

**CLIMATE CHANGE INDICATORS**

**RESULTS OF TRACKING QUESTIONS**

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## Climate Change Indicators Results of Tracking Questions

This report presents results of questions agreed to by HUB members that track climate change indicators in the public opinion field. All of the questions agreed upon were posed in a survey recently carried out by Decima Research for Natural Resources Canada and Environment Canada. For some of the indicators, we have two additional points of reference with questions posed in surveys conducted by Pollara Research in 1998 and 1999. It is our intent to employ these questions in future surveys to build up a body of tracking data, as well as to encourage HUB members to use these questions in any regional surveys they may carry out. The results are taken from Decima's report of December 17 entitled *Canadian's Attitudes Towards Climate Change: Wave 111(2001)*.

All the interviews in these surveys were carried out through the telephone. The 1998 survey interviewed 1,974 Canadians in May of that year; the 1999 survey in March had 2,192 respondents. Both of these surveys excluded residents of the three Territories. The 2001 survey this past September had a sample of 2,202 Canadians including those residing in the three Territories. The tracking questions are illustrated in italics.

1. INDICATOR: AWARENESS OF CLIMATE CHANGE: *Have you recently heard, seen or read anything about climate change?*

The 2001 survey introduced refinements to the question discussed below.

Seven in ten Canadians (69%) claim to be aware of climate change, up from 65% in 1999 but not reaching the 77% level found in 1998. Residents of the Territories have the highest level of awareness at 85%.

	Claimed awareness of climate change		
	<u>2001</u>	<u>1999</u>	<u>1998</u>
Yes-	69%	65%	77%
No-	31	34	22
Don't know	--	1	1

As in the previous surveys, awareness of climate change is higher in B.C. (76%) than in other provinces. The growth in awareness since 1999 has taken place mainly in Ontario (72%, up 9 points) and Saskatchewan (71%, up 7 points). Awareness of this issue remains lowest in Quebec (64%) and Alberta (61%).

As before, awareness of climate change increases with levels of education and income as well as with age.

Part of the challenge in assessing climate change awareness is terminology, given the overlapping terms used to describe it. The current survey probed further than previous ones to ensure that the public's understanding is captured as fully as possible. This was done in two ways. First, those respondents who did not recall hearing or reading anything

recently about climate change were asked if they have ever seen or read about it. More than half (56%) of this group did respond in the affirmative.

The second modification involved the use of additional terminology since 'climate change' is by no means understood as the definitive term. This is illustrated by the finding that among those who did not recall anything about 'climate change,' almost half (47%) did recognize 'global warming' and one-third (34%) recalled seeing or hearing something about 'greenhouse gases.'

When the results are combined across the three terms used in the survey, we find that 93% of Canadians have at least a minimum level of awareness of this phenomenon however it is defined. Framing the questions in this way provides a more accurate measure of the true level of public awareness than the single question used in previous research and should serve as the baseline for future tracking studies.

*What does the term 'climate change' mean to you?*

As in previous surveys, Canadians aware of climate change were asked what it means to them (unprompted this is an essential question in survey research, so that we can verify what people say). Respondents in the current survey were asked the question using the term they first recognized--global warming, etc.

Results are consistent with previous waves. Canadians offer a wide range of meanings to 'climate change,' most of which (understandably) are weather-related such as global warming (30%), changes in temperature (25%) and unusual weather patterns (22%). A significant number incorrectly link it to problems with the ozone layer.

What Does Climate Change Mean?  
(Top 5 mentions)

	<u>2001</u>	<u>1999</u>	<u>1998</u>
Global warming-	30%	31%	23%
Change in temperature-	25	21	23
Change in/unusual weather patterns-	22	22	26
Problems with the ozone layer-	18	15	12
Extreme weather/natural disasters-	9	7	8

These results show a public that has a limited, and at times incorrect, understanding of what climate change is all about. However, it would be unrealistic to expect anything more than this given the complexity of the issue, misrepresentation of the facts in the media and continuing scientific debate about the issue.

There is some variation in the results across the country, but nothing significant enough to conclude that there are fundamental differences in how this issue is viewed in the regions. There is little variation in the data across most of the demographic indicators.

Individuals who recognize the term 'climate change' do not attach noticeably different meanings to the concept in comparison with those who recognize it as either 'global warming' or 'greenhouse effect' (the exception being that the latter two groups do not use either of these terms to define the phenomenon). This confirms that Canadians for the most part are using these three terms interchangeably to refer to the same concept.

2. INDICATOR: Level of Concern. *How concerned are you personally about the issue of climate change?*

Results show that while a majority of Canadians are concerned about climate change, for most it is not an acute type of worry.

- A small group (15%) say they are 'extremely concerned' about climate change. They could be said to be highly sensitized to the issue.
- A larger group (40%) is 'definitely concerned'. They recognize the significance of the issue and consider it one that needs to be addressed.
- One third (35%) say they are 'somewhat concerned'. This category captures those Canadians expressing concern because it is the socially correct thing to do.
- One in ten (11%) maintain they are 'not very' or 'not at all' concerned.

The same question was asked in the previous research but using a different response scale (a numerical scale ranging from 1 (not at all concerned) to 10 (very concerned) and so the results are not directly comparable. However, a general comparison can be made if assumptions are made about how the ten points in the old scale might be converted to the current five-point scale. (10-point scales are problematic as a measurement tool for public opinion research. Numbered scales can result in inconsistent interpretation because people do not assign the same meaning to a given number. The 2001 survey used a five-point scale with clear descriptive labels for each).

While the comparison is not precise, the results suggest that the proportion of extremely concerned Canadians has fallen over the past three years. The overall level of concern (combining extremely and definitely) has increased since 1999 and is now back up to the 1998 levels.

## Degree of concern about climate change

1998-1999 response category (10 point scale)	2001 response category (5 point scale)	2001 %	1999 %	1998 %
10	Extremely concerned	15	18	22
8-9	Definitely concerned	40	29	31
5-7	Somewhat concerned	35	42	35
1-4	Not very/Not at all concerned	11	11	12

Level of concern is highest in Quebec (71% extremely or definitely concerned) and lowest in the Prairies, especially in Manitoba (41%) and Alberta (43%). Concern is more pronounced among women (56%) than men (48%) and rises along with the level of education.

Other perceptions about climate change are also closely linked to the level of concern expressed by Canadians. Those who believe they have an 'excellent' understanding of this issue are among the most concerned (77% extremely/definitely concerned), declining among those who rate their understanding to be 'good' (67%), 'only fair' (47%) and 'poor' (31%). Also, those who believe the effects of climate change are already noticeable in Canada are almost twice as likely to be concerned (61%) than those who think the effects will be in the future (35%). Concerned citizens are more likely to identify a number of possible effects of climate change on Canada, including loss of forests, health impacts, air pollution and increased UV rays.

*What concerns you most about climate change?(2001 only)*

When respondents who expressed at least a minimal concern about climate change were asked (unprompted) to indicate what specifically worried them the most, a wide range of topics are identified but none emerge as predominant. These results suggest that public concern about climate change is real but diffuse, in terms of not being focused on one or more clearly identifiable consequences that might define the true nature of the concern.

Greatest Concerns About Climate Change  
(Top 5 mentions)

Temperature changes/heat waves-	15%
Drought/water shortages-	13
Human health impacts-	12
Agricultural impacts-	12
Legacy for future generations-	10

Those who are extremely concerned do not offer reasons that are noticeably different from those who are 'definitely' or only 'somewhat concerned' about climate change. This further underscores the point that the public's feeling about this issue is largely unfocused in terms of clearly definable risks or impacts that might serve to engender greater attention.

3. INDICATOR: UNDERSTANDING: *How well do you feel you understand the issue of climate change?'*

The 2001 survey asked Canadians to self-define their level of understanding of climate change. This question was not asked in previous surveys. This question is intended as a gauge of the public's sense of confidence in their understanding of the issue as well as helping us to better interpret responses to other questions (relation to the concern discussed above, for example).

Few Canadians (6%) claim to have an 'excellent' understanding of the climate change issue. Most rate their understanding to be either 'good' (38%) or only 'fair' (47%), while 9% say it is 'poor'.

Self-defined Understanding of Climate Change, 2001

Excellent-	6%
Good-	38
Only fair-	47
Poor-	9

Do self-described 'experts' have a fuller understanding of climate change? The results show only a modest relationship between self-rated knowledge and meanings attached to climate change. Canadians who rate their understanding of climate change to be excellent are more likely than others to define it in terms of the greenhouse effect, environmental change, a man-made phenomenon, a result of natural cycles and air pollution. In most cases however, these differences are not substantial and do not reflect a fundamentally different or better understanding of climate change than others who rate their knowledge to be more limited.

**Consequences of climate change:** *Do you feel that you and your family are likely to be affected by climate change? If so, in what ways? Do you believe Canada as a whole is likely to be affected by climate change? If so, how?*

The 2001 survey asked Canadians how their families and Canada as a whole would be affected by climate change. There is no tracking data on this topic.

Among those who believe that climate change will have some type of impact on Canada (90% of the entire population), two in three (66%) think that they or their families are likely to be directly affected. This feeling is evident across the country, but is most widespread in Saskatchewan (73%) compared with little more than half in Manitoba (56%). This belief is higher among women (69%) than men (62%) and people with higher levels of education. The greatest concern is expressed in terms of health impacts (32%).

#### How Self/family Likely to be Affected by Climate Change (Top 5 mentions)

Health impacts-	32%
Different seasonal patterns-	14
Higher costs for energy/food-	14
Air pollution-	14
Heat-related discomfort-	12

Ontario residents expressed the highest levels of health concerns (40%) and air pollution (20%) while those in Saskatchewan had the lowest proportion for health (19%) and air pollution (6%). Residents of the Territories are twice as likely as their southern neighbours to see themselves affected by climate change in terms of experiencing different seasonal patterns (32%).

When asked (unprompted) how Canada as a whole is most likely to be affected by climate change, Canadians offer a variety of responses, but none emerge as predominant. This suggests that people have some idea about real or potential impacts of climate change but their understanding of the issue has not yet coalesced around a clearly defined set of impacts.

#### How Will Climate Change Affect Canada (Top 5 mentions)

UV rays/skin cancer-	20%
Drought/water shortages-	20
Extreme weather-	16
Agriculture/crop damage-	16
Rising sea levels-	10

Canadians' confusion about climate change is underscored by the fact that one of the most commonly identified effects of climate change is increased UV radiation and skin cancer. As we have seen earlier, this is not surprising given that a growing proportion of Canadians think that climate change means problems with the ozone layer.

4. INDICATOR: WILLINGNESS TO ACT: *As far as you know, is there something that you can personally do about climate change? If so, what can you do? Is this something you have done in the past year? If no, why have you not taken this action?*

There is clear evidence that an increasing number of Canadians recognize the role they have to play in addressing climate change. Seven in ten (68%) say there is something they can personally do about climate change, up from 58% in 1999 and 54% in 1998.

#### Is There Something You Can Do About Climate Change?

	<u>2001</u>	<u>1999</u>	<u>1998</u>
Yes-	68%	58%	54%
No-	28	39	43
Dont know-	4	3	3

This growth in personal empowerment is most pronounced since 1998 in central Canada: Quebec (67%, up 26 points), Ontario (71%, up 16 points) and Manitoba (65%, up 15 points). Territorial residents are the most likely to say they can make a difference (74%). People with a post-secondary degree (80%) are significantly more likely than those without a high school diploma (48%) to believe they can do something about this issue. A similar pattern is evident based on self-defined knowledge about climate change: 80% of those who say they have an excellent knowledge of climate change express an ability to make a difference compared with 51% who admit to knowing little or nothing about the issue. An encouraging result is that 71% of those 18-34 years of age feel this way compared with 56% of the over 55 year age group.

When respondents who say there is something they can do about climate change were then asked (unprompted) what this involves, a wide range of actions were suggested (an average of 2.3 actions/individual). Only 2% were unable to come up with anything. The greatest emphasis (43% of all responses) is given to transportation-related steps, such as reducing vehicle use through car pools, driving less or cycling, using public transit and walking more.

Personal Actions to Address Climate Change  
(Top 6 mentions)

	<u>2001</u>	<u>1999</u>	<u>1998</u>
Car pool/drive less/cycle-	50%	37%	30%
Recycle/reduce waste-	32	24	27
Reduce emissions/cleaner fuel-	19	21	19
Use public transit-	18	-	-
Energy efficiency/use less energy-	16	16	17
Walk more-	11	-	-

Understanding what can be done to address climate change is important, but ultimately what counts is whether or not Canadians act and take the necessary steps to reduce their contribution to greenhouse gases. The 2001 survey asked respondents who identified climate change actions if they had actually taken these actions in the past year and if not, why not (not asked in previous surveys).

Almost 8 in 10 (76%) say they have taken the specific action(s) they identified ranging from a high of B.C. residents (81%) to a low of 67% of residents in the Atlantic provinces.

Climate Change Reducing Actions Taken in the Past Year  
(Top 5 mentions)

	%
Recycle/reduce waste-	95
Do not use aerosol products-	91
Pollute less-	90
Reduce waste/packaging-	90
Walk more/wherever possible-	90

It seems that these results reflect reality to a certain degree in terms of what Canadians are doing based on their concerns about the environment and a desire to save money. However, these numbers suggest that many people are overstating the case. It is likely that in many cases they are reporting something they may have done once or twice, or may feel they should be doing and therefore feel inclined to say they are already doing it. There will be some degree of over-reporting as there is on any survey that asks about socially desirable behaviours. Further research is called for on this point.

As such, these results should be interpreted with caution and not be considered as a conclusive measure of the level of effort Canadians are making on the issue of climate change. They do provide useful insight into how people believe (or would like to believe) they are engaged in the issue.

Although few Canadians admit to not having taken the climate change actions they identified, it is useful to look at the reasons they gave for not doing so. While the reasons are in some cases specific to the type of action not taken, there is some commonality in the types of reasons given with two themes emerging. Across all action types, the most common reason given for inaction is motivational, with individuals saying it was inconvenient (19%); they did not have the time (14%) and apathy or laziness (10%).

#### Reasons for Not Taking Climate change related Actions

Inconvenient-	19%
Dont have time-	14
Not close/too far away-	11
No control over decisions-	10
No need-	10
Apathy/laziness-	10
No public transit available-	6
Financial reasons-	3
Do not drive much-	3
Other reasons-	18
Dont know-	37

The second theme pertains to structural barriers that make it difficult or impossible to take action such as proximity to destinations (for walking), no control over decisions, lack of public transit, and financial constraints (making energy efficient investments in the home). Noteworthy is the finding that more than one-third (37%) of this group could not offer any reason for why they have not acted on the types of climate change steps they identified as ones they could do.