to take climate change into account.

Most participants have taken no formal action yet or are just beginning to contemplate changes. A couple note tests of new technology to help them adapt to climate change.

In the longer term, a couple of businesses cite potential expansion as their business takes advantage of opportunities to grow their customer base because of climate change (changing climate will drive customers to purchase their products/services).

More lobbying of the US may occur if climate change has cross-border impacts (trucking industry). Agriculture businesses may have to change product offering (no more maple syrup).

Governments

Most government participants do not have any formal mechanisms to include consideration of climate change in their decision-making. However, a number have created “initiatives” or “action plans” of various types. One participant noted that they have created a working group to strategize around the climate change issue. One mentioned that a strategic plan encompassing sustainability and climate change is in the works. Climate change is grouped with “greening” activities in some jurisdictions.

Some participants cited the creation of new “tools”. Other specific actions taken include:

- a policy change to give local groups more power to manage the watershed
- new policies for aquaculture development
- an “Innovations” program around climate change adaptation

A number of risks were cited as necessary to address in planning. They include:

- wetlands vulnerability
- reservoir capacity
- bridge/culvert standards, related to increased flooding
- other infrastructure improvements
- lack of knowledge

In the longer term, a number of participants noted that there will need to be more coordination among the various levels of government and other organizations working in the climate change field. Participants also noted that funding issues have to be addressed if local governments are to be able to adequately address climate change issues.

Needs for more case studies and more information were also cited. Getting information on what works, how to get citizens and councillors on board, and what the cost implications are (for both action and inaction) could be important information for municipalities to share.

Information and tools, credibility of sources, barriers

Businesses

Participants list a number of sources of information on climate change, including:

- popular (non-peer-reviewed) scientific journals like Scientific American, National Geographic, New Scientist
- Internet sources
- government sources
- peer-reviewed scientific literature/universities
- industry associations
- NGOs (Pollution Probe, for example)
- their own data (mentioned by business in the agricultural sector)
- media

Opinions varied regarding information gaps. Some participants feel they lack information (but don't always know what it is they lack!); others feel that the problem is that there is too much information and they cannot make sense of it.

A number note a need for better modeling and projections, with more specific information relevant to their business. Some note a particular need for information on how climate change will impact doing business in the North.

Most businesses do not have any tools for incorporating climate change into their decision-making or planning. The minority that do mention having tools mention the following:

- technology/software
- newsletters
- checklists

The few who comment on tools needed mention things like life-cycle analysis tools or modeling tools.

A number of barriers are cited to organizations incorporating climate change into their decision-making or planning processes, including:

- funding (most commonly cited)
- legislative confusion/conflicting regulations
- technology barriers (lack of technology to address climate change)
- lack of information specific to their needs
- information overload/difficulties interpreting raft of information on climate change

In terms of responsibility for minimizing climate change risks (or maximizing benefits), most feel that this responsibility is shared among government, business and individuals. However, most see the federal government as having a primary leadership role and a responsibility to set policy for all.

Governments

Participants list a number of sources of information on climate change, including (in roughly descending order):

- NRCan (mentioned by five participants)
- Environment Canada
- IPCC
- peer-reviewed scientific literature
- provincial government sources
- Pacific Climate Impacts Consortium
- “Villeneuve Report”
- NGOs (unspecified)
- Internet
- Pembina Institute
- media
- Northern Climate Exchange

Opinions varied regarding information gaps. Some participants feel they lack information, while others feel that the problem is that there is too much information. A number note a need for fine-grained data/analysis/modeling (to be more relevant to their region). Other needs noted include:

- more information that the general public can understand
- more information in aboriginal languages
- more local monitoring

Most participants do not have any tools for incorporating climate change into their decision-making or planning. However a number cite tools related to gathering and managing data (such as databases to handle observations and modeling/forecasting data). Other tools mentioned include:

- Web sites
- newsletters
- checklists

Those who comment on tools needed mention things like case studies or guides to “best practices,” as well as communications tools.

A number of barriers are cited to organizations incorporating climate changes into their decision-making or planning processes. Two major ones were (1) a tendency to adopt a “wait and see” attitude, rather than being proactive, and (2) opposition from “naysayers” on the climate change issue within their own organizations. Other barriers cited include:

- lack of information at the local level
- lack of information on costs and benefits in relation to addressing climate change
- lack of funding (cited as a barrier by many)
- competing priorities
- lack of capacity to address climate change issues
- slow-to-change community cultures
- political cycle (four years municipal) limits will to do long-term planning

In terms of responsibility for minimizing climate change risks (or maximizing benefits), most feel that this responsibility is shared among governments (or among government, business and individuals). However, most see the federal government as having a primary leadership role and a responsibility to set policy for all. A couple of municipalities mentioned that they have a special responsibility because it is at the municipal level that “the rubber hits the road”.

QUALITATIVE RECRUITMENT SCREENER
(ENGLISH AND FRENCH)

Natural Resources Canada
Climate Change Adaptation
Initial Contact Script – In-Depth Interviews

Respondent Information

Contact Name: _____ Title/Position: _____
Organization: _____ City/Province: _____
Phone: _____ Language: English French

Introduction

(ask for CONTACT NAME if available in sample file)

Good day, my name is _____ and I'm calling from Environics Research Group, a professional public opinion research firm. We have been retained by Natural Resources Canada to conduct research on how senior-level decision-makers in the public, private and non-profit sectors are considering the issue of a changing climate and how it may affect planning and operations over time.

IF NAME OF CONTACT NOT AVAILABLE: May I speak to someone in your department or organization who is responsible for policies and planning?

INTERVIEWER INSTRUCTION: THE APPROPRIATE RESPONDENT IS SOMEONE WHO IS A DECISION-MAKER RATHER THAN A TECHNICIAN I.E. SHOULD NOT BE SOMEONE RESPONSIBLE FOR EMISSIONS REDUCTION OR CLIMATE CHANGE MITIGATION UNLESS ALSO A SENIOR ORGANIZATIONAL PLANNER.

As a part of this study, we are conducting in-depth telephone interviews with:

IF GOVERNMENT CONTACT: representatives of governments at the provincial and municipal levels, as well as other key stakeholders. As a token of thanks for taking the time to speak with us, we will send you a copy of a Natural Resources Canada summary report entitled *Canada in a Changing Climate.*)

IF BUSINESS CONTACT: business leaders like yourself. As a token of thanks for taking the time to speak with us, we will send you a cheque for \$100 and a copy of a Natural Resources Canada summary report entitled *Canada in a Changing Climate.*

The interview will last about **30 minutes** depending on your responses, and the interviewer (a senior member of the research team) will call at a time convenient for you. If you wish, we can fax or e-mail you the list of questions in advance.

IF YES: What time would you like to have the interviewer call you? NOTE TIME BELOW.

On behalf of Environics and Natural Resources Canada, we would like to thank you very much for participating in this study.

Appointment made for interview Date and time: _____

*Ressources naturelles Canada
Adaptation aux changements climatiques*

Script pour le contact initial – Entrevues approfondies

Renseignements sur le/la répondant(e)

Nom du contact : _____ Titre/Poste : _____
Organisation : _____ Ville/Province : _____
Téléphone : _____ Langue : Anglais Français

Introduction

(Demandez le NOM DU CONTACT s'il est disponible dans le dossier échantillon)

Bonjour, mon nom est _____ et je vous appelle de la firme Environics Research Group, une firme professionnelle de recherche sur l'opinion publique. Ressources naturelles Canada a retenu nos services pour effectuer une recherche sur la façon dont les décideurs de niveau supérieur dans les secteurs public, privé et des organismes sans but lucratif envisagent la question du changement climatique et de quelle façon cette question pourrait avoir un effet sur la planification et les opérations à long terme.

SI LE NOM DU CONTACT EST DISPONIBLE : Puis-je parler à une personne de votre ministère ou de votre organisation responsable des politiques et de la planification?

INSTRUCTION À L'INTERVIEWEUR : LE/LA RÉPONDANT(E) APPROPRIÉ(E) EST UN/UNE DÉCISIONNAIRE PLUTÔT QU'UN TECHNICIEN OU UNE TECHNICIENNE C.À.D. NE DEVRAIT PAS ÊTRE UNE PERSONNE RESPONSABLE DE LA RÉDUCTION DES ÉMISSIONS OU DE L'ATTÉNUATION DU CHANGEMENT CLIMATIQUE À MOINS QU'IL NE S'AGISSE ÉGALEMENT D'UN PLANIFICATEUR PRINCIPAL.

Dans le cadre de cette étude, nous effectuons des entrevues téléphoniques approfondies avec :

S'IL S'AGIT D'UN CONTACT GOUVERNEMENTAL : des représentants du gouvernement aux niveaux provincial et municipal, de même qu'avec d'autres intervenants clés. En guise de remerciement pour avoir pris le temps de vous entretenir avec nous, nous vous ferons parvenir une copie d'un rapport sommaire de Ressources naturelles Canada intitulé *Vivre avec les changements climatiques au Canada*.

S'IL S'AGIT D'UN CONTACT DU MONDE DES AFFAIRES : des dirigeants d'entreprise tels que vous. En guise de remerciement pour avoir pris le temps de vous entretenir avec nous, nous vous ferons parvenir un chèque au montant de 100 \$ et une copie d'un rapport sommaire de Ressources naturelles Canada intitulé *Vivre avec les changements climatiques au Canada*.

L'entrevue durera environ **30 minutes** selon vos réponses et l'intervieweur (un membre chevronné de l'équipe de recherche) vous appellera à un moment qui vous convient. Si vous le désirez, nous pouvons vous acheminer à l'avance une liste des questions par télécopieur ou par courriel.

SI OUI : À quel moment aimeriez-vous que l'intervieweur vous appelle? NOTEZ L'HEURE CI-DESSOUS.

Au nom d'Environics et de Ressources naturelles Canada, j'aimerais vous remercier de votre participation à cette étude.

Rendez-vous pris pour l'entrevue Date et heure : _____

IN-DEPTH INTERVIEW DISCUSSION GUIDE
(ENGLISH AND FRENCH)

**Natural Resources Canada
Climate Change Adaptation**

Interview Protocol – Executive Interviews

Respondent Information

Contact Name: _____
Title/Position: _____
Organization: _____
City/Province: _____
Phone: _____

Language: English French

Introduction

- Introduce self and company
 - Confirm speaking to correct individual
 - Reference prior contact (recruitment)
 - Briefly explain purpose of research, which will focus on your how your organization is currently responding to the impacts of a changing climate, and what needs to be done further to address the risks and benefits resulting from it.
 - Cover housekeeping:
 - Interview format (qualitative interview)
 - Length (**c. 30 minutes depending on responses**)
 - Assurance of confidentiality (no responses will be linked to individuals by name/organization)
Your answers will be confidential. Your individual responses will not be provided to our client, but will be grouped with the responses of others so they cannot be traced back to you. Our report may use representative “quotes”, but these will not be attributed.
 - *I would like to tape our discussion, so I can concentrate on your responses and not be scrambling to take down notes. The tape will not be going to the client, it will only be used for my own analysis. Is this alright with you?*
 - If business contact, confirm incentives (\$100 cheque and NRCan summary report)
 - Any questions before we begin?
-

A. Respondent profile (warm-up)

I'd like to start by talking a bit about your organization and your role.

1. What are the general areas of responsibility of your organization?
2. Who are your clients or stakeholders?
3. What is your own role in policy making and planning decisions?

B. Broad views of climate change

Now I'd like to talk a bit about your views about climate change and about potential risks and benefits.

NOTE TO INTERVIEWER: IF RESPONDENT USES THE TERM "ADAPTATION" IN RELATION TO CLIMATE CHANGE, ASK (WHEN APPROPRIATE) WHAT THEY MEAN BY THAT TERM.

4. What do you think of when I mention **climate change**? What does this phrase mean to you? How would you describe your overall position or orientation to climate change? Do you believe it is happening in your area? Do you have confidence in the science? What makes you say that?
5. How would you rate your own knowledge level about climate change? Tell me what has influenced your thinking on this subject? How knowledgeable are your clients/stakeholders about climate change?

6. Have there been any impacts of a changing climate on your region or area of the country to date? What do you anticipate over the short term?
7. What risks associated with a changing climate are currently being faced by your organization? Are there any potential benefits you have identified?
- 8A. What about the future impacts of climate change on your organization, both positive and negative? In the short term? In the longer term?
- 8B. IF RESPONDENT HAS NOT USED THE TERM “ADAPTATION” PREVIOUSLY IN DISCUSSING CLIMATE CHANGE: What does the phrase “adaptation to climate change” mean to you?

16. What barriers, if any, exist to your organization incorporating climate change into your decision-making or planning processes (IF ALREADY DOING SO, to a greater extent)?

E. Final Comments

17. Where do you feel the responsibility lies for minimizing climate change risks or maximizing the opportunities? Federal government or other levels of government? Individuals? Business/industry? Others?
18. Do you have any final comments that you would like to make regarding responding to a changing climate, and what could be done to assist organizations like yours in making decisions and adaptations to reduce vulnerability?

This concludes the interview:

- Thank respondent for participation and reiterate confidentiality
- Mention that results of study will be made available later in the fall of 2009.
- Provide contact name at NRCan ONLY if specifically requested:
Carrie Spencer, Manager - Regional Climate Change Adaptation Programming/ /Gestionnaire - Programmation Régionale en adaptation au changement climatique (613) 992-0644
- IF BUSINESS INTERVIEW: arrange for incentive – verify mailing information.
- Ask if they would like a mailed copy of a report on the impacts of climate change in Canada. If so, request their mailing address.

<p>_____</p> <p>Contact name</p> <p>_____</p> <p>Telephone</p>	<p>_____</p> <p>_____</p> <p>_____</p> <p>Address</p>
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**Ressources naturelles Canada
Adaptation aux changements climatiques**

Protocole d'entrevue – Entrevues des gestionnaires

Renseignements sur le/la répondant(e)

Nom du contact : _____
Titre/Poste : _____
Organisation: _____
Ville/Province : _____
Téléphone : _____
Langue : Anglais Français

Introduction

- Présentez-vous ainsi que la firme
 - Confirmez que vous parlez à la bonne personne
 - Faites référence au contact antérieur (recrutement)
 - Expliquez brièvement l'objectif de la recherche qui mettra l'accent sur la façon dont votre organisation répond présentement aux impacts d'un climat changeant, et sur ce qui doit être fait en plus pour traiter les risques et les avantages qui en résultent.
 - Couvrez les questions administratives :
 - Format de l'entrevue (entrevue qualitative)
 - Durée (**environ 30 minutes selon les réponses**)
 - Assurance de confidentialité (aucune des réponses ne sera liée à un individu, ni par son nom, ni par celui de l'organisation)
Vos réponses demeureront confidentielles. Vos réponses individuelles ne seront pas présentées à notre client; elles seront regroupées avec les réponses des autres de façon à ne pas être retracées. Notre rapport utilisera peut-être des « citations » mais elles ne seront pas identifiées.
 - J'aimerais enregistrer notre discussion afin de me permettre de me concentrer sur vos réponses sans avoir à me presser pour prendre des notes. Le ruban n'ira pas au client; il ne sera utilisé que pour mon analyse. Cela vous convient-il?*
 - S'il s'agit d'un contact du monde des affaires, confirmez l'incitatif (un chèque au montant de 100 \$ et un rapport sommaire de RNCan).
 - Avez-vous des questions avant que nous commençons?
-

A. Profil du/de la répondant(e) (mise en train)

J'aimerais commencer en parlant un peu de votre organisation et de votre rôle.

1. Quels sont les domaines généraux de responsabilité de votre organisation?

2. Qui sont vos clients ou vos partenaires?

3. Quel est votre rôle dans le développement des politiques et des décisions de planification?

B. Aperçu général des changements climatiques

J'aimerais maintenant parler de vos points de vue sur les changements climatiques et sur d'éventuels risques et avantages.

NOTE À L'INTERVIEWEUR : SI LE/LA RÉPONDANT(E) UTILISE LE TERME « ADAPTATION » EN RELATION AUX CHANGEMENTS CLIMATIQUES, DEMANDEZ (AU MOMENT OPPORTUN) CE QU'IL OU ELLE ENTEND PAR CE TERME.

4. À quoi pensez-vous quand je mentionne **changements climatiques**? Que signifient ces mots pour vous? Comment décririez-vous votre position ou orientation d'ensemble envers les changements climatiques. Pensez-vous que cela se produit dans votre région? Avez-vous confiance en la science? Qu'est-ce qui vous fait dire cela?

5. Comment évalueriez-vous votre propre niveau de connaissance des changements climatiques? Dites-moi ce qui a influencé votre pensée sur ce sujet? À quel point vos clients/partenaires sont-ils informés sur les changements climatiques?

6. Y a-t-il eu des impacts des changements climatiques dans votre région du pays à date? Que prévoyez-vous à court terme?

7. Quels sont les risques associés aux changements climatiques auxquels votre organisation fait face présentement? Avez-vous identifié des avantages éventuels?

- 8A. Qu’en est-il des impacts futurs des changements climatiques sur votre organisation, à la fois positifs et négatifs? À court terme? À long terme?

- 8B. SI LE/LA RÉPONDANT(E) N’A PAS UTILISÉ LE TERME « ADAPTATION » AUPARAVANT EN DISCUTANT DES CHANGEMENTS CLIMATIQUES : Qu’est-ce que les mots « adaptation aux changements climatiques » signifient pour vous?

C. Réponse/planification organisationnelle

J’aimerais maintenant que nous parlions de si et de quelle façon votre organisation a pris en considération les changements climatiques lorsqu’elle prend des décisions soit présentement, soit en planifiant pour l’avenir.

9. Quel effet, s’il en existe, un climat changeant a-t-il eu sur le processus de prise de décisions de votre organisation jusqu’à maintenant? (SI ADÉQUAT : ou sur celui de vos clients/partenaires?)

10. Quelles actions votre organisation a-t-elle pensé prendre ou a-t-elle prise à date en réponse à ces changements? (SI ADÉQUAT : Qu’en est-il de vos clients? Au meilleur de votre connaissance, prennent-ils présentement en considération les changements climatiques? Si oui, comment? Si non, pourquoi pas?)

11. Avez-vous identifié des risques reliés aux changements climatiques que vous devrez éliminer dans votre planification? Que dire des possibilités? Existe-t-il des avantages reliés aux changements climatiques inclus dans vos plans? Voyez-vous des risques potentiels à NE PAS apporter une solution aux changements climatiques dans un avenir rapproché? Quels sont-ils?

12. Que devrez vous faire à long terme à l’égard des politiques ou des décisions de planification relatives aux changements climatiques?

D. Renseignements et outils, crédibilité des sources et obstacles

J’aimerais maintenant porter votre attention sur les renseignements et les outils actuels que votre organisation pourrait avoir développés ou de ceux qui pourraient lui manquer pour vous aider à mieux traiter de la question des changements climatiques dans vos opérations et votre planification.

13. Où avez-vous obtenu des renseignements sur les changements climatiques. Trouvez-vous que certaines sources d’information sont plus précises et fiables que d’autres? SI OUI : Quelles sont les plus fiables/précises? Pourquoi dites-vous cela? Quelles sont les moins fiables/précises? Pourquoi?
(NOTE À L’INTERVIEWEUR : L’ÉVALUATION DE LA PERCEPTION DE LA FIABILITÉ DES SOURCES N’EST PAS UNE PRIORITÉ – PASSEZ LA QUESTION SI LE TEMPS VOUS PRESSE)

14. Pensez-vous détenir suffisamment de renseignements pour apporter une solution adéquate aux défis et aux possibilités des changements climatiques dont nous avons parlé plus tôt? Si non, où se trouvent les carences de renseignements en ce moment?

15. Votre organisation a-t-elle développé des outils pour inclure les changements climatiques dans vos processus de prise de décisions ou de planification? Quelles sortes d’outils pourraient vous être utiles? (DEMANDEZ DES PRÉCISIONS : SI RÉPONDANT DU MONDE DES AFFAIRES : législation, règlement; TOUS LES RÉPONDANTS : communications, bases de données, listes de contrôle, études de cas, programmes)

16. Quels sont les obstacles, s’il en existe, à ce que votre organisation insère les changements climatiques à vos processus de prise de décisions ou de planification (SI ELLE LE FAIT DÉJÀ, davantage)?

E. Mot de la fin

17. Où pensez-vous que repose la responsabilité de minimiser les risques des changements climatiques ou d’en maximiser les possibilités? Le gouvernement fédéral ou autres niveaux de gouvernement? Les individus? Le monde des affaires/l’industrie? Autres?
18. Avez-vous des commentaires que vous aimeriez faire en ce qui a trait à la réponse aux changements climatiques et sur ce qui pourrait être accompli pour aider des organisations comme la vôtre à prendre des décisions et à procéder à des adaptations afin de réduire la vulnérabilité?

Voilà qui met fin à l’entrevue :

- Remerciez le/la répondant(e) de sa participation et réitérez l’énoncé de confidentialité
- Mentionnez que les résultats de l’étude seront rendus publics vers la fin de l’automne 2009
- Donnez le nom de la personne-ressource à RNCan si on vous le demande précisément :
Carrie Spencer, Manager - Regional Climate Change Adaptation Programming/ /Gestionnaire - Programmation Régionale en adaptation au changement climatique (613) 992-0644
- S’IL S’AGIT D’UNE ENTREVUE AVEC LE MONDE DES AFFAIRES : faites les arrangements pour l’incitatif – vérifiez l’adresse postale.
- Demandez s’ils désirent qu’on leur achemine par la poste une copie d’un rapport sur les impacts des changements climatiques au Canada. Si oui, demandez leur adresse postale.

<hr/> <p>Nom du contact</p> <hr/>	<hr/> <hr/> <hr/>
<hr/> <p>Téléphone</p> <hr/>	<hr/> <p>Adresse</p> <hr/>

THANK-YOU LETTER TO QUALITATIVE RESPONDENTS
(ENGLISH AND FRENCH)

Date

(CONTACT INFORMATION)

Dear (Name),

I am writing to thank you for participating in the research project that the Environics Research Group undertook on behalf of Natural Resources Canada. Despite your busy schedule you were able to find the time to give us your thoughts and opinions regarding your organization's response to a changing climate. Your assistance is very much appreciated. Results of this research will be available later in 2009.

Please find enclosed with this letter (IF BUSINESS RESPONDENT: a cheque for \$100.00 as a token of our appreciation for your participation, and) a copy of a Natural Resources Canada summary report entitled *From Impacts to Adaptation: Canada in a Changing Climate*. If you would like more information on the subject of climate change adaptation, please visit the web site at <http://adaptation.nrcan.gc.ca/>

Once again, I would like to thank you for your help on this interesting and important project.

Yours sincerely,

(NAME)

Senior Research Associate
Environics Research Group

Encl:

6463-02

Date

(Contact Information)

Cher (nom du contact),

Chère (nom du contact),

Je tiens à vous remercier bien sincèrement de votre participation au projet de recherche qu'Environics Research Group a entrepris au nom de Ressources naturelles Canada. Malgré votre horaire chargé, vous avez trouvé le temps de nous transmettre vos pensées et vos opinions sur la réponse de votre organisation aux changements climatiques. Votre aide est très appréciée. Les résultats de cette recherche seront disponibles un peu plus tard en 2009.

Avec cette lettre, vous trouverez (POUR LES RÉPONDANTS DU MONDE DES AFFAIRES) un chèque au montant de 100 \$ en guise de remerciement pour votre participation, et (POUR TOUS LES RÉPONDANTS) une copie d'un rapport sommaire de Ressources naturelles Canada intitulé *Vivre avec les changements climatiques au Canada*. Si vous désirez plus de renseignements sur le sujet de l'adaptation aux changements climatiques, visitez le site Web au : <http://adaptation.nrcan.gc.ca/>

Encore une fois, je vous remercie de votre aide dans ce projet tout aussi important qu'intéressant.

Sincèrement,

(NOM)

Assistante principale à la recherche
Environics Research Group

SURVEY QUESTIONNAIRE
(ENGLISH AND FRENCH)

**Natural Resources Canada
Climate Change Adaptation
FINAL QUESTIONNAIRE**

Introduction

BUSINESS SAMPLE: IF CONTACT NAME IS AVAILABLE IN SAMPLE FILE:

Good morning/afternoon. May I please speak with CONTACT NAME?

IF PERSON IS NOT AVAILABLE, ARRANGE FOR CALL-BACK
IF PERSON IS NOT AVAILABLE OVER INTERVIEW PERIOD, ASK FOR ANOTHER DECISION-
MAKER IN THE SAME AREA (I.E., WITH RESPONSIBILITY FOR POLICIES AND PLANNING).

BUSINESS SAMPLE: IF CONTACT NAME IS NOT AVAILABLE IN SAMPLE FILE:

Good morning/afternoon. My name is _____ and I am calling from Environics Research Group on behalf of Natural Resources Canada. May I speak to someone in your group or organization who is responsible for policy-making and planning?

INTERVIEWER INSTRUCTION: THE APPROPRIATE RESPONDENT IS SOMEONE WHO IS A DECISION-MAKER (RATHER THAN A TECHNICIAN).

MUNICIPAL SAMPLE:

Good morning/afternoon. My name is _____ and I am calling from Environics Research Group on behalf of Natural Resources Canada. I would like to speak to someone in the administrator's office who is responsible for policy-making and planning for your municipality. Can you please direct me to the appropriate person?

INTERVIEWER INSTRUCTION: THE APPROPRIATE RESPONDENT IS SOMEONE WHO IS A DECISION-MAKER (RATHER THAN A TECHNICIAN).

PROVINCIAL SAMPLE:

Good morning/afternoon. My name is _____ and I am calling from Environics Research Group on behalf of Natural Resources Canada. I would like to speak to someone who is responsible for policy-making and planning for your department and would appreciate your help in locating the right person.

INTERVIEWER INSTRUCTION: THE APPROPRIATE RESPONDENT IS SOMEONE WHO IS A DECISION-MAKER (RATHER THAN A TECHNICIAN).

IF ASKED WHAT THE CALL IS ABOUT:

We have been retained by Natural Resources Canada to conduct research on how senior-level decision-makers in the public and private sectors are considering the issue of a changing climate and how it may affect planning and operations over time.

WHEN RESPONDENT IS REACHED REINTRODUCE:

My name is _____ and I am calling from Environics Research Group, a professional research firm. We have been retained by Natural Resources Canada to conduct research on how senior-level decision-makers in the public and private sectors are considering the issue of a changing climate and how it may affect planning and operations over time.

This survey is being directed to people who have responsibility for policies and planning within their organization.

A. Is this part of your current role?

- 01 - Yes
- 02 - No
- VOLUNTEERED
- 99 - DK/NA

IF NO/DK, ASK:

B. Can I please speak to the person in your organization with overall responsibility for policies and planning?

- 01 - Yes (REINTRODUCE WHEN CORRECT PERSON ON THE LINE)
- 02 - Person unavailable (ARRANGE CALLBACK)

ENSURE THIS TEXT IS READ WHEN CORRECT PERSON IS ON THE LINE:

I want to assure you that all of information collected, used and/or disclosed will be used for research purposes only, will not deal with classified or confidential information, and will be administered as per the requirements of the Privacy Act. Your name or position will not be linked to the results. This survey is registered with the national survey registration system

IF ASKED: This interview will take about 15 minutes. – IF NO TIME NOW, MAKE APPOINTMENT DURING SURVEY FIELD PERIOD.

IF ASKED WHERE GOT NAME/NUMBER:

BUSINESS SAMPLE: We picked your organization at random from a list of organizations in specific industry groups.

PROVINCIAL GOVERNMENT SAMPLE: We identified provincial government departments responsible for specific portfolios that would be likely to be involved in decisions involving climate change issues.

MUNICIPAL SAMPLE: We picked your municipality at random from a list of municipalities across Canada.

IF ASKED: The contact person at Natural Resources Canada in charge of the project is Mary-Ann Wilson. Her telephone number is (613) 992-0644 and her e-mail address is marwilso@nrcan-rncan.gc.ca

IF ASKED FOR INFO TO VERIFY LEGITIMACY OF SURVEY: The national survey registration system has been created by the Canadian survey research industry to allow the public to verify that a survey is legitimate, get information about the survey industry or register a complaint. The registration systems toll-free telephone number is 1-800-554-9996.

IF ASKED ACCESS TO RESULTS: The results of this survey will be available on the Library and Archives Canada web site in the spring of 2010.

IF ASKED WHAT GOVERNMENT WILL DO WITH THE INFORMATION COLLECTED: Natural Resources Canada will use this information to design communications and programs that will assist organizations like yours in meeting the challenges of a changing climate.

IF RESPONDENT DOES NOT WANT TO PARTICIPATE, ASK C.
OTHERWISE, GO TO TEXT BEFORE Q1

C. That's okay, this survey is voluntary. Could I just ask you *why* you are not interested in participating?
DO NOT READ – CODE ALL THAT APPLY

- 01 - Not considering climate change at organizational level
- 02 - Climate change does not have an impact on my organization
- 03 - Climate change is the responsibility of head office/another office/another department
- 04 - Do not believe climate change is happening
- 98 - Other reason (SPECIFY: _____)
- VOLUNTEERED
- 99 - DK/NA

IF NOT CONSIDERING CLIMATE CHANGE AT THIS POINT OR DOES NOT FEEL CLIMATE CHANGE IS IMPACTING ORGANIZATION (CODE 01 AND/OR 02), READ:

D. This survey is still relevant to you even if your organization is not currently addressing climate change in a formal way, as we are also interested in your own views about climate change and how you think a changing climate may impact your organization in the future. Would you be willing to continue with the survey?

- 01 - Yes
- 02 - No (THANK RESPONDENT AND TERMINATE INTERVIEW)

IF GOVERNMENT AND CLIMATE CHANGE IS RESPONSIBILITY OF ANOTHER DEPARTMENT (CODE 03), READ

E. This survey is still relevant to you even if your department does not have primary responsibility for addressing climate change in a formal way, as we are also interested in your own views about how a changing climate may impact your department in the future. Would you be willing to continue with the survey?

- 01 - Yes
- 02 - No (THANK RESPONDENT AND TERMINATE INTERVIEW)

TO ALL RESPONDENTS: In this survey we are interested in your personal perspective, not the official position of your organization.

A. Organization Profile

I'd like to start by asking some general questions about your department, organization or group.

1. IF JOB TITLE IN SAMPLE FILE: Can I confirm that your job title is [TITLE]?
IF NO JOB TITLE IN SAMPLE FILE: What is your job title?

98 - SPECIFY _____

2. Who would you say are your main clients or stakeholders?
DO NOT READ - CODE ALL THAT APPLY

- 01 – General public/citizens
- 02 – Clients/customers
- 03 – City council
- 04 – Board of directors
- 05 – Senior ministry officials/Minister
- 98 – SPECIFY _____
- VOLUNTEERED
- 99 - DK/NA

ASK/CODE FOR MUNICIPAL SAMPLE ONLY:

3a. What is the current population of your municipality?

ASK/CODE FOR BUSINESS SAMPLE ONLY:

3b. How many employees work at your location?

ASK FOR BUSINESS SAMPLE ONLY:

4. For classification purposes only, what is the approximate ANNUAL operating budget for your operating unit, group or division?

IF A SMALL BUSINESS CAN COLLECT FOR ENTIRE ORGANIZATION

- 01 - Less than \$10,000
- 02 - \$10,000 to under \$50,000
- 03 - \$50,000 to under \$100,000
- 04 - \$100,000 to under \$500,000
- 05 - \$500,000 to under \$1 million
- 06 - \$1 million to under \$5 million
- 07 - Over \$5 million
- VOLUNTEERED
- 98 - REFUSED
- 99 - DK

B. Awareness/Opinions Regarding Climate Change

Now I'd like to talk about your views on a changing climate.

5. What do you first think of when you hear the term "climate change"? What's the next thing that comes to mind related to climate change?
DO NOT READ - CODE TWO RESPONSES ONLY - RECORD FIRST MENTION SEPARATELY

- 01 – Warmer temperatures/warmer weather
- 02 – Colder temperatures/colder weather
- 03 – Weather more unpredictable
- 04 – Weather events more extreme
- 05 – More storms
- 06 – Stronger winds
- 07 – More air pollution/lower air quality
- 08 – Water levels are lower
- 09 – Water levels are higher
- 10 – More flooding/more severe flooding
- 11 – Less ice/snow
- 12 – Less rain/drought
- 13 – More ice/snow
- 14 – More rain
- 15 – Affecting tundra/permafrost
- 16 – More forest fires
- 17 – Melting ice caps
- 98 – Other (SPECIFY _____)
- 99 – DK/NA

6. Which of the following best describes your OWN personal position on climate change?

READ CODES 1,2,3 IN REVERSE ORDER TO HALF OF SAMPLE

01 - Climate change is happening right now

02 - Climate change is not happening right now, but it will happen in the foreseeable future

03 - Climate change is not happening right now and will not happen in the foreseeable future

VOLUNTEERED

98 - Other (SPECIFY: _____)

99 - DK/NA

8a. Does your organization have a position on the climate change issue?

01 - Yes

02 - No

VOLUNTEERED

99 - DK/NA

IF YES TO Q8A ASK Q8B

8b. Is your organization's position based on the belief that...?

READ RESPONSES 1-2-3 IN SAME ORDER AS IN Q6

01 - Climate change is happening right now

02 - Climate change is not happening right now, but it will happen in the foreseeable future

03 - Climate change is not happening right now and will not happen in the foreseeable future

VOLUNTEERED

98 - Other (SPECIFY: _____)

99 - DK/NA

ASK Q8c TO PROVINCIAL GOVERNMENT SAMPLE ONLY:

8c. Is addressing climate change issues a part of your organization's current mandate?

01 - Yes

02 - No

VOLUNTEERED

99 - DK/NA

9. What about your clients or stakeholders? Would you say that they are generally very concerned, somewhat concerned, not very concerned or not at all concerned about climate change?

01 - Very concerned

02 - Somewhat concerned

03 - Not very concerned

04 - Not at all concerned

VOLUNTEERED

99 - DK/NA

IF BELIEVES CLIMATE CHANGE IS HAPPENING OR WILL HAPPEN IN THE FUTURE (CODE 01 OR 02 AT Q6), ASK Q10-15:

10. Thinking about (IF GOVERNMENT: your region/IF BUSINESS: the regions of Canada in which your organization operates), what do you think will be the most serious impact of a changing climate over the next 20 years? What do you think will be the next-most serious impact? CODE TWO RESPONSES ONLY - RECORD FIRST MENTION SEPARATELY

DO NOT READ ANSWER CODES

- 01 - Human health impacts
 - 02 - Droughts
 - 03 - Impacts on water supply
 - 04 - Changing sea/lake levels/coastal erosion
 - 05 - Flooding
 - 06 - More frequent or more severe weather events/storms
 - 07 - Other environmental impacts (melting permafrost, forest fires, heat waves, extreme cold)
 - 08 - Effects on wildlife (changing migration patterns, species loss, invasive species, loss of habitat)
 - 09 - Effects on agriculture (growing season changes, crop failures)
 - 10 - Effects on tourism related to poorer weather
 - 11 - Economic effects (loss of productivity, negative trade impacts, increased trade opportunities)
- VOLUNTEERED
- 97 - NO ONE MOST SERIOUS IMPACT
 - 98 - Other (SPECIFY: _____)
 - 99 - DK/NA

11. How MUCH of an impact will a changing climate will have on (IF GOVERNMENT: your region/IF BUSINESS: the regions of Canada in which your organization operates), in the next 20 years? Would you say it will have a...? READ IN SEQUENCE

- 01 – Major impact
 - 02 – Moderate impact
 - 03 – Minor impact
 - 04 – No impact at all
- VOLUNTEERED
- 05 – Depends
 - 99 – DK/NA

ASK IF BUSINESS SAMPLE OR IF PROVINCIAL GOVERNMENT SAMPLE NOT TASKED WITH ADDRESSING CLIMATE CHANGE (Q8c = 02,99)

12. Do you believe that a changing climate will have any impact on YOUR ORGANIZATION?

- 01 - Yes
 - 02 - No
- VOLUNTEERED
- 99 - DK/NA

IF YES TO Q12, ASK Q13-14:

13. Is this impact already being felt, or will it occur later? IF LATER, ASK: How many years from now do you believe your organization will start to see impacts from a changing climate?

- 01 - Impact is already being felt

- 02 - Impact will be felt later (SPECIFY NUMBER OF YEARS _____)
- VOLUNTEERED
- 03 - Impact will be felt later (NUMBER OF YEARS NOT SPECIFIED)
- 99 - DK/NA

14. Overall, do you believe that a changing climate will have a (mainly negative or mainly positive/mainly positive or mainly negative) impact on your organization?

ALTERNATE SAYING NEGATIVE OR POSITIVE FIRST

- 01 - Mainly positive impact
- 02 - Mainly negative impact
- VOLUNTEERED
- 03 - Both positive and negative impacts
- 04 - Neutral or no impact
- 99 - DK/NA

IF NEUTRAL/NO IMPACT AT Q14 (CODE 04), SKIP TO Q16

ROTATE Q15a AND Q15b:

15a. What, specifically, are some of the positive impacts or opportunities for your organization resulting from a changing climate? PROBE: Any others?

RECORD VERBATIM

- VOLUNTEERED
- 99 - DK/NA

15b. What, specifically, are some of the negative impacts or risks for your organization resulting from a changing climate? PROBE: Any others?

RECORD VERBATIM

- VOLUNTEERED
- 99 - DK/NA

ASK IF BELIEVES CLIMATE CHANGE IS HAPPENING/WILL HAPPEN (CODE 01 OR 02 AT Q6):

16. Considering all the challenges that your organization faces now and will face in the near future, which of the following best describes how you PERSONALLY feel? READ

- 01 - Climate change is one of the most significant challenges your organization faces
- 02 - Climate change is a significant challenge, but not as serious as others your organization faces
- 03 - Climate change does not present a significant challenge to your organization
- VOLUNTEERED
- 04 - Climate change is not happening
- 99 - DK/NA

IF ORGANIZATION DOES NOT BELIEVE CLIMATE CHANGE IS HAPPENING OR MAY HAPPEN (CODE 03 AT Q8b), SKIP TO Q23

17. Regardless of your PERSONAL views, which of the following best describes your ORGANIZATION'S view regarding climate change? Is it that... READ

- 01 - Climate change is one of the most significant challenges your organization faces
- 02 - Climate change is a significant challenge, but not as serious as others your organization faces
- 03 - Climate change does not present a significant challenge to your organization
- VOLUNTEERED
- 04 - Climate change is not happening
- 99 - DK/NA

IF CODE 04 AT Q17, SKIP TO Q23

IF PROVINCIAL GOVERNMENT ORGANIZATION TASKED WITH ADDRESSING CLIMATE CHANGE, SKIP TO Q19a

18. Organizations can respond to a changing climate in a number of ways. One type of response is to reduce the organization's *contribution* to climate change (for example, by reducing greenhouse gas emissions or dependence on fossil fuels). This type of response is called MITIGATION. Is your organization currently doing any of the following to reduce its contribution to climate change?

- a. Conserving fuel by driving less or using more fuel efficient vehicles
- b. Conserving electricity or reducing energy use
- c. Using alternative forms of energy such as wind or solar power
- d. Anything else to mitigate climate change (SPECIFY)

- 01 - Yes
- 02 - No
- VOLUNTEERED
- 99 - DK/NA

19a. What does the phrase "climate change adaptation" mean to you? PROBE: Anything else?

RECORD VERBATIM

- VOLUNTEERED
- 99 - DK/NA

19b. Organizations can adapt to a changing climate in a number of ways. They can take action to reduce the **negative** impacts of climate change or try to take advantage of any **opportunities** a changing climate may offer.

BUSINESS/MUNICIPAL SAMPLE OR PROVINCIAL GOVERNMENT ORGANIZATION NOT TASKED WITH ADDRESSING CLIMATE CHANGE (Q8c = 02,99): Is your organization currently doing anything to adapt to the risks and opportunities resulting from a changing climate?

PROVINCIAL GOVERNMENT ORGANIZATION TASKED WITH ADDRESSING CLIMATE CHANGE (Q8c = 01): Is your organization currently doing anything to assist your stakeholders in adapting to the risks and opportunities resulting from a changing climate?

- 01 - Yes
- 02 - No
- VOLUNTEERED
- 99 - DK/NA

IF ENGAGED IN ADAPTATION ACTIVITIES (CODE 01 AT Q19b), ASK Q19c:

19c. BUSINESS/MUNICIPAL SAMPLE OR PROVINCIAL GOVERNMENT ORGANIZATION NOT TASKED WITH ADDRESSING CLIMATE CHANGE (Q8c = 02,99): What, specifically, is your organization currently doing to ADAPT to a changing climate? PROBE: Anything else?

PROVINCIAL GOVERNMENT ORGANIZATION TASKED WITH ADDRESSING CLIMATE CHANGE (Q8c = 01): What, specifically, is your organization currently doing to assist your stakeholders (IF NECESSARY, READ: in adapting to the risks and opportunities resulting from a changing climate)?

RECORD VERBATIM

VOLUNTEERED
99 - DK/NA

21. BUSINESS/MUNICIPAL SAMPLE OR PROVINCIAL GOVERNMENT ORGANIZATION NOT TASKED WITH ADDRESSING CLIMATE CHANGE (Q8c = 02,99): Does your organization have any specific plans for FUTURE actions designed to ADAPT to the risks and opportunities provided by a changing climate?

PROVINCIAL GOVERNMENT ORGANIZATION TASKED WITH ADDRESSING CLIMATE CHANGE (Q8c = 01): Does your organization have any specific plans for FUTURE actions designed to help it ADAPT to the risks and opportunities provided by a changing climate?

01 - Yes
02 - No
VOLUNTEERED
99 - DK/NA

IF PLANNING ADAPTATION ACTIVITIES (CODE 01 AT Q21), ASK Q22:

22. What actions are specifically planned? PROBE: Anything else?

RECORD VERBATIM

VOLUNTEERED
99 - DK/NA

C. Impacts of Climate Change on Organizational Decision-making

ASK ALL:

23. (PROVINCIAL GOVERNMENT ORGANIZATION TASKED WITH ADDRESSING CLIMATE CHANGE [Q8c=1]: Other than in the formulation of policy designed to help your stakeholders address climate change,) Does your organization or department consider a changing climate in its decision-making and planning?

01 - Yes
02 - No
VOLUNTEERED
99 - DK/NA

IF 02 OR 99 (NO OR DON'T KNOW) AT Q23, SKIP TO SECTION D

24. For how long has your organization been considering a changing climate in its decision-making?

RECORD NUMBER OF YEARS

VOLUNTEERED

01 – Less than one year

99 - DK/NA

26. In which of the following ways does your organization take climate change into account in its planning or decision-making?

READ - MULTIPLE RESPONSES ALLOWED - PROBE: Any other ways?

01 - In long-term planning and/or policy decisions

02 - In current operational decisions

03 - In risk management planning

04 - In the design of infrastructure or facilities

VOLUNTEERED

98 - In other ways (SPECIFY: _____)

99 - DK/NA

D. Barriers to Incorporating Climate Change Considerations in Decision-making

IF Q6 = 03 AND Q8B = 03 AND Q23 = 02, SKIP TO FINAL COMMENTS

29. What are your organization's sources of information regarding climate change?

PROBE: Any other sources? DO NOT READ

01 – Scientific journals/magazines

02 – Internet sources (SPECIFY)

03 – Government sources (SPECIFY)

04 – Internal/our own information/data

05 – Academic journals/universities

06 – Industry associations/conferences

07 – Not-for-profit organizations (e.g. Pollution Probe)

08 – The media

98 – Other (SPECIFY: _____)

VOLUNTEERED

97 - NO INFORMATION AT ORGANIZATIONAL LEVEL

99 – DK/NA

33. To what extent does each of the following represent a barrier to your organization better taking climate change into account in its decision-making? For each one I read, please tell me how much of a barrier it represents to your organization.

IF GOVERNMENT ASK A, B, C, E, F, G, I

IF BUSINESS ASK A, B, D, F, G, H, I

a. Lack of expertise to address the impacts of a changing climate

b. The COST of adapting to the impacts of a changing climate

c. The complexity of policy change processes

d. Making a business case for adapting to the impacts of a changing climate

e. The need to have other departments/organizations act first, before we can act

f. Lack of information about climate change and its impacts

g. Not knowing the benefits of adapting to a changing climate

- h. Lack of capacity
- j. Competing organizational priorities

01 - Significant barrier
02 - Minor barrier
03 - Not a barrier
VOLUNTEERED
99 - DK/NA

34. What other barriers or challenges, if any, limit your organization's ability to make decisions about adapting to climate change?

RECORD VERBATIM

VOLUNTEERED
99 - DK/NA

IF LACK OF INFORMATION IS A SIGNIFICANT BARRIER (Q33f = 1), ASK Q35:

35. Specifically, what types of information do you lack?
DO NOT READ - MULTIPLE RESPONSES ALLOWED - PROBE: Any other types?

01 - Information on impacts specific to region
02 - Projections of future impacts/forecasts
03 - More reliable information
04 - Relevant case studies/examples of what other organizations like ours are doing
05 - Best practices information
VOLUNTEERED
98 - Other (SPECIFY: _____)
99 - DK/NA

36. Are there any decision-making tools or technical resources that would assist your organization in addressing the impacts of climate change? PROBE: Any other types?

RECORD VERBATIM

VOLUNTEERED
96 - NONE
97 - DO NOT HAVE/USE SUCH TOOLS OR RESOURCES
99 - DK/NA

POST-CODES:

1. Methods
2. Models
3. Regulations
4. Codes or standards
5. Data

37. Do you have any final comments about what would help organizations such as yours to face the challenges associated with a changing climate?

RECORD VERBATIM

VOLUNTEERED
99 - DK/NA

FINAL COMMENTS

This completes the survey. On behalf of Natural Resources Canada, thank you very much for your time and cooperation. If you would like more information about ways your organization can adapt to a changing climate, you can visit the web site at <http://adaptation.nrcan.gc.ca/>

IF RESPONDENT ASKS FOR INFORMATION ABOUT THIS SURVEY: You can get more information about this research by contacting Mary-Ann Wilson at Natural Resources Canada. Her telephone number is (613) 992-0644 and her e-mail address is marwilso@nrcan-rncan.gc.ca

RECORD:

A. Gender:

- 01 - Male
- 02 - Female

B. Language of interview

- 01 - English
- 02 - French

C. Province/Territory

- 01 - Northwest Territories
- 02 - Yukon
- 03 - Nunavut
- 04 - British Columbia
- 05 - Alberta
- 06 - Saskatchewan
- 07 - Manitoba
- 08 - Ontario
- 09 - Quebec
- 10 - New Brunswick
- 11 - Nova Scotia
- 12 - Prince Edward Island
- 13 - Newfoundland and Labrador

D. Type of interview

- 01 - Provincial government
- 02 - Municipal government
- 03 - Business

Ressources naturelles Canada
Adaptation aux changements climatiques
QUESTIONNAIRE DÉFINITIF

Introduction

**ÉCHANTILLON D'ENTREPRISES : SI LE NOM DU CONTACT EST DISPONIBLE
DANS LE FICHIER DES ÉCHANTILLONS :**

Bonjour. Puis-je parler à NOM DU CONTACT?

SI LA PERSONNE N'EST PAS DISPONIBLE, PRENDRE DES ARRANGEMENTS POUR UN RAPPEL.
SI LA PERSONNE N'EST PAS DISPONIBLE POUR LA PÉRIODE D'ENTREVUE, DEMANDER À
PARLER À UN(E) AUTRE DÉCISIONNAIRE DANS LE MÊME DOMAINE (C.-À-D., AYANT UNE
RESPONSABILITÉ POUR LES POLITIQUES ET LA PLANIFICATION).

**ÉCHANTILLON D'ENTREPRISES : SI LE NOM DU CONTACT N'EST PAS
DISPONIBLE DANS LE FICHIER DES ÉCHANTILLONS :**

Bonjour. Mon nom est _____ et je vous appelle au nom d'Environics Research Group pour
le compte de Ressources naturelles Canada. Puis-je parler à une personne de votre groupe ou de votre
organisation responsable de l'élaboration des politiques et de la planification.

INSTRUCTION AUX INTERVIEWEURS : LE/LA RÉPONDANT(E) APPROPRIÉ(E) EST UN/UNE
DÉCISIONNAIRE PLUTÔT QU'UN/UNE TECHNICIEN(NE).

ÉCHANTILLON MUNICIPAL :

Bonjour. Mon nom est _____ et je vous appelle au nom d'Environics Research Group pour le
compte de Ressources naturelles Canada. J'aimerais parler à une personne du bureau de
l'administrateur qui est responsable de l'élaboration des politiques et de la planification pour votre
municipalité. Pourriez-vous me diriger vers la personne appropriée?

INSTRUCTION AUX INTERVIEWEURS : LE/LA RÉPONDANT(E) APPROPRIÉ(E) EST UN/UNE
DÉCISIONNAIRE PLUTÔT QU'UN/UNE TECHNICIEN(NE).

ÉCHANTILLON PROVINCIAL :

Bonjour. Mon nom est _____ et je vous appelle au nom d'Environics Research Group pour le
compte de Ressources naturelles Canada. J'aimerais parler à une personne responsable de l'élaboration
des politiques et de la planification pour votre ministère et j'apprécierais votre aide pour repérer la
personne appropriée.

INSTRUCTION AUX INTERVIEWEURS : LE/LA RÉPONDANT(E) APPROPRIÉ(E) EST UN/UNE
DÉCISIONNAIRE PLUTÔT QU'UN/UNE TECHNICIEN(NE).

SI ON VOUS DEMANDE LE BUT DE VOTRE APPEL :

Ressources naturelles Canada a retenu nos services pour effectuer une recherche sur la façon dont les
décisionnaires supérieurs perçoivent la question des changements climatiques et comment ils pourraient
avoir une incidence sur la planification et les opérations au fil du temps.

UNE FOIS LE/LA RÉPONDANT(E) ATTEINT(E), SE PRÉSENTER À NOUVEAU :

Mon nom est _____ et je vous appelle au nom d'Environics Research Group, une firme professionnelle de recherche. Ressources naturelles Canada a retenu nos services pour effectuer une recherche sur la façon dont les décideurs supérieurs perçoivent la question des changements climatiques et comment ils pourraient avoir une incidence sur la planification et les opérations au fil du temps.

Ce sondage s'adresse aux personnes qui ont une responsabilité pour l'élaboration des politiques et la planification au sein de votre organisation.

A. Ceci fait-il partie de vos fonctions actuelles?

- 01 - Oui
- 02 - Non
- NON SUGGÉRÉ
- 99 - NSP/PR

SI NON/NSP, DEMANDER :

B. Puis-je parler à la personne qui a la responsabilité pour l'élaboration des politiques et la planification dans votre organisation?

- 01 - Oui (SE PRÉSENTER À NOUVEAU LORSQUE LA BONNE PERSONNE EST EN LIGNE)
- 02 – Personne non disponible (PRENDRE DES ARRANGEMENTS POUR UN RAPPEL)

S'ASSURER DE LIRE CE TEXTE LORSQUE LA BONNE PERSONNE EST EN LIGNE :

Je tiens à vous assurer que tous les renseignements recueillis, utilisés et/ou dévoilés ne serviront qu'à des fins de recherche; nous ne traiterons pas des renseignements classifiés ou confidentiels et ils seront administrés selon les exigences de la Loi sur la protection des renseignements personnels. Ni votre nom ni votre poste ne seront reliés aux résultats. Ce sondage est inscrit dans le système national d'inscription des sondages.

SI ON VOUS LE DEMANDE : Cette entrevue durera environ 15 minutes. – SI LA PERSONNE N'A PAS LE TEMPS MAINTENANT, PRENDRE RENDEZ-VOUS DURANT LA PÉRIODE DE DURÉE DU SONDRAGE.

SI ON VOUS DEMANDE OÙ VOUS AVEZ OBTENU LE NOM/NUMÉRO :

ÉCHANTILLON D'ENTREPRISES : Nous avons choisi votre organisation au hasard parmi une liste d'organisations dans des groupes particuliers d'industries.

ÉCHANTILLON DE GOUVERNEMENTS PROVINCIAUX : Nous avons identifié des ministères des gouvernements provinciaux responsables de portefeuilles particuliers susceptibles d'intervenir dans des décisions touchant les questions des changements climatiques.

ÉCHANTILLON MUNICIPAL : Nous avons choisi votre municipalité au hasard parmi une liste de municipalités à travers le Canada.

SI ON VOUS LE DEMANDE : La personne ressource à Ressources naturelles Canada responsable du projet est Mary-Ann Wilson. Son numéro de téléphone est le (613) 992-0644 et son adresse de courriel est marwilso@nrcan-rncan.gc.ca

SI ON VOUS DEMANDE DE L'INFORMATION POUR VÉRIFIER LA LÉGITIMITÉ DU SONDRAGE : Le système d'inscription a été mis sur pied par l'industrie canadienne de recherche par sondages, afin de permettre au public de vérifier la légitimité d'un sondage, d'obtenir plus de renseignements au sujet de l'industrie des sondages ou de déposer une plainte. Le numéro sans frais du système d'enregistrement est le suivant : 1-800-554-9996.

SI ON VOUS DEMANDE L'ACCÈS AUX RÉSULTATS : Les résultats de ce sondage seront disponibles sur le site Web de la Bibliothèque et d'Archives Canada au printemps de 2010.

SI ON VOUS DEMANDE CE QUE LE GOUVERNEMENT FERA AVEC LES RENSEIGNEMENTS RECUEILLIS : Ressources naturelles Canada utilisera ces renseignements pour concevoir des communications et des programmes qui aideront les organisations comme la vôtre à faire face aux défis des changements climatiques.

SI LE/LA RÉPONDANT(E) NE VEUT PAS PARTICIPER, DEMANDER C. AUTREMENT, ALLER AU TEXTE AVANT Q1

C. C'est très bien, ce sondage est volontaire. Puis-je seulement vous demander pourquoi vous n'êtes pas intéressé(e) à participer?
NE PAS LIRE – CODER TOUT CE QUI S'APPLIQUE

- 01 – N'envisage pas les changements climatiques au niveau organisationnel
- 02 – Les changements climatiques n'ont pas d'impact sur mon organisation
- 03 – Les changements climatiques sont la responsabilité du siège social/d'un autre bureau/d'un autre ministère
- 04 – Ne croit pas que les changements climatiques se produisent
- 98 – Autre raison (PRÉCISER : _____)
- NON SUGGÉRÉ
- 99 - NSP/PR

SI ON N'ENVISAGE PAS LES CHANGEMENTS CLIMATIQUES PRÉSENTEMENT OU SI ON NE TROUVE PAS QUE LES CHANGEMENTS CLIMATIQUES AFFECTENT L'ORGANISATION (CODE 01 ET/OU 02), LIRE :

D. Ce sondage vous concerne également même si votre organisation ne traite pas présentement les changements climatiques d'une façon formelle; comme nous sommes également intéressés à votre point de vue personnel sur les changements climatiques et sur la façon dont vous pensez que les changements climatiques pourraient avoir une incidence sur votre organisation dans l'avenir. Seriez-vous prêt(e) à poursuivre ce sondage?

- 01 - Oui
- 02 - Non (REMERCIER LE/LA RÉPONDANT(E) ET TERMINER L'ENTREVUE)

S'IL S'AGIT D'UN GOUVERNEMENT ET QUE LES CHANGEMENTS CLIMATIQUES SONT LA RESPONSABILITÉ D'UN AUTRE MINISTÈRE (CODE 03), LIRE

E. Ce sondage vous concerne également même si votre ministère ne traite pas présentement les changements climatiques d'une façon formelle; comme nous sommes également intéressés à votre point de vue personnel sur les changements climatiques et sur la façon dont vous pensez que les changements climatiques pourraient avoir une incidence sur votre ministère dans l'avenir. Seriez-vous prêt(e) à poursuivre ce sondage?

- 01 - Oui
- 02 - Non (REMERCIER LE/LA RÉPONDANT(E) ET TERMINER L'ENTREVUE)

À TOUS LES RÉPONDANT(E)S : Dans ce sondage, nous sommes intéressés à votre point de vue personnel, non pas à la position officielle de votre organisation.

A. Profil de l'organisation

J'aimerais commencer en vous posant des questions d'ordre général sur votre ministère, organisation ou groupe.

1. SI LE TITRE DU POSTE EST DANS LE FICHER D'ÉCHANTILLONS : Puis-je confirmer que le titre de votre poste est (TITRE)?
SI AUCUN TITRE DE POSTE DANS LE FICHER D'ÉCHANTILLONS : Quel est le titre de votre poste?

98 - PRÉCISER

2. Qui diriez-vous sont vos principaux clients ou intervenants?
NE PAS LIRE – CODER TOUT CE QUI S'APPLIQUE

01 – Grand public/citoyens
02 – Clients
03 – Conseil municipal
04 – Conseil d'administration
05 – Hauts fonctionnaires du ministère/Ministre
98 – PRÉCISER _____
NON SUGGÉRÉ
99 - NSP/PR

DEMANDER/CODER POUR L'ÉCHANTILLON MUNICIPAL SEULEMENT :

- 3a. Quelle est la population actuelle de votre municipalité?

DEMANDER/CODER POUR L'ÉCHANTILLON D'ENTREPRISES SEULEMENT :

- 3b. Combien d'employés travaillent à votre emplacement?

DEMANDER POUR L'ÉCHANTILLON D'ENTREPRISES SEULEMENT :

4. À des fins de classification seulement, quel est approximativement le budget ANNUEL d'opération de votre unité, groupe ou division opérationnelle?
S'IL S'AGIT D'UNE PETITE ENTREPRISE, PEUT DONNER LE BUDGET DE L'ORGANISATION

01 – Moins de 10 000 \$
02 - 10 000 \$ à moins de 50 000 \$
03 – 50 000 \$ à moins de 100 000 \$
04 – 100 000 \$ à moins de 500 000 \$
05 – 500 000 \$ à moins de 1 million \$
06 - 1million \$ à moins de 5 millions \$
07 – Plus de 5 millions \$
NON SUGGÉRÉ
98 - REFUSE
99 - NSP

B. Sensibilisation/Opinions à l'égard des changements climatiques

J'aimerais maintenant parler de vos vues sur les changements climatiques.

5. À quoi pensez-vous tout d'abord lorsque vous entendez l'expression « changements climatiques »? Quelle est la deuxième chose qui vous vient à l'esprit en relation avec les changements climatiques?
NE PAS LIRE – CODER DEUX RÉPONSES SEULEMENT – ENREGISTRER LA PREMIÈRE MENTION SÉPARÉMENT

- 01 – Températures plus chaudes/temps plus chaud
- 02 – Températures plus froides/temps plus froid
- 03 – Météo moins prévisible
- 04 – Événements météorologiques plus extrêmes
- 05 – Plus de tempêtes
- 06 – Vents plus violents
- 07 – Plus de pollution de l'air/qualité d'air inférieure
- 08 – Niveaux des eaux moins élevés
- 09 – Niveaux des eaux plus élevés
- 10 – Plus d'inondations/ inondations plus sévères
- 11 – Moins de glace/neige
- 12 – Moins de pluie/sécheresse
- 13 – Plus de glace/neige
- 14 – Plus de pluie
- 15 – Dégradation de la toundra/du pergélisol
- 16 – Plus de feux de forêts
- 17 – Fonte de la calotte glaciaire
- 98 – Autre (PRÉCISER _____)
- 99 – NSP/PR

6. Laquelle des affirmations suivantes décrit le mieux votre PROPRE position personnelle sur les changements climatiques?
LIRE LES CODES 1,2,3 DANS L'ORDRE INVERSE POUR LA MOITIÉ DE L'ÉCHANTILLON.

- 01 – Les changements climatiques se manifestent dès maintenant
 - 02 – Les changements climatiques ne se manifestent pas dès maintenant, mais ils se produiront dans un avenir rapproché
 - 03 – Les changements climatiques ne se manifestent pas dès maintenant et ne se produiront pas dans un avenir rapproché
- NON SUGGÉRÉ
98 - Autre (PRÉCISER : _____)
99 - NSP/PR

- 8a. Votre organisation a-t-elle une position sur la question des changements climatiques?

- 01 - Oui
 - 02 - Non
- NON SUGGÉRÉ
99 - NSP/PR

SI OUI À Q8A DEMANDER Q8B

8b. La position de votre organisation est-elle fondée sur la croyance que...?

LIRE LES RÉPONSES 1-2-3 DANS LE MÊME ORDRE QU'EN Q6

01 – Les changements climatiques se manifestent dès maintenant

02 – Les changements climatiques ne se manifestent pas dès maintenant, mais ils se produiront dans un avenir rapproché

03 – Les changements climatiques ne se manifestent pas dès maintenant et ne se produiront pas dans un avenir rapproché

NON SUGGÉRÉ

98 - Autre (PRÉCISER : _____)

99 - NSP/PR

DEMANDER Q8c À L'ÉCHANTILLON GOUVERNEMENT PROVINCIAL SEULEMENT :

8c. S'attaquer aux questions des changements climatiques fait-il partie du mandat actuel de votre organisation?

01 - Oui

02 - Non

NON SUGGÉRÉ

99 - NSP/PR

9. Qu'en est-il de vos clients ou intervenants? Diriez-vous qu'ils sont en général très inquiets, quelque peu inquiets, pas très inquiets ou pas du tout inquiets au sujet des changements climatiques?

01 – Très inquiets

02 – Quelque peu inquiets

03 – Pas très inquiets

04 – Pas du tout inquiets

NON SUGGÉRÉ

99 - NSP/PR

SI ON CROIT QUE LES CHANGEMENTS CLIMATIQUES SE MANIFESTENT OU QU'ILS SURVIENDRONT DANS LE FUTUR (CODE 01 OU 02 À Q6), DEMANDER Q10-15:

10. En pensant à (SI GOUVERNEMENT : votre région/SI ENTREPRISE : aux régions du Canada dans lesquelles votre organisation opère), quel sera selon vous le plus sérieux impact des changements climatiques au cours des prochaines 20 années? Quel sera selon vous l'autre plus sérieux impact? CODER DEUX RÉPONSES SEULEMENT – ENREGISTRER LA PREMIÈRE MENTION SÉPARÉMENT

NE PAS LIRE LES CODES RÉPONSES

- 01 – Impacts sur la santé humaine
 - 02 – Sécheresses
 - 03 – Impacts sur l'approvisionnement en eau
 - 04 – Changement dans le niveau des océans/des lacs/l'érosion côtière
 - 05 – Inondation
 - 06 – Événements météorologiques/orages plus fréquents ou plus sévères
 - 07 – Autres impacts environnementaux (fonte du pergélisol, feux de forêts, vagues de chaleur, froids extrêmes)
 - 08 – Effets sur la faune (changement dans les comportements migratoires, pertes d'espèces, espèces invasives, perte d'habitats)
 - 09 – Effets sur l'agriculture (changements dans les saisons de croissance, récoltes déficitaires)
 - 10 – Effets sur le tourisme relié à une température moins clémente
 - 11 – Effets économiques (baisse de productivité, impacts négatifs sur le commerce, augmentation des occasions de commerce)
- NON SUGGÉRÉ
- 97 – AUCUN IMPACT DES PLUS SÉRIEUX
 - 98 – Autre (PRÉCISER : _____)
 - 99 – NSP/PR

11. Quel DEGRÉ d'impact un changement climatique aura-t-il sur (SI GOUVERNEMENT : votre région/SI ENTREPRISE : les régions du Canada dans lesquelles votre organisation opère), dans les 20 prochaines années? Diriez-vous qu'il aura...? LIRE EN SÉQUENCE

- 01 – Impact majeur
 - 02 – Impact modéré
 - 03 – Impact mineur
 - 04 – Absolument aucun impact
- NON SUGGÉRÉ
- 05 – Cela dépend
 - 99 – NSP/PR

DEMANDER SI L'ÉCHANTILLON D'ENTREPRISES OU SI L'ÉCHANTILLON DE GOUVERNEMENT PROVINCIAL N'A PAS LA TÂCHE DE RÉAGIR AUX CHANGEMENTS CLIMATIQUES (Q8c = 02,99)

12. Croyez-vous qu'un changement climatique aura un impact sur VOTRE ORGANISATION?

- 01 - Oui
 - 02 - Non
- NON SUGGÉRÉ
- 99 - NSP/PR

SI OUI À Q12, DEMANDER Q13-14:

13. Cet impact est-il déjà ressenti ou surviendra-t-il plus tard? SI PLUS TARD, DEMANDER : Dans combien d'années croyez-vous que votre organisation commencera à voir les impacts d'un changement climatique?

- 01 – Impact se fait déjà sentir
- 02 – Impact se fera sentir plus tard (PRÉCISER LE NOMBRE D'ANNÉES) _____)
- NON SUGGÉRÉ
- 03 – Impact se fera sentir plus tard (NOMBRE D'ANNÉES NON PRÉCISÉ)
- 99 – NSP/PR

14. Dans l'ensemble, croyez-vous qu'un changement climatique aura un impact (principalement négatif ou principalement positif/principalement positif ou principalement négatif) sur votre organisation?

ALTERNER À DIRE NÉGATIF OU POSITIF EN PREMIER

- 01 – Impact principalement positif
- 02 – Impact principalement négatif
- NON SUGGÉRÉ
- 03 – Impacts à la fois positif et négatif
- 04 – Impact neutre ou aucun impact
- 99 - NSP/PR

SI NEUTRE/AUCUN IMPACT À Q14 (CODE 04), PASSER À Q16

EFFECTUER UNE ROTATION AVEC Q15a ET Q15b:

15a. Plus particulièrement, quels sont certains des impacts positifs ou certaines des possibilités pour votre organisation que présenterait un changement climatique? INSISTER : Quels autres?

ENREGISTRER MOT À MOT

NON SUGGÉRÉ
99 – NSP/PR

15b. Plus particulièrement, quels sont certains des impacts négatifs ou des risques pour votre organisation que présenterait un changement climatique? INSISTER : Quels autres?

ENREGISTRER MOT À MOT

NON SUGGÉRÉ
99 – NSP/PR

DEMANDER SI ON CROIT QUE LE CHANGEMENT CLIMATIQUE SE MANIFEST/SURVIENDRA (CODE 01 OR 02 À Q6):

16. Considérant tous les défis auxquels fait face votre organisation présentement et auxquels elle fera face dans un avenir rapproché, laquelle des affirmations suivantes décrit le mieux ce que vous ressentez PERSONNELLEMENT? LIRE

- 01 – Les changements climatiques s'avèrent un des plus importants défis auquel votre organisation fait face.
- 02 – Les changements climatiques s'avèrent un important défi mais pas aussi sérieux que d'autres auxquels fait face votre organisation.
- 03 – Les changements climatiques ne représentent pas un important défi pour votre organisation.
NON SUGGÉRÉ
- 04 – Les changements climatiques ne se manifestent pas.
- 99 – NSP/PR

SI L'ORGANISATION NE CROIT PAS QUE LES CHANGEMENTS CLIMATIQUES SE MANIFESTENT OU QU'ILS POURRAIENT SURVENIR (CODE 03 À Q8b), PASSER À Q23

17. Indépendamment de vos vues PERSONNELLES, laquelle des affirmations suivantes décrit le mieux le point de vue de votre ORGANISATION à l'égard des changements climatiques? Pense-t-elle que...LIRE

- 01 – Les changements climatiques s'avèrent un des plus importants défis auquel votre organisation fait face.
- 02 – Les changements climatiques s'avèrent un important défi mais pas aussi sérieux que d'autres auxquels fait face votre organisation.
- 03 – Les changements climatiques ne représentent pas un important défi pour votre organisation.
NON SUGGÉRÉ
- 04 – Les changements climatiques ne se manifestent pas.
- 99 – NSP/PR

SI CODE 04 À Q17, PASSER À Q23

SI L'ORGANISATION D'UN GOUVERNEMENT PROVINCIAL A LA TÂCHE DE RÉAGIR AUX CHANGEMENTS CLIMATIQUES, PASSER À Q19a

18. Les organisations peuvent réagir aux changements climatiques de plusieurs façons. Un type de réaction consiste à réduire la *contribution* de l'organisation aux changements climatiques (par exemple, en réduisant les émissions de gaz à effet de serre ou la dépendance aux combustibles fossiles). Ce type de réaction s'appelle ATTÉNUATION. Votre organisation utilise-t-elle présentement l'un ou l'autre des moyens suivants pour réduire sa contribution aux changements climatiques?

- a. Conserver le carburant en conduisant moins ou en utilisant des véhicules économiques
- b. Conserver l'électricité ou en réduisant la consommation d'énergie
- c. Utiliser des formes d'énergie alternatives comme l'énergie éolienne ou solaire
- d. Tout autre moyen pour atténuer les changements climatiques (PRÉCISER)

- 01 - Oui
- 02 - Non
- NON SUGGÉRÉ
- 99 – NSP/PR

19a. Qu'est-ce que l'expression « adaptation aux changements climatiques » signifie pour vous?
INSISTER : Quoi d'autre?

ENREGISTRER MOT À MOT

NON SUGGÉRÉ

99 – NSP/PR

19b. Les organisations peuvent s'adapter au changement climatique de plusieurs façons. Elles peuvent prendre des moyens pour réduire les impacts **négatifs** des changements climatiques ou essayer de profiter de toutes les **possibilités** que les changements climatiques peuvent offrir.

ÉCHANTILLON D'ENTREPRISES/MUNICIPAL OU ORGANISATION DE GOUVERNEMENT PROVINCIAL QUI N'ONT PAS LA TÂCHE DE RÉAGIR AUX CHANGEMENTS CLIMATIQUES (Q8c = 02,99) : Votre organisation prend-elle présentement des moyens pour s'adapter aux risques et aux possibilités provoquées par un changement climatique?

ORGANISATION DE GOUVERNEMENT PROVINCIAL QUI A LA TÂCHE DE RÉAGIR AUX CHANGEMENTS CLIMATIQUES (Q8c = 01) : Votre organisation prend-elle présentement des moyens pour aider vos intervenants à s'adapter aux risques et aux possibilités provoquées par un changement climatique?

01 - Oui

02 - Non

NON SUGGÉRÉ

99 – NSP/PR

SI ENGAGÉE DANS DES ACTIVITÉS D'ADAPTATION (CODE 01 À Q19b), DEMANDER Q19c:

19c. ÉCHANTILLON D'ENTREPRISES/MUNICIPAL OU ORGANISATION DE GOUVERNEMENT PROVINCIAL QUI N'ONT PAS LA TÂCHE DE RÉAGIR AUX CHANGEMENTS CLIMATIQUES (Q8c = 02,99) : Quels moyens spécifiques votre organisation prend-elle présentement pour s'adapter aux changements climatiques? INSISTER : Quoi d'autre?

ORGANISATION DE GOUVERNEMENT PROVINCIAL QUI A LA TÂCHE DE RÉAGIR AUX CHANGEMENTS CLIMATIQUES (Q8c = 01) : Quels moyens spécifiques votre organisation prend-elle présentement pour aider vos intervenants (SI NÉCESSAIRE, LIRE : à s'adapter aux risques et aux possibilités provoquées par un changement climatique)?

ENREGISTRER MOT À MOT

NON SUGGÉRÉ

99 – NSP/PR

21. ÉCHANTILLON D'ENTREPRISES/MUNICIPAL OU ORGANISATION DE GOUVERNEMENT PROVINCIAL QUI N'ONT PAS LA TÂCHE DE RÉAGIR AUX CHANGEMENTS CLIMATIQUES (Q8c = 02,99) : Votre organisation a-t-elle des plans spécifiques pour des mesures ÉVENTUELLES conçues pour s'adapter aux risques et aux possibilités que présente un changement climatique?

ORGANISATION DE GOUVERNEMENT PROVINCIAL QUI A LA TÂCHE DE RÉAGIR AUX CHANGEMENTS CLIMATIQUES (Q8c = 01) : Votre organisation a-t-elle des plans spécifiques pour des mesures ÉVENTUELLES conçues pour l'aider à S'ADAPTER aux risques et aux possibilités que présente un changement climatique?

01 - Oui
02 - Non
NON SUGGÉRÉ
99 – NSP/PR

SI PLANIFICATION DE MESURES D'ADAPTATION (CODE 01 À Q21), DEMANDER Q22:

22. Quelles mesures particulières planifiez-vous? INSISTER : Quoi d'autre?

ENREGISTRER MOT À MOT

NON SUGGÉRÉ
99 – NSP/PR

C. Impacts des changements climatiques sur le processus décisionnel de l'organisation

DEMANDER TOUTES LES QUESTIONS :

23. ORGANISATION DE GOUVERNEMENT PROVINCIAL QUI A LA TÂCHE DE RÉAGIR AUX CHANGEMENTS CLIMATIQUES (Q8c = 01) : Autre que l'élaboration de politiques conçues pour aider vos intervenants à réagir aux changements climatiques, votre organisation ou votre ministère tient-il compte des changements climatiques dans son processus décisionnel et dans sa planification?

01 - Oui
02 - Non
NON SUGGÉRÉ
99 – NSP/PR

SI 02 OU 99 (NON OU NE SAIT PAS) À Q23, PASSER À LA SECTION D

24. Depuis combien de temps votre organisation tient-elle compte des changements climatiques dans son processus décisionnel?

ENREGISTRER LE NOMBRE D'ANNÉES

NON SUGGÉRÉ

01 – Moins d'une année

99 – NSP/PR

26. De laquelle des façons suivantes votre organisation tient-elle compte des changements climatiques dans sa planification ou dans son processus décisionnel?

LIRE – RÉPONSES MULTIPLES ACCEOTÉES – INSISTER : Quelles autres façons?

01 – Dans la planification à long terme et/ou décisions stratégiques

02 – Dans les décisions opérationnelles actuelles

03 – Dans la planification de la gestion des risques

04 – Dans la conception de l'infrastructure ou des installations

NON SUGGÉRÉ

98 – De quelles autres façons? (PRÉCISER : _____)

99 – NSP/PR

D. Obstacles à inclusion de considérations en matière de changements climatiques dans le processus décisionnel

SI Q6 = 03 ET Q8B = 03 ET Q23 = 02, PASSER AU MOT DE LA FIN

29. Quelles sont les sources de renseignements de votre organisation sur les changements climatiques? INSISTER : Quelles autres sources?

NE PAS LIRE

01 – Journaux/magazines scientifiques

02 – Sources sur Internet (PRÉCISER)

03 – Sources gouvernementales (PRÉCISER)

04 – Sources internes/nos propres renseignements/données

05 – Journaux académiques/universités

06 – Associations/conférences industrielles

07 – Organismes sans but lucratif (p. ex. Pollution Probe)

08 – Les médias

98 – Autre (PRÉCISER : _____)

NON SUGGÉRÉ

97 – AUCUN RENSEIGNEMENTS AU NIVEAU ORGANISATIONNEL

99 – NSP/PR

33. Jusqu'à quel point chacune des affirmations suivantes constituent-elles un obstacle empêchant votre organisation de tenir compte des changements climatiques dans son processus décisionnel? Pour chacune des affirmations, veuillez me dire à quel point elle représente un obstacle pour votre organisation.

SI GOUVERNEMENT DEMANDER A, B, C, E, F, G, I

SI ENTREPRISES DEMANDER A, B, D, F, G, H, I

a. Manque d'expertise pour traiter des impacts des changements climatiques

b. Le COÛT d'adaptation aux impacts des changements climatiques

c. La complexité du processus de modification des politiques

d. Présentation d'une analyse de rentabilité d'une adaptation aux impacts des changements climatiques

- e. La nécessité que d'autres ministères/organisations agissent les premiers avant que nous puissions le faire
- f. Manque de renseignements sur les changements climatiques et des impacts
- g. L'ignorance des avantages d'une adaptation aux changements climatiques
- h. Le manque de capacité
- j. Priorités organisationnelles opposées

01 – Obstacle important
02 – Obstacle mineur
03 – N'est pas un obstacle
NON SUGGÉRÉ
99 – NSP/PR

34. Quels autres obstacles ou difficultés, s'il en existe, limitent la capacité de votre organisation de prendre des décisions touchant l'adaptation aux changements climatiques?

ENREGISTRER MOT À MOT

NON SUGGÉRÉ
99 – NSP/PR

SI LE MANQUE DE RENSEIGNEMENTS EST UN OBSTACLE IMPORTANT (Q33f = 1), DEMANDER Q35:

35. Plus particulièrement, quels genres de renseignements vous manquent-ils?
NE PAS LIRE – RÉPONSES MULTIPLES PERMISES - INSISTER: Quels autres renseignements?

01 – Renseignements sur les impacts particuliers à la région
02 - Projections d'impacts futurs/prévisions
03 – Renseignements plus fiables
04 – Études de cas/exemples pertinents de ce que font d'autres organisations comme la nôtre
05 – Renseignements sur les pratiques exemplaires
NON SUGGÉRÉ
98 - Autre (PRÉCISER : _____)
99 – NSP/PR

36. Existe-t-il des outils décisionnels ou des ressources techniques qui aideraient votre organisation à traiter des impacts des changements climatiques? INSISTER : Y en a-t-il d'autres?

ENREGISTRER MOT À MOT

NON SUGGÉRÉ
96 - AUCUN
97 – N'AVONS PAS/N'UTILISONS PAS D'OUTILS NI DE RESSOURCES
99 – NSP/PR

APRÈS-CODES:

- 1. Méthodes
- 2. Modèles
- 3. Règlements
- 4. Codes ou normes
- 5. Données

37. Avez-vous d'autres commentaires sur ce qui aiderait des organisations comme la vôtre à faire face aux défis associés aux changements climatiques?

ENREGISTRER MOT À MOT

NON SUGGÉRÉ

99 – NSP/PR

MOT DE LA FIN

Voilà qui complète le sondage. Au nom de Ressources naturelles Canada, je vous remercie de votre temps et de votre collaboration. Si vous désirez plus de renseignements sur des moyens permettant à votre organisation de s'adapter aux changements climatiques, vous pouvez visiter le site Web <http://adaptation.nrcan.gc.ca/>

SI LE/LA RÉPONDANT(E) DEMANDE DES RENSEIGNEMENTS SUR LE SONDEGE : Vous pouvez obtenir plus de renseignements sur cette recherche en communiquant avec Mary-Ann Wilson à Ressources naturelles Canada. Son numéro de téléphone est le (613) 992-0644 et son adresse électronique est marwilso@nrcan-rncan.gc.ca

ENREGISTRER :

A. Sexe :

- 01 - Masculin
- 02 - Féminin

B. Langue de l'entrevue

- 01 - Anglais
- 02 - Français

C. Province/Territoire

- 01 – Territoires du Nord-Ouest
- 02 - Yukon
- 03 - Nunavut
- 04 – Colombie-Britannique
- 05 - Alberta
- 06 - Saskatchewan
- 07 - Manitoba
- 08 - Ontario
- 09 - Québec
- 10 – Nouveau-Brunswick
- 11 – Nouvelle Écosse
- 12 – Île-du-Prince-Édouard
- 13 – Terre-Neuve et Labrador

D. Type d'entrevue

- 01 – Gouvernement provincial
- 02 – Gouvernement municipal
- 03 - Entreprise

STANDARD INDUSTRIAL CLASSIFICATION CODES
(USED FOR BUSINESS SURVEY SAMPLE)

013401 - Potato Growers	138203 - Oil & Gas Exploration & Development
013901 - Agricultural Products	138204 - Oil & Gas Consultant
016101 - Vegetable Farms	138211 - Exploration Services
017201 - Vineyards	138212 - Geophysical Brokers
017502 - Cider	138902 - Mud Jacking Contractors
017503 - Cider Mills	138905 - Oil Field Service
018101 - Greenhouses	138908 - Oil Well Drilling Mud & Additives
018102 - Seeds-Certified	138912 - Oil Well Services
018103 - Turf	138914 - Riggers
018201 - Mushrooms	138915 - Hot Shot Service
018202 - Hydroponics	138918 - Offshore Platforms/Oil
019101 - Farms	138922 - Oil Extraction-Downhole
019104 - Organic Farms	138999 - Oil & Gas-Field Services
021101 - Livestock Feeding	141101 - Stone-Natural
021398 - Hogs	142901 - Stone-Crushed
024101 - Dairies (Milk)	144201 - Quarries
024103 - Dairy Farms	149901 - Mining Companies
025401 - Poultry Farms	149902 - Mineral Exploration
027298 - Horses & Other Equines	149903 - Mining Contractors
027902 - Beekeepers	149905 - Diamond Drilling
027905 - Animal Breeders	161101 - Paving Contractors
027906 - Llamas	161102 - Road Building Contractors
027999 - Animal Specialties	161103 - Grading Contractors
029101 - Ranches	161104 - Parking Area/Lots Maint. & Marking
029102 - Animal Brokers & Dealers-Zoo Circus Etc	161106 - Asphalt & Asphalt Products
078101 - Horticultural Consultants	161107 - Pavement Marking
078102 - Land Planning Services	161108 - Paving Materials
078103 - Landscape Designers	161110 - Pavement Sealing
078107 - Park Planning	162201 - Culverts
078108 - Tree Consultants	162202 - Tunneling Contractors
078111 - Concrete Hardscaping	162203 - Bridge Builders
085102 - Foresters-Consulting	162204 - Road Boring
085106 - Engineers-Forest	162301 - Pipe Line Contractors
091201 - Fishermen-Commercial	162302 - Piping Contractors
091902 - Seaweed Products	162304 - Water Main Contractors
092101 - Fishery Consultants	162305 - Pole Line Contractors
097101 - Hunting & Fishing Preserves	162307 - Sewer Contractors
097102 - Wildlife Services	162308 - Utility Contractors
101198 - Iron-Ore	162309 - Fiber Optics
102198 - Copper Ores	162312 - Telecommunications Wiring & Cabling
104102 - Prospectors	162313 - Cable Detection Installation & Splicing
104198 - Gold Ores	162316 - Wiring & Cabling-Home & Office-Voice
108102 - Mines-Exploration	162325 - Corrosion Control
131101 - Oil & Gas Producers	162901 - Pile Driving
131103 - Oil Companies	162902 - Docks (Builders)
131107 - Petroleum Contractors	162903 - Marine Contractors & Designers
131108 - Petrochemical Contractors	162904 - Drainage Contractors
138102 - Oil Well Drilling	162907 - Tennis Court Construction
138104 - Oil Well Directional Drilling	162908 - Railroad Contractors

162909 - Trenching & Underground Contractors	701102 - Inns
162910 - Water Pollution Control	701103 - Hotel & Motel Management
162913 - Dockboards & Ramps	701104 - Health Resorts
162914 - Dredging	701106 - Cottages & Cabins
162921 - Erosion Control	701107 - Bed & Breakfast Accommodations
162926 - Ponds & Pond Supplies	701109 - Tourist Accommodations
162929 - Soil Stabilization	701110 - Skiing Centers & Resorts
162930 - Oil Field Contractors	701111 - Resorts
162934 - Environmental Reclamation	701112 - Hotels-Apartment
162935 - Sawmill Construction & Maintenance	701113 - Outing Facilities
162977 - Construction-Heavy Projects	701117 - Accommodations
241101 - Pulpwood (Manufacturers)	703201 - Fishing Camps
241102 - Logging Companies (Mfrs)	703203 - Camps
242101 - Lumber-Manufacturers	703208 - Adventure Games & Activities
242102 - Sawmills (Mfrs)	703301 - Campgrounds
242107 - Planing Mills (Mfrs)	794101 - Sports Promoters Managers & Recruiters
242198 - Sawmills & Planing Mills-General (Mfrs)	794102 - Soccer Clubs
242601 - Furniture Frames (Manufacturers)	794104 - Stadiums Arenas & Athletic Fields
242602 - Wood-Turning (Mfrs)	794198 - Professional Sports Clubs & Promoters
242604 - Hardwood Flooring (Mfrs)	794801 - Race Tracks
242608 - Stair Equipment (Manufacturers)	794803 - Horse Racing
242698 - Hardwood Dim.-Flooring Mills (Mfrs)	799201 - Golf Courses-Public
242901 - Shingles & Shakes-Manufacturers	799601 - Amusement Places
243102 - Millwork (Manufacturers)	799604 - Amusement & Theme Parks
243103 - Building Materials-Manufacturers	799701 - Recreation Centers
243105 - Door Frames-Manufacturers	799704 - Swimming Pools-Private
243107 - Molding-Manufacturers	799705 - Hockey Clubs
243109 - Doors-Folding (Manufacturers)	799706 - Golf Courses-Private
261101 - Paper Converters (Manufacturers)	799707 - Curling Clubs
261102 - Pulp & Pulp Products (Manufacturers)	799708 - Baseball Clubs
262101 - Paper-Manufacturers	799710 - Skiing Organizations
262105 - Printing Supplies-Manufacturers	799711 - Squash Courts-Private
263102 - Paperboard Mills (Mfrs)	799720 - Sports Clubs
291101 - Oil Refiners (Manufacturers)	799728 - Rugby Clubs & Organizations
291104 - Oils-Petroleum-Manufacturers	799901 - Skating Rinks
291105 - Petroleum Products-Manufacturers	799902 - Archery Instruction
291111 - Oil Recovery-Enhanced (Mfrs)	799906 - Balloons-Manned
299202 - Lubricants-Manufacturers	799908 - Baseball Batting Ranges
299298 - Lubricating Oils & Greases (Mfrs)	799909 - Bicycles-Renting
401101 - Railroads	799910 - Baths-Bath Houses Spas & Saunas
461201 - Pipe Line Companies	799911 - Bingo Games
491101 - Electric Companies	799912 - Billiard Parlors
492398 - Natural Gas Transmission & Distribution	799913 - Boats-Rental & Charter
492401 - Gas-Natural	799914 - Boating Instruction
492501 - Gas Companies	799915 - Bridge Clubs
493902 - Utilities	799916 - Bowling Instruction
493903 - Utilities-Underground-Cable Locating Svc	799917 - Canoe Trip Outfitters
494102 - Water & Sewage Companies-Utility	799919 - Carnivals
494103 - Water Supply Systems	799921 - Concessionaires
494105 - Water Treatment Management Plant	799924 - Diving Instruction
701101 - Hotels & Motels	799927 - Children's Svcs & Activities Information

799928 - Fishing Parties
799929 - Golf Courses-Miniature
799931 - Golf Practice Ranges
799932 - Golf Instruction
799934 - Guide Service
799935 - Halls & Auditoriums
799936 - Gymnastic Instruction
799939 - Paint Ball Games
799940 - Historical Places
799947 – Motorcycle/Scooters-Rent/Lease
799951 - Provincial Parks
799952 - Skydiving & Parachute Jumping Instrctns
799957 - Riding Academies
799958 - Racquetball Courts-Public
799963 - Sightseeing Tours
799964 - Skiing Equipment-Rental
799966 - Skiing Instruction
799967 - Swimming Instruction
799968 - Stables
799969 - Swimming Pools-Public
799970 - Tennis Instruction
799971 - Tennis Courts-Public
799972 - Tourist Attractions
799973 - Ticket Service
799978 - Boxing Instruction
799982 - Circus Companies
799984 - Squash Courts-Public
799986 - Raft Trips
799992 - Hunting Trips
799997 - Dog Sledding
799999 - Amusement & Recreation