PERSPECTIVES ON CLIMATE CHANGE

A REPORT ON THE 2019 BENCHMARKING SURVEY of CANADIAN PROFESSIONAL PLANNERS

JULY 2019

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Introduction

In 2018, the Canadian Institute of Planners (CIP) launched its Policy on Climate Change Planning, recognizing that "climate change planning….is the domain of all planners, including those working on energy, land-use, transportation, infrastructure and community planning". As part of that policy CIP committed to ensure that practicing planners have access to the resources, data and training, and other support they need to fully apply a climate change lens to their work.

In order to determine what the needs of planners are with respect to climate change, CIP undertook a survey of planners in partnership with Natural Resources Canada (NRCan), under the Building Regional Adaptation Capacity and Expertise (BRACE) program. This report outlines findings of that survey, the latest in a series of four, which date back to 2009, 2011, and 2012. These surveys also sought to investigate the level of awareness among planners of the impact of climate change on planning issues. It is considered that the findings of this survey will help to shape the policy, advocacy, and Continued Professional Learning (CPL) activities of CIP. It should also be used as a reference for external stakeholders who would like to engage with planners on climate change planning issues, whether through developing tools and resources, working on bespoke projects, or in general discussion.

Key findings

Awareness: Planners' awareness of the impact of climate change on planning issues has increased significantly since 2009, with the number of respondents reporting they are *very aware,* doubling from 18% to 38%.

Climate change sources of knowledge and information: Professional networks (interaction with colleagues), provincial agencies, and Environment and Climate Change Canada are the most frequently consulted sources of information by planners when seeking to incorporate a climate change lens to their planning work.

Climate Change Tools: For those who consider that climate change has a significant impact on their planning work, national data, modelling and mapping tools, and national non-governmental guides are the most frequently used tools for applying a climate lens to their work. More generally, comparing national, provincial, local, and neighbourhood tools, most planners look to local plans (e.g. operational plan/municipal development plans) when applying a climate lens to their work.

Barriers: Competing priorities (e.g. financial viability), lack of political support, and lack of information are seen as the main barriers to incorporating a climate change lens into planning work.

Methodology

The 2019 survey included 28 questions, which broadly cover 4 themes:

- Awareness of the impact of climate change on planning issues;
- Climate change sources of knowledge and information;
- Climate change tools; and
- Barriers to incorporating the effects of a changing climate into planning work

The 2019 survey was adapted from previous surveys carried out in 2009, 2011, and 2012. Where most relevant, comparisons between the surveys have been made in the analysis.

The survey also collected data on a wide variety of demographic attributes related to planners. Information on geographic region, type of community in which planners practice, age, years of experience, planning specialty, and whom planners work for was also collected. This information provides an almost infinite opportunity for cross tabulations. However, this report focuses on the major themes outlined above. The demographic information, while containing numerous research opportunities, was used mainly to determine how well the respondents represent the membership of the Canadian Institute of Planners.

Response rate/ no of responses

In April 2019, CIP sent the survey to 5,800 of its members (professional (full), candidate, pre-candidate, and non-practicing). 1,457 responses were received, which translated to a 25% response rate. 1,232 (85%) participants completed the survey. The table below provides a comparison with responses from previous years.

	2009	**2011**	**2012**	**2019**
Distribution	7572	7753	3170	5800
Responses	1843	1218	1403	1457
Rate	**27%**	**16%**	**44%**	**25%**

Analysis

Awareness of Climate Change

This section of the report comprises three questions which were designed to measure planners' awareness of climate change and impact on planning work. One question (Q6) asked directly the extent to which the respondent was aware of the impact of climate change on planning issues (on a seven point scale from *very aware* to *very unaware*). Another (Q7) asked the extent to which the participant agreed with the statement that climate change has a substantial impact on their planning work (on a seven point scale from *strongly disagree* to *strongly agree*). Q8 asked how frequently the respondent incorporated climate change considerations into their planning work.

Question (6)

Please indicate your level of awareness of climate change on planning issues (respondents were asked to rate their awareness on a seven-point scale ranging from very aware to very unaware).

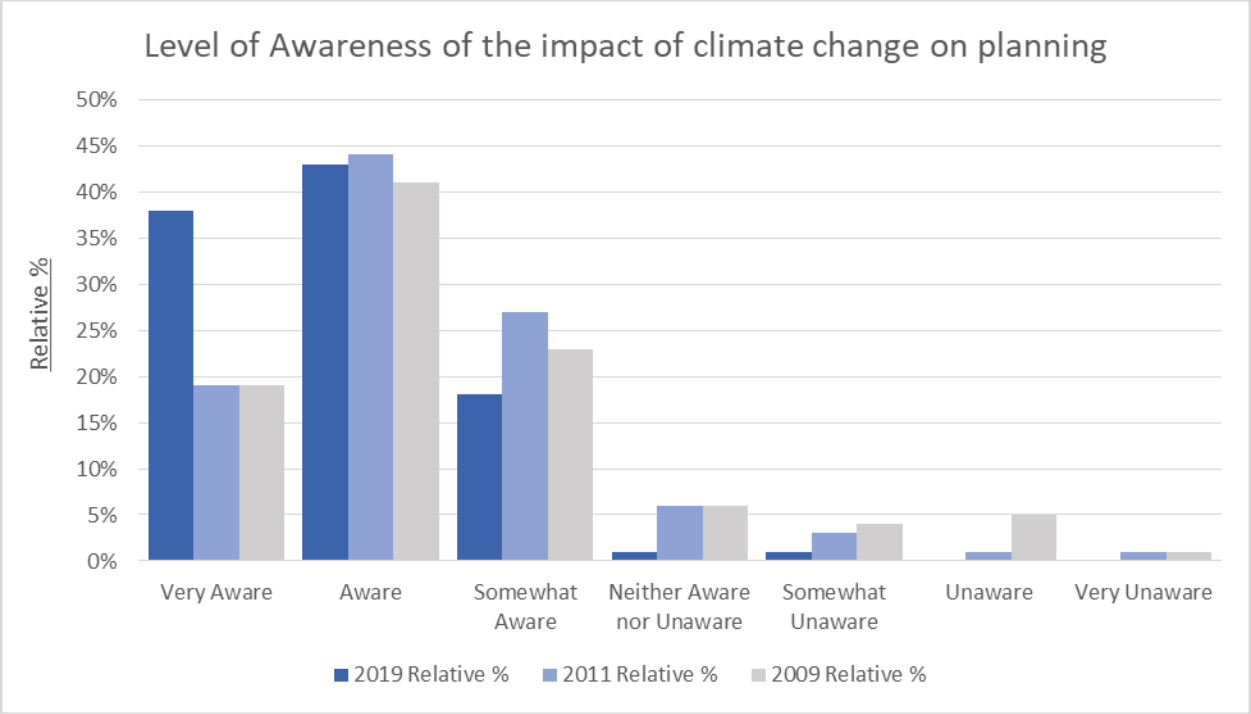
Results and analysis

This question was asked to measure how the profession's awareness of climate change has changed since CIP's previous surveys.

The count below provides a comparison of the 2019 responses with three previous surveys (2009, 2011, and 2012). A noticeable trend is that while answers to *somewhat aware* and *aware* have fluctuated over the three surveys, the count in the *unaware* categories has steadily decreased. The most significant increase has been in the *very aware* category, in which the percentage of respondents has doubled between 2009 and 2019 (from 18% to 38%). It should be noted that for previous surveys, there was an "I don't know" option. This question was removed for the 2019 survey.

	2009	**2011**	**2012**	**2019**
Very (completely) Aware	331 (18%)	223 (18%)	219 (16%)	509 (38%)
Aware	700 (38%)	525 (43%)	666 (49%)	579 (43%)
Somewhat Aware	403 (22%)	324 (27%)	411 (30%)	237 (18%)
Neither Aware nor Unaware	103 (6%)	75 (6%)	33 (2%)	12 (1%)
Somewhat Unaware	76 (4%)	32 (3%)	27 (2%)	10 (1%)
Unaware	85(5%)	10 (1%)	5(0.5%)	4 (0%)
Very (completely) Unaware	18(1%)	7 (1%)	3(0.2%)	1(0%)

Acknowledging that the total number of responses differ for each survey, the percentage differences are significant. The graph below presents a comparison between 2009, 2011, and 2019:



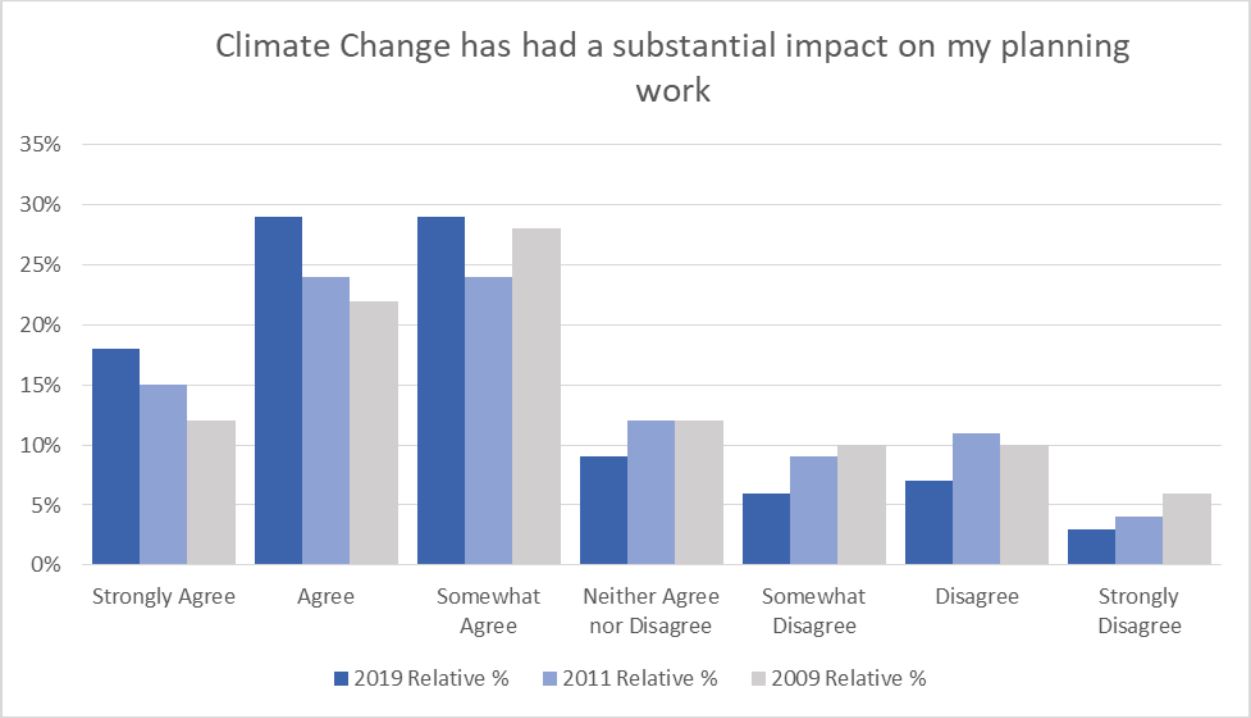
Question (7)

Please indicate how strongly you agree or disagree with the following statement: "*Climate change has a substantial impact on my planning work*".

Results and analysis.

This question was asked in order to further examine the extent to which planners were applying a climate change lens to their work.

The two highest scoring answers to this question in 2019 were *somewhat agree* (29%) and *agree* (29%). The answers for *neither agree nor disagree, somewhat agree, disagree,* and *strongly disagree* were significantly lower (at 9%, 6%, 7%, and 3% respectively). As a general observation, comparing 2011 and 2019, the answers to those who agree with the statement has increased (between 3% and 5%) while those who disagree has decreased (between 1% and 4%). These are not remarkable changes, but do demonstrate a trend to a more general acceptance that climate change is having a substantial impact on planning work.



General Impact Line

Most of the results presented in this report were compared directly against the results of question 7, which asked the extent to which respondents perceived that climate change has a substantial impact on *their* planning work.

The green line shown on a number of the graphs represents the percentage of respondents who either *agreed* or *strongly agreed* with that statement (accounting for 47% of responses to this question).

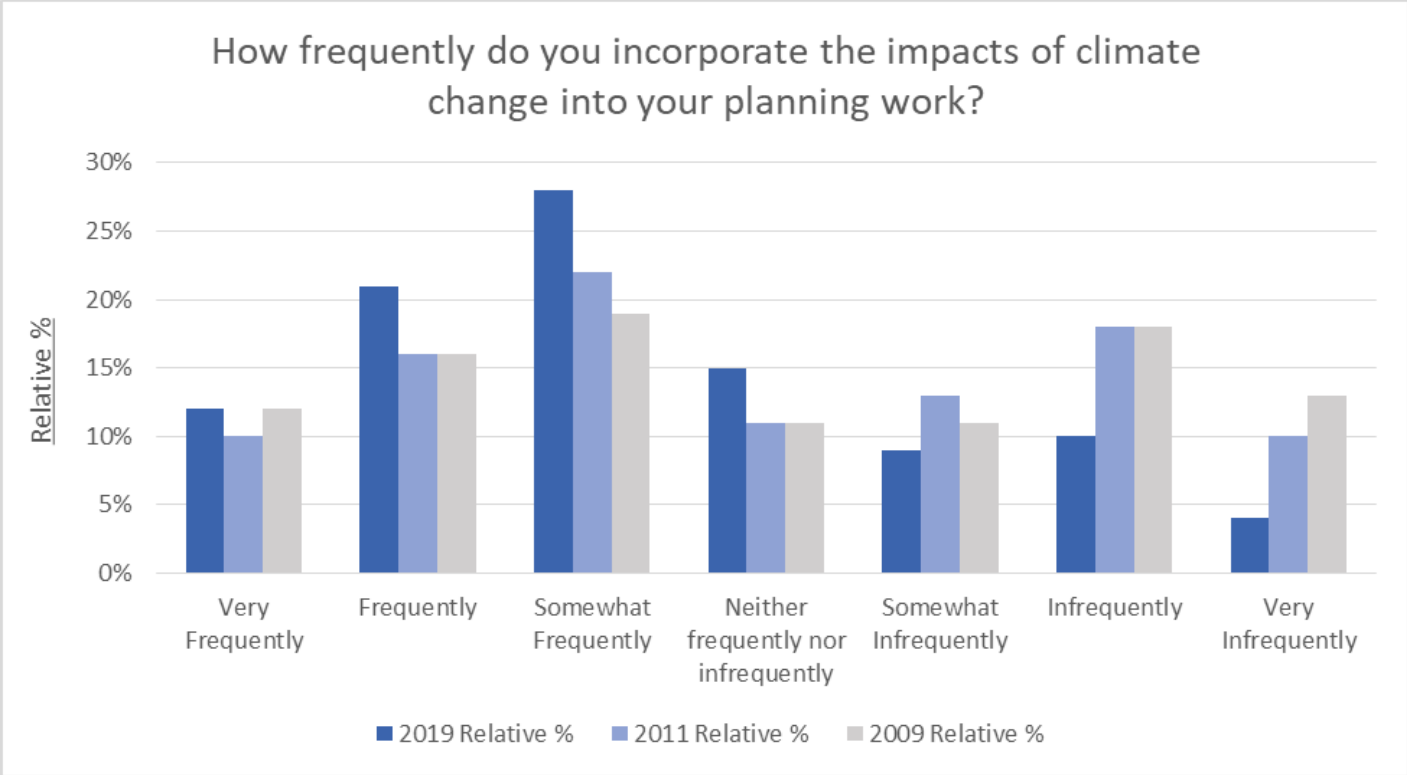
The purpose of these comparisons was to ascertain a deeper understanding of knowledge sources, tools used, and barriers perceived by respondents who were more likely to be dealing with climate change related issues in *their* planning work, as opposed to those who were aware of the impact of climate change on planning issues more generally.

Question 8

How frequently or infrequently do you incorporate the impact of climate change into your planning work?

Results and analysis

The highest two results were *somewhat frequently* (28%) and *frequently* (21%). A notable comparison with 2011, is that there is a general trend towards climate change considerations being incorporated more frequently in 2019, and that the answer to *infrequently* dropped by 8%.



Geography and environment

Question 5

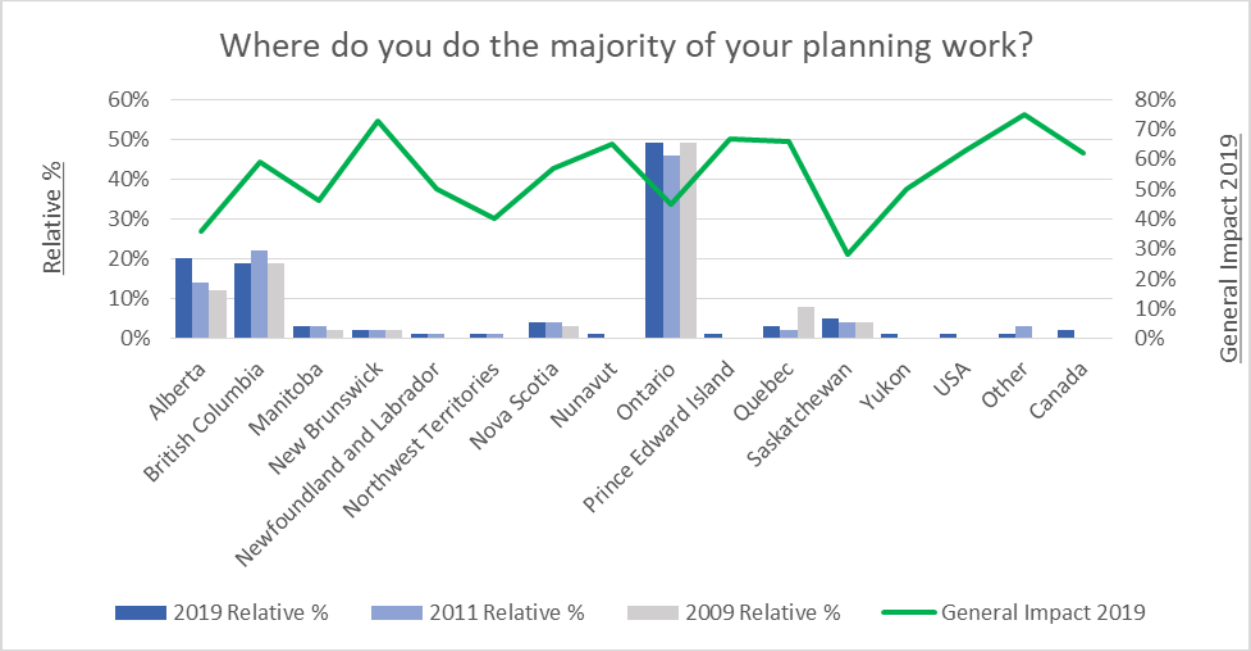
Please indicate in which geographical region(s) you conduct the majority of your planning work. Please choose all that apply.

Results and analysis

This question was asked to determine trends across the provinces and territories in relation to where planners worked. The question specifically asked where respondents conducted the majority of their planning work, as they may not necessarily conduct work in provinces in which they reside. Respondents could also pick more than one option.

Province/Territory	**Count**	**Percentage**
Alberta	268	20%
British Columbia	250	19%
Manitoba	40	3%
New Brunswick	28	2%
Newfoundland & Labrador	18	1%
Northwest Territories	15	1%
Nova Scotia	51	4%
Nunavut	18	1%
Ontario	654	49%
Prince Edward Island	13	1%
Québec	47	3%
Saskatchewan	66	5%
Yukon	18	1%

The distribution is a fair representation of CIP membership, with the only underrepresentation being from Québec. One comparison to be made is how answers to question 7 (*climate change has a substantial impact on planning work*) vary across provinces and territories; the graph below demonstrates this, and also shows responses from 2009, 2011, and 2019.



While the general impact line only applies to 2019, it suggests that climate change has a substantial impact on planning work (between 60% + 80%) in the following provinces and territories: New Brunswick, British Columbia, Nunavut, Nova Scotia, Prince Edward Island, and Québec (between 60% + 80%). At between 40% and 50% Manitoba, Newfoundland and Labrador, the Northwest Territories, and Yukon score lower on general impact with the lowest impact reported in Saskatchewan and Alberta, which are below 30%. However, it should be acknowledged that respondents could select more than one province in which they worked and so the perceptions of impact are not necessarily reflective of those residing in the provinces. The main conclusion from these results is that the perceived impact of climate change on planning work by planners varies significantly across the provinces and territories.

Question 9 and Question 10

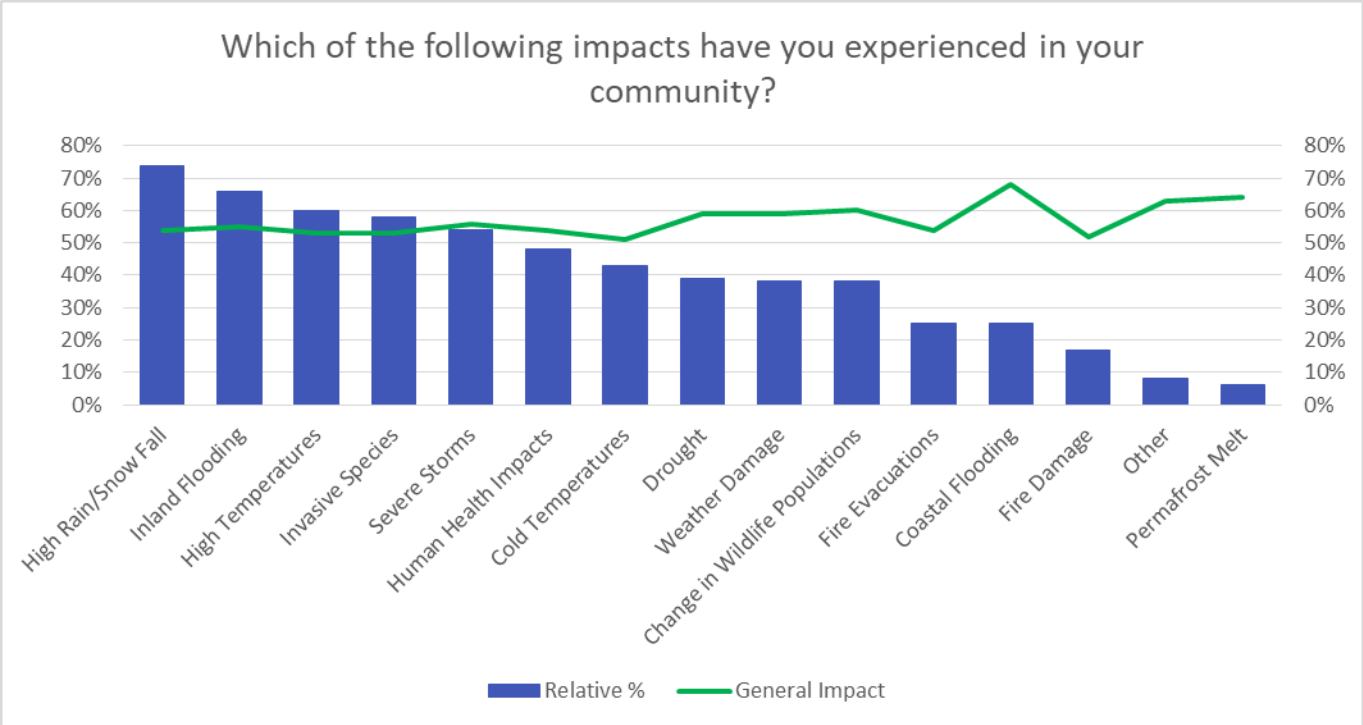
- *Please indicate which of the following, if any, you have experienced in the regions or communities where you practice. Please choose all that apply.*
- *Please indicate which of the following impacts you believe you will have to address in your professional practice within the next 10 years.*

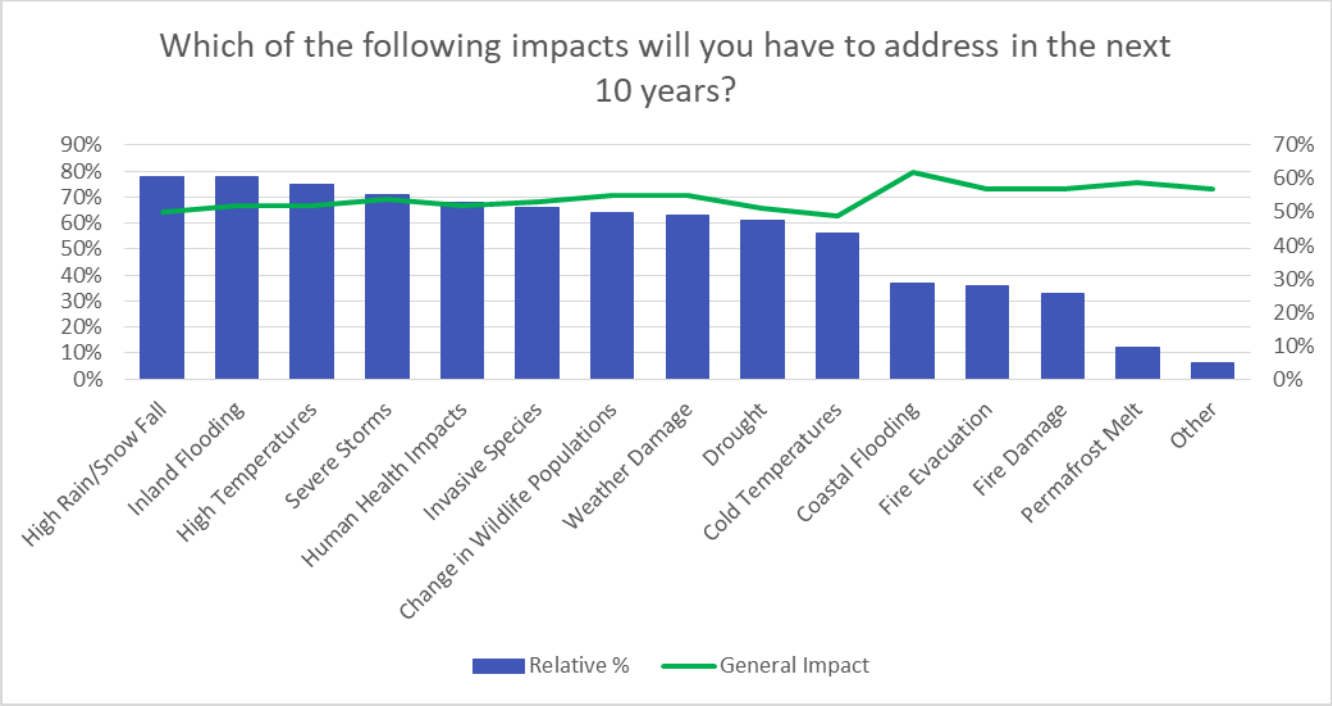
Results and analysis

Two questions were asked to ascertain respondents' perceptions about how climate change related challenges affected their work. Participants were asked to choose from a number of options from *high rain and snow fall* to *severe storm events* to *permafrost melting*. Respondents were asked to answer this question to gauge their understanding of the importance of these issues now, and their predictions for the next 10 years.

Overall, the results show that there is a general perception that the issues facing communities today will be amplified in 10 years' time. *High rain/snowfall*, *inland flooding*, and *high temperatures* remain the top three issues planners perceive their communities are dealing with, and that they will have to deal with in the next 10 years. *Invasive species* drops slightly in the ranking for the 10 year estimation, as *severe storms* and *human health impacts* move up one place each.

Planners who considered *coastal flooding* to be an important issue also *agreed* or *strongly agreed* that climate change has a substantial impact on their planning work, indicating that the impacts of climate change are more apparent to those working in coastal areas.



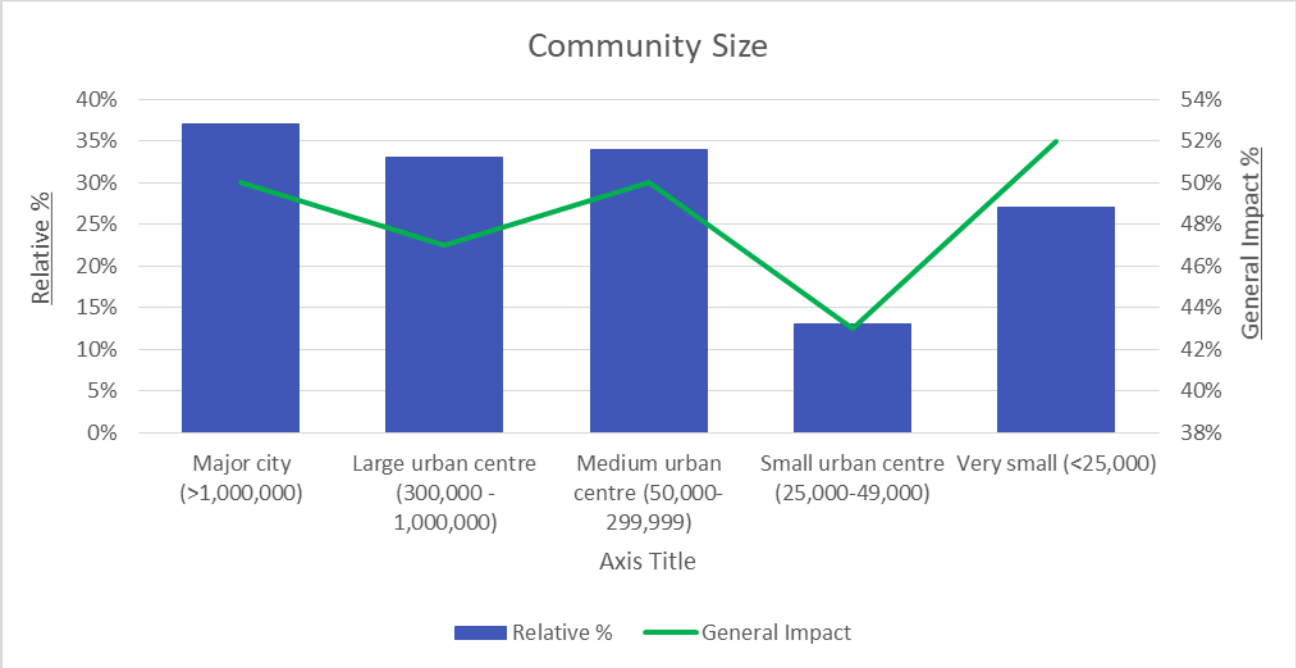


Question 24

If you work with / in a community, what size is it?

Results and analysis

This question was asked to compare understanding about climate change with different sized communities. The graph below shows there was an even distribution of respondents across most sizes of communities with the he general impact line dipping significantly for small urban centres. It is unclear why this is, though could be attributed to lower response rates from communities of this size.



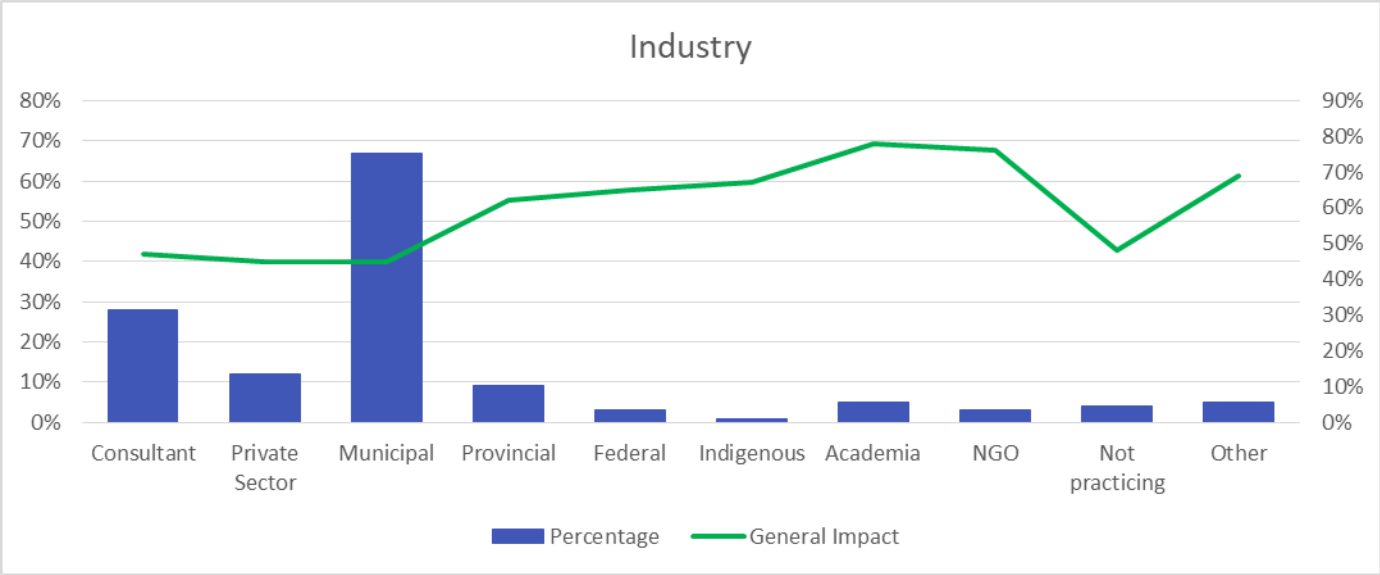
Professional background

Question 20

Please tell us in which area of the industry you are currently employed. Please choose all that apply.

Results and analysis

This question was asked in order to segment findings according to which area of industry planners worked.



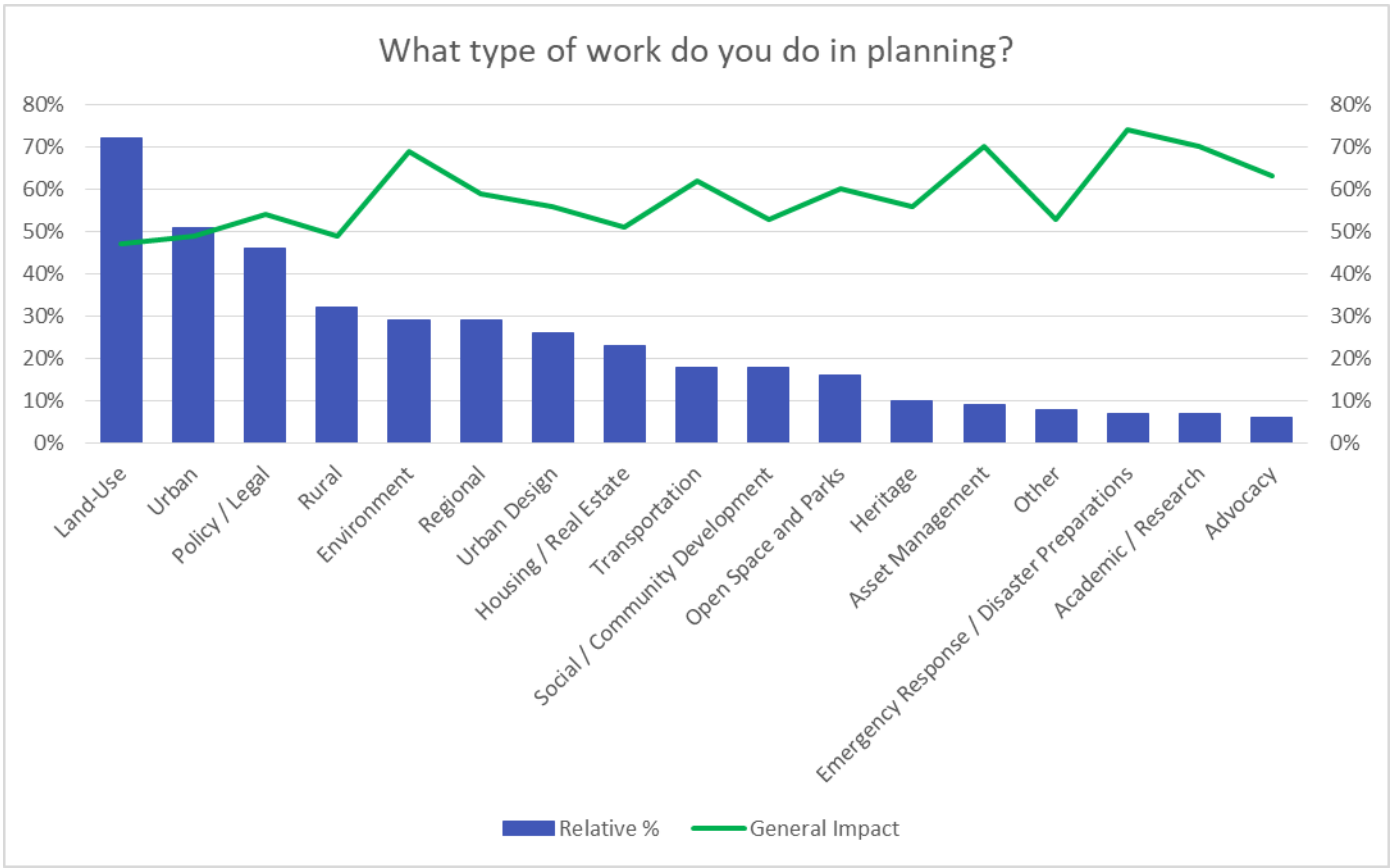
The graph shows that a high proportion of respondents work for municipalities (67%). Given this, one finding when compared to the general impact line, is that just under half of municipal respondents did not *strongly agree* or *agree* that climate change had a substantial impact on their work. There could be a number of reasons for this. One could be that climate change issues may not be immediately apparent in their work, which is more associated with municipal planning duties, such as assessing land use and zoning applications. This is compounded by the fact that when compared to question 19 below (specialization), those who indicated that they specialized mostly in land-use planning did not score very highly on recognition of general impact. On the other hand, those who indicated that they worked in policy scored significantly higher. Therefore, the conclusion should not necessarily be that half of municipal planners do not consider climate change in their day to day work. It just may not be immediately apparent in the decisions they make, or the policies to which they refer, as each project will be balancing a number of more (seemingly) tangible priorities. CIP recognizes that the cumulative impact of individual land use and zoning decisions has a significant impact on climate change adaptation and mitigation, and that more may need to be done to raise general awareness and appreciation of this.

Question 19

Please tell us which of the following most closely describes the type of work you do in planning. Please choose all that apply.

Results and analysis

The top three areas that respondents said they worked in were *land-use*, *urban design*, and *policy/legal*. The extent to which climate change has a substantial impact on their planning work was highest with those involved in *emergency response/disaster preparations*, as well as those in *environment* and *asset management*. This is understandable given that asset management is an increasingly important entry-point for many local governments to consider climate change preparedness, and future projections (e.g. related to infrastructure decisions - either new build, maintenance, or repair following a severe weather). However, while asset management may be where planners see the most obvious impact of climate change on their work, it is considered that there is more to do to improve recognition climate change impacts on other more mainstream planning activities.

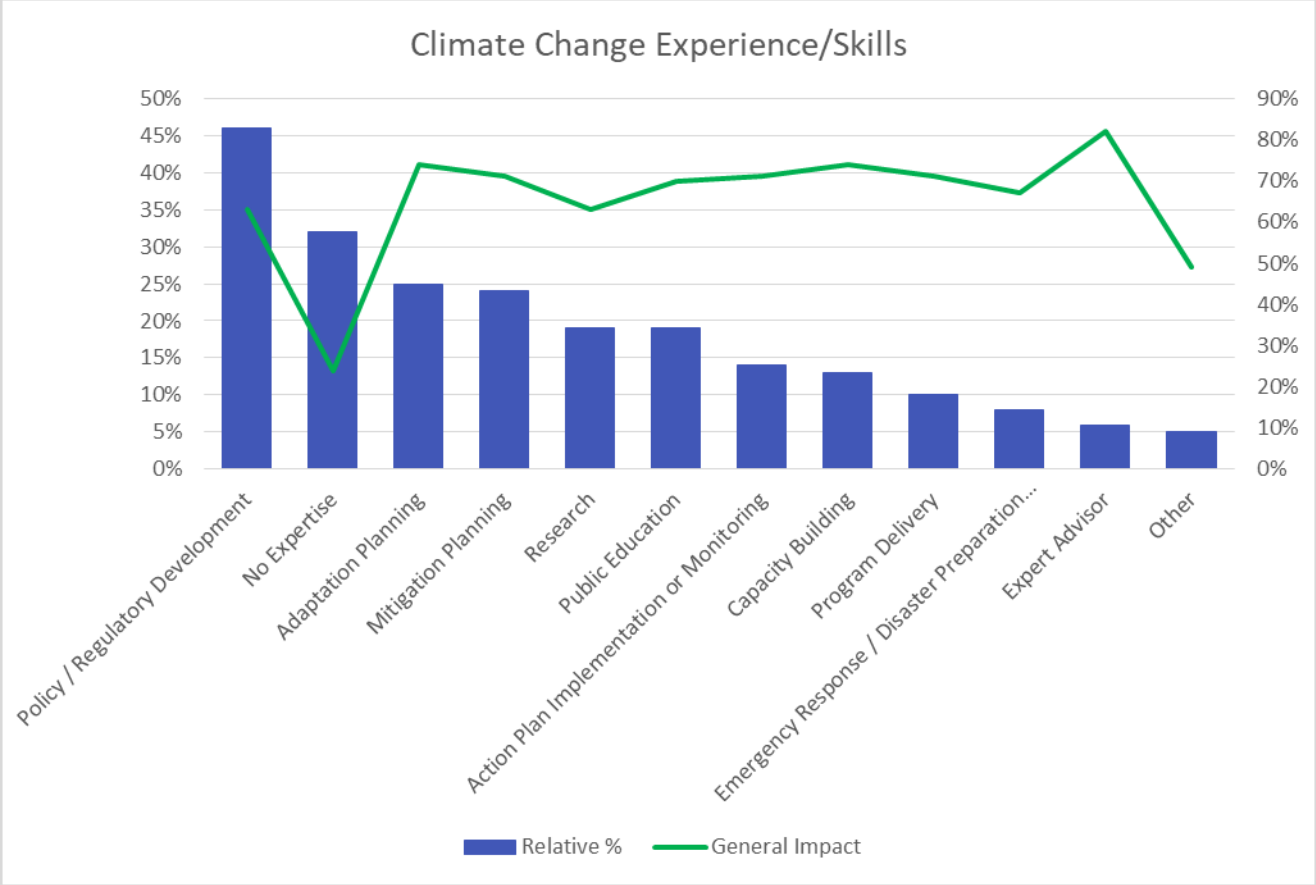


Question 21

Please indicate which, if any, the following best describes your area of climate change experience and skills. Please choose all that apply.

Results and analysis

As part of the survey, CIP wanted to find out from those who identified as dealing with climate change issues, what job title they most identified with. A significant amount (30%) stated that they had no expertise, which correlated strongly with a low general impact score. Otherwise, the most common climate change related skill selected was *policy and regulatory development specialists* (46%), with *adaptation* planning being the third highest (25%). The specialisms which ranked highest in terms of perception of climate change impact on planning work were *expert advisor, capacity building*, and *adaptation planning* specialists.



Sources of knowledge and information

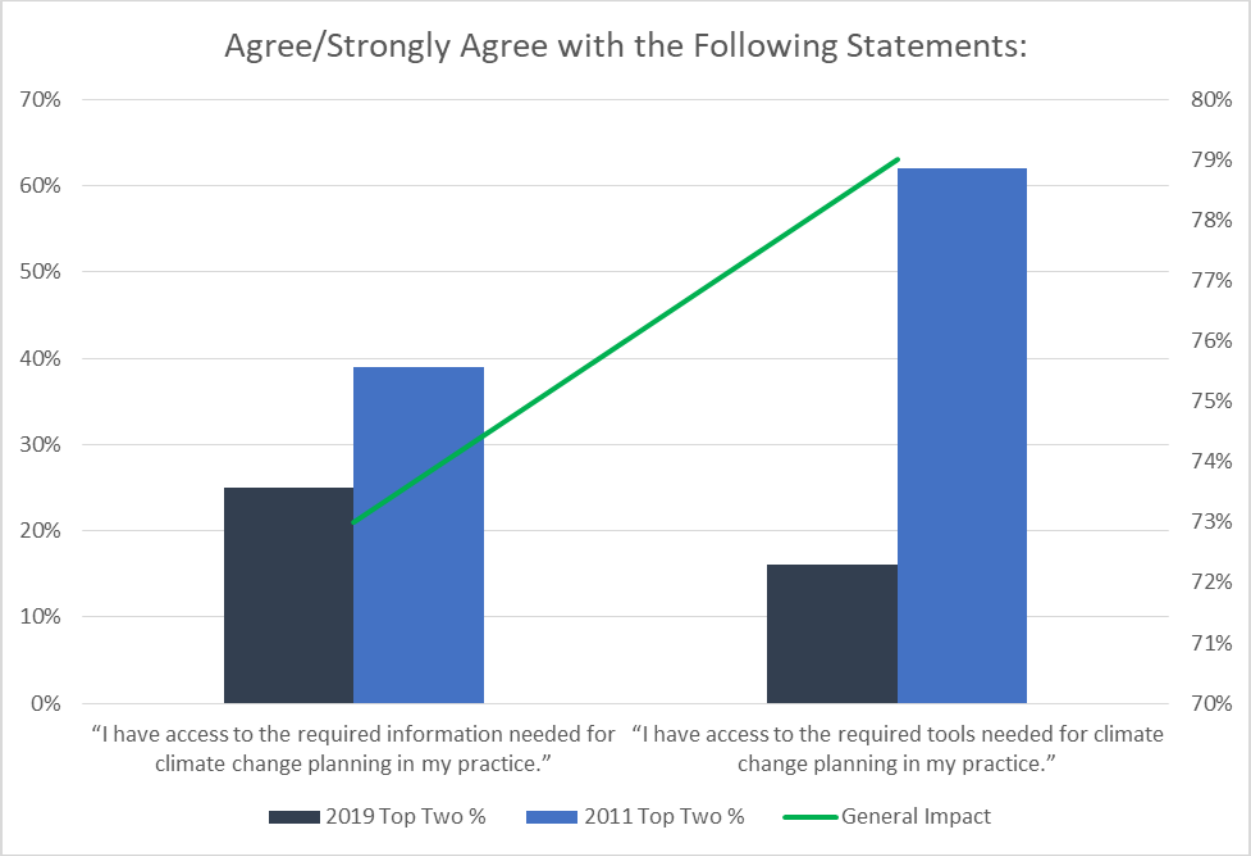
Question 11

P*lease indicate how strongly you agree or disagree with each of the following statements*

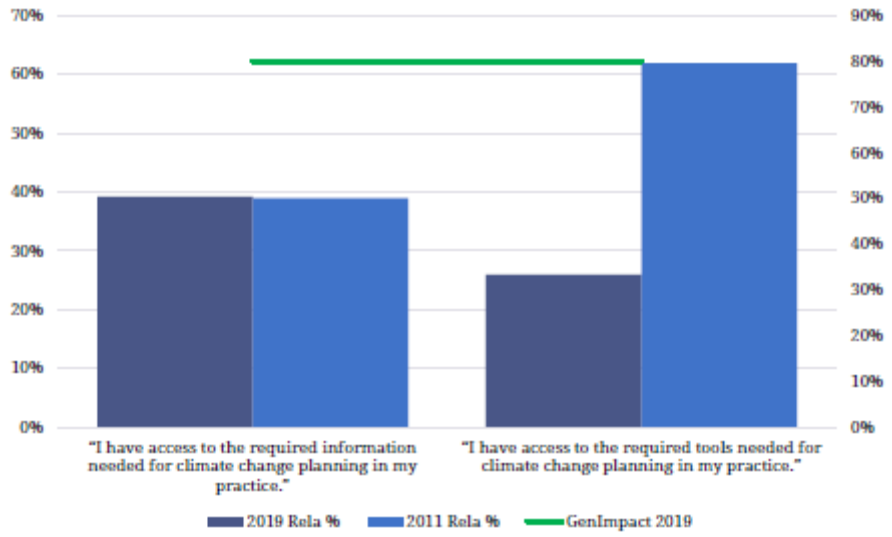
- *I have access to the required information needed for climate change planning in my practice.*
- *I have access to the required tools needed for climate change planning in my practice.*

Results and analysis

Participants were asked about the extent to which they believed they had access to the right information and tools to incorporate climate change into their work. Comparing the top two responses (*agree* and *strongly agree*) from 2019 to those from 2011, the results of this question were substantially different. In 2019, less respondents (approx. 8%) said they have access to the required information, and substantially less (approx. 45%) believed they did not have the required tools to incorporate climate change planning into their work. While at first glance this may seem concerning, it is unlikely that there is less information or tools available in 2019 than in 2011. This could be an indication that planners have a more sophisticated understanding now of the type of information or tools that would be helpful for them to integrate climate change planning into their work, compared with awareness levels and types of information and tools available in 2011. It could also be that planners are less sure about where to access this information (or that it is not in a suitable format for their needs).



A further segmentation exercise was done to ascertain the extent to which this trend was the case for those who specialize in adaptation planning (285 of respondents identified as having adaptation experience and skills, which amounted to 33% of all respondents):



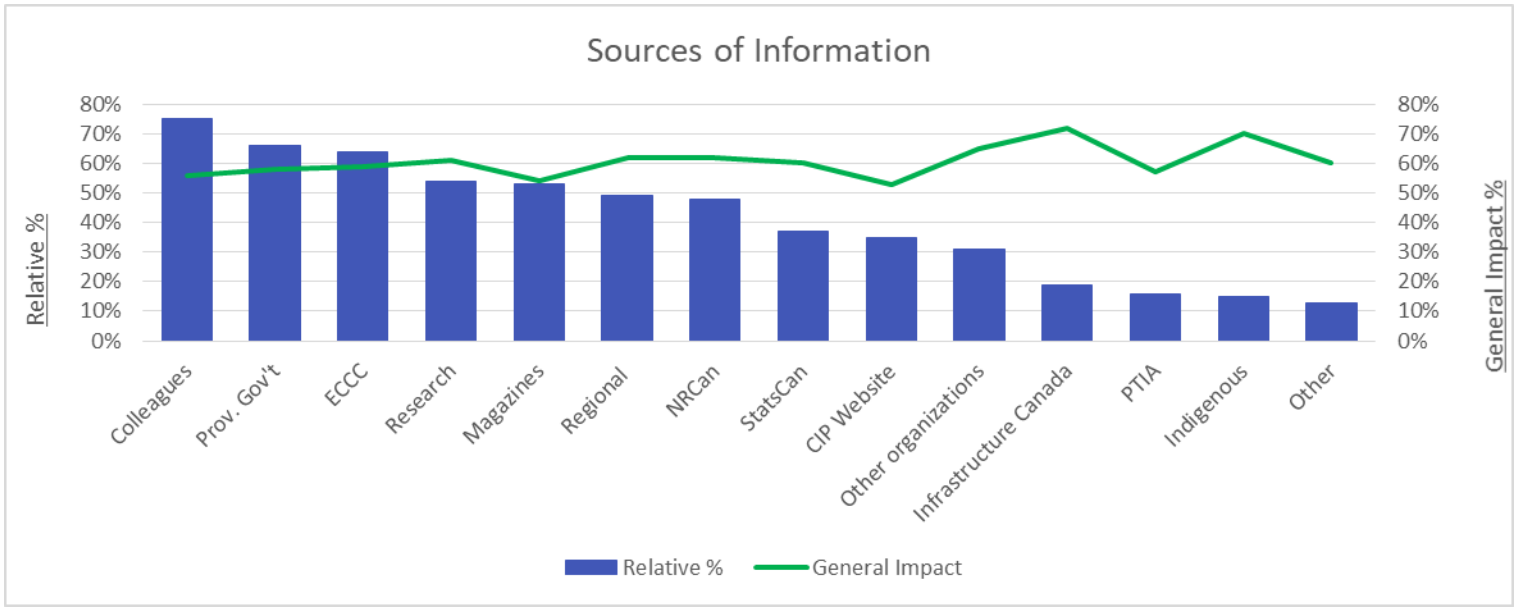
Whereas the findings are similar for the adaptation specialism insofar as there has been a decrease in the perception that planners have the requisite tools needed to incorporate climate change into practice, it should be noted that roughly the same percentage of planners specializing in adaptation reported that they had access to relevant information needed.

Question 12

When looking for information that will inform your climate change planning work, which sources of information do you consult?

Results and analysis

Respondents were asked about what sources of information they used to inform their planning work. As may be expected, asking colleagues and professional networks scored highly (75%). Provincial government departments responsible for climate programs (66%) and Environment and Climate Change Canada (64%) also scored highly. It is also worth noting that the line indicating a high recognition of the impact of climate change on planning work peaked at Infrastructure Canada and Indigenous sources of knowledge. While not shown in graph form, the ranking remains very similar when segmented against adaptation planning specialists.



Tools

Question 13

Please indicate how frequently or infrequently you use each of the following planning tools with respect to addressing the impact of climate change.

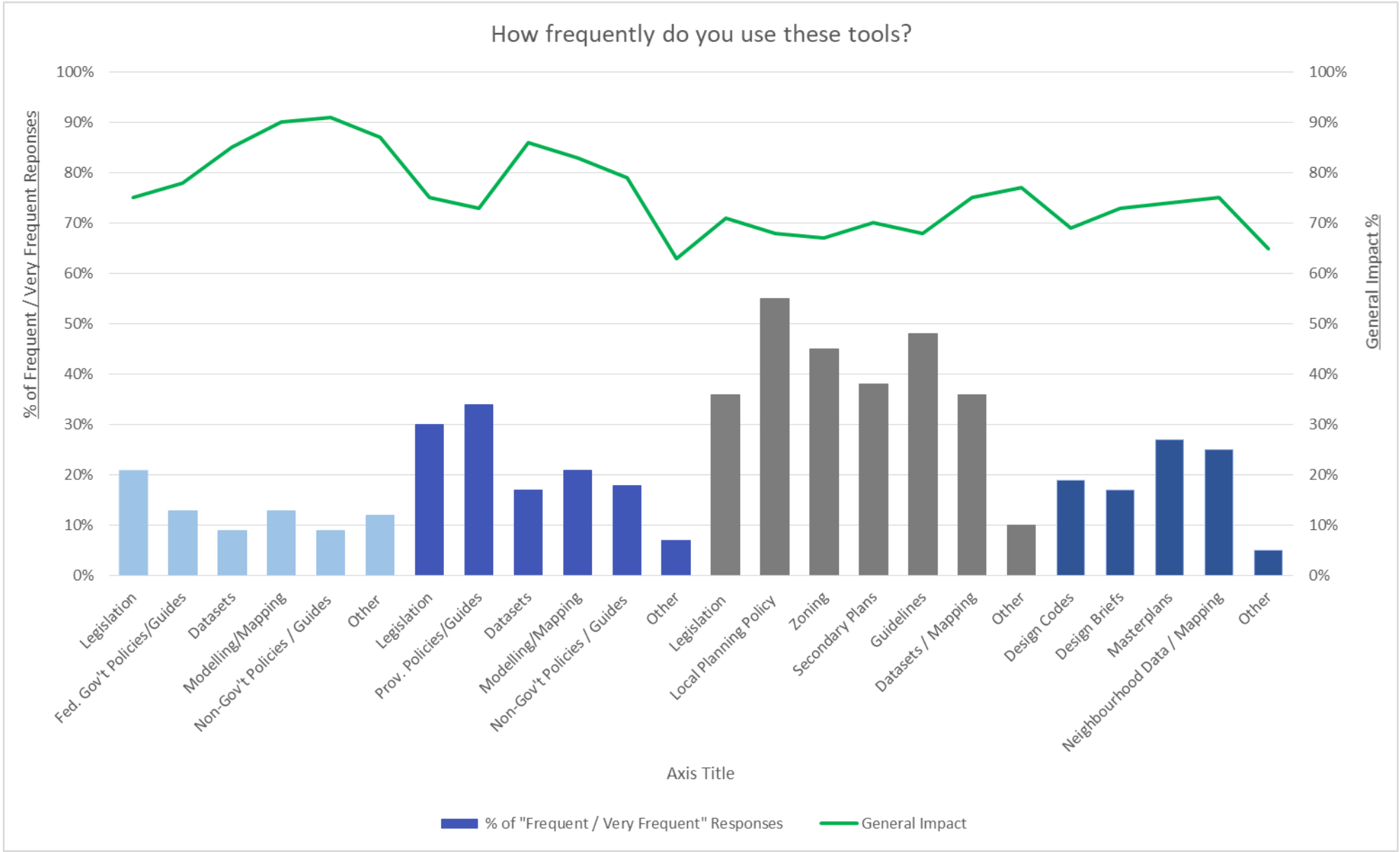
Results and analysis

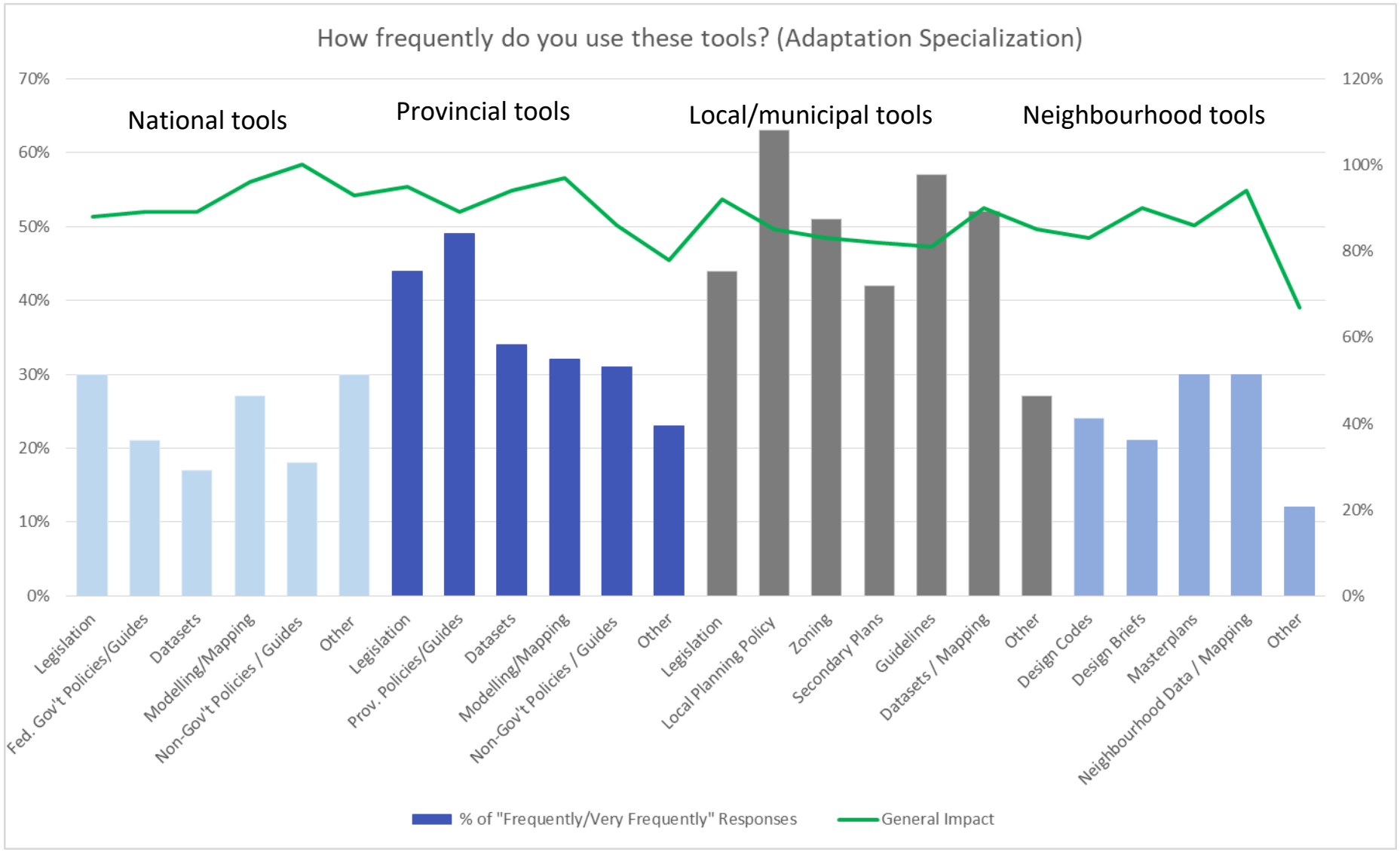
In previous surveys, participants were asked which tools they used to conduct their work incorporating a climate change lens, which resulted in over 500 open ended responses. Having analyzed these results from 2009 and 2011, CIP was able to modify the 2019 questions by grouping the type of tools depending on jurisdictional level (neighbourhood, local, provincial, or national) and within these categories, grouping types of tools. This has made it easier to identify the jurisdictional level and type of tools that are most used by planners to inform their work on climate change.

Respondents who answered *frequently* and *very frequently* for the options provided were analyzed to compare the overall frequency of use of tools. The graph below shows that tools at the local jurisdictional level are the most commonly used, with local planning policies scoring highest, followed by local guidelines, zoning, and secondary plans.

Compared to the general impact line, the graph shows that those who perceive that climate change has a substantial impact on their work most frequently use modelling and mapping, as well as national non-governmental policies and guides.

The analysis went in to more detail to consider whether any particular tools were more popular for those who identified as specializing in adaptation planning. A general observation is that tools at the provincial level are proportionally more frequently used across the board (between +11% and +17% higher when compared to general results), and that data sets score significantly higher in all three categories of national (+14%), provincial (+17%), and local (+16%) when compared to general results.


How frequently do you use these tools?
% of Frequent / Very Frequent Reponses
General Impact %
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Legislation
Fed. Gov't Policies/Guides
Datasets
Modelling/Mapping
Non-Gov't Policies / Guides
Other
Legislation
Prov. Policies/Guides
Datasets
Modelling/Mapping
Non-Gov't Policies / Guides
Other
Legislation
Local Planning Policy
Zoning
Secondary Plans
Guidelines
Datasets / Mapping
Other
Design Codes
Design Briefs
Masterplans
Neighbourhood Data / Mapping
Other
Axis Title
% of "Frequent / Very Frequent" Responses
General Impact

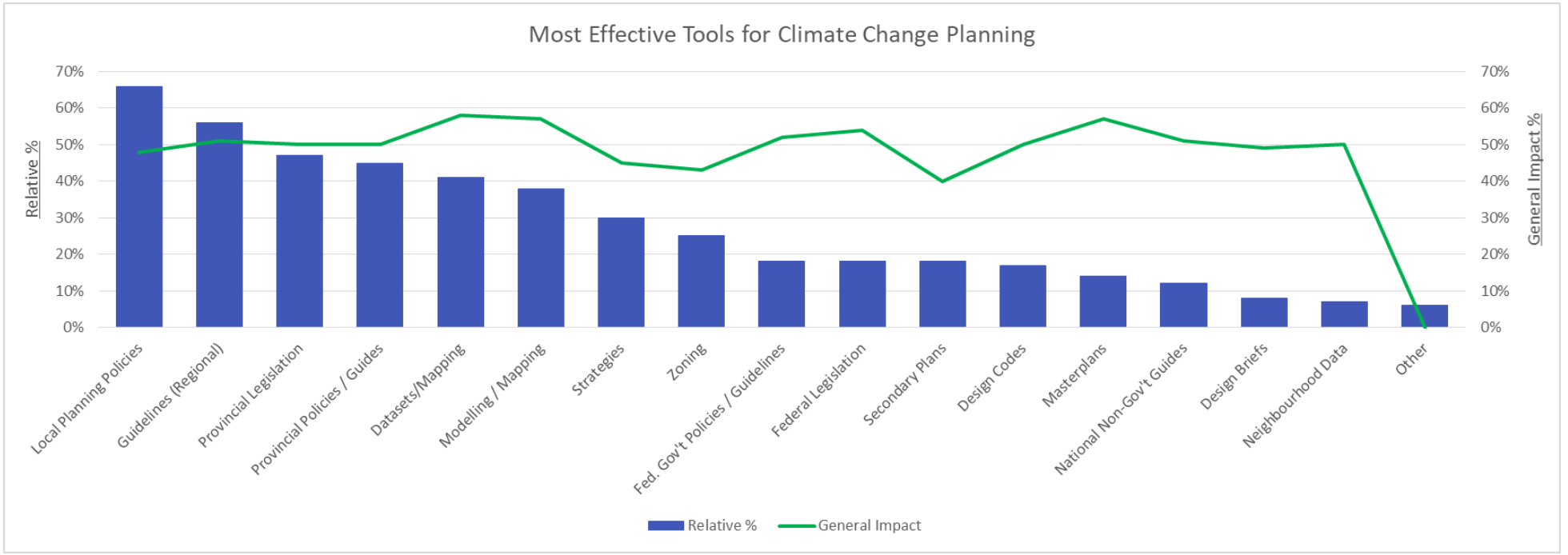

How frequently do you use these tools? (Adaptation Specialization)
National tools
Provincial tools
Local/municipal tools
Neighbourhood tools
70%
60%
50%
40%
30%
20%
10%
0%
120%
100%
80%
60%
40%
20%
0%
Legislation
Fed. Gov't Policies/Guides
Datasets
Modelling/Mapping
Non-Gov't Policies / Guides
Other
Legislation
Prov. Policies/Guides
Datasets
Modelling/Mapping
Non-Gov't Policies / Guides
Other
Legislation
Local Planning Policy
Zoning
Secondary Plans
Guidelines
Datasets / Mapping
Other
Design Codes
Design Briefs
Masterplans
Neighbourhood Data / Mapping
Other
% of "Frequently/Very Frequently" Responses
General Impact

Question 14

Please take a moment to consider the same set of tools described in the previous questions. When considering those tools, please indicate which five you find to be the most effective for applying a climate lens to your planning work?

Results and analysis

While question 13 considered frequency of tools used, question 14 considered how useful tools are perceived to be. Local plans (e.g. official / Municipal development Plan) scored highest (66%), guidelines (e.g. on storm water management) scored second at (56%), and provincial legislation (47%) scored third. The general impact line is fairly constant, although noticeably one area where it is highest corresponds with datasets and mapping.



Barriers

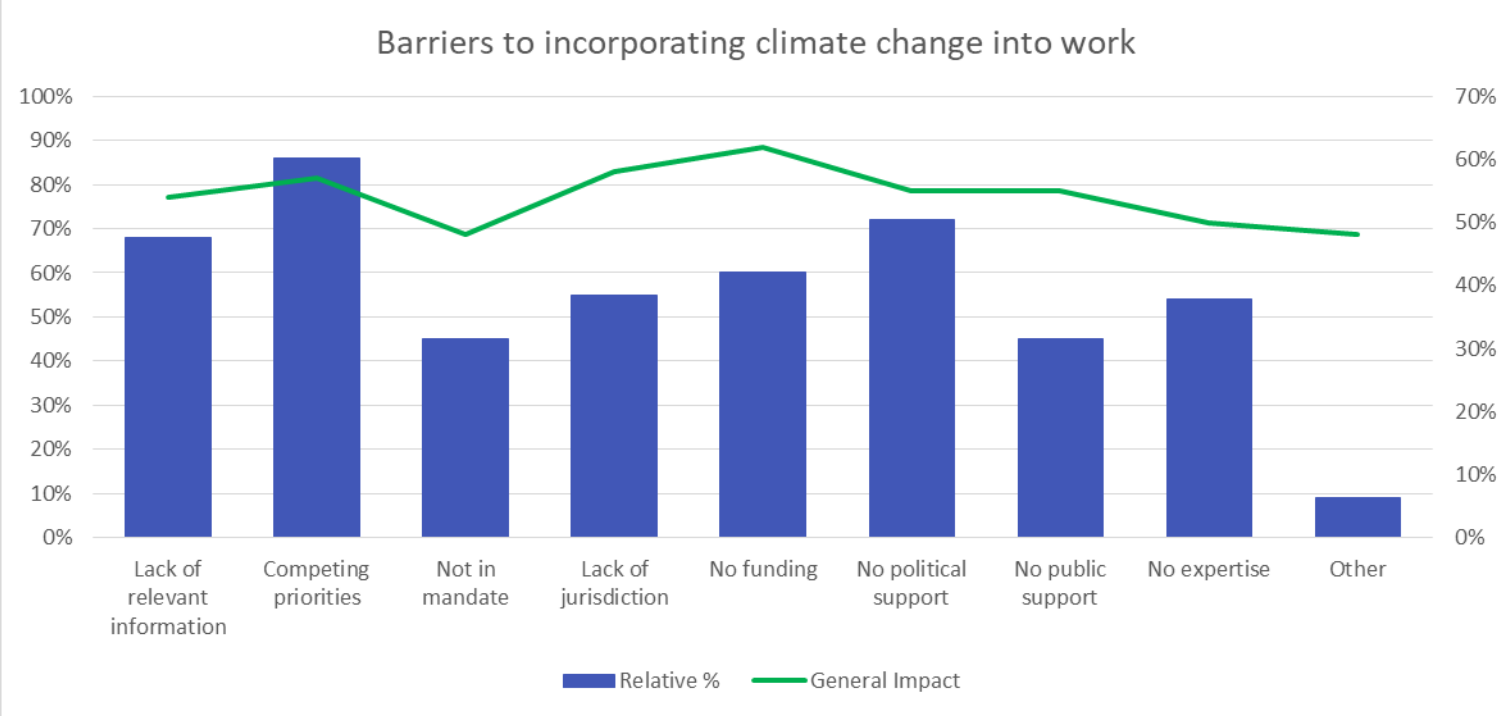
Question 15

Please indicate which barriers, if any, you experience when incorporating the effects of a changing climate into your work.

Results and analysis

This question was asked in order to inform how to assist planners in incorporating climate change mitigation and adaptation considerations as part of their work. The highest barrier, at 85%, was competing priorities (e.g. financial viability). Lack of political support was also ranked high at 72%. These findings are reflective of the externalities that may be perceived to be outside of the profession's control, yet which substantively influence a planner's ability to integrate climate change considerations into their work. Further discussions about how best to reconcile competing priorities with those who make viability decisions could be one take-away from this finding, as well as the need to better communicate with political decision makers.

While not shown on the graph, when the results were segmented to focus on respondents who indicated adaptation as a specialism, the most significant difference was that adaptation specialists saw their own lack of expertise as much more of a barrier than shown in the general response rate (+32%). This indicates a perceived need from planners for further training on adaptation planning.



Conclusions and next steps

This survey represents an important step towards implementing CIP's Policy on Climate Change Planning. The strong response rate and engagement from planners throughout the process is indicative of how important planners consider the issue. It is not possible in one report to reflect on the potentially endless conclusions from the data collected, but there are a number of key findings (outlined at the beginning of the report), which are a foundation from which to take next steps.

Reflecting on the past ten years since CIP climate change benchmarking surveys were first initiated, it is clear that general levels of awareness of the impact of climate change on planning issues has significantly increased. This is compounded by findings that show planners are incorporating the impact of climate change into their work with increasing frequency.

The 2019 survey has drawn out the immediate issues that planners perceive to be facing in relation to climate change, as well as those they anticipate they will face in the next ten years. The study also identified the most commonly used sources of climate change related information and tools, in addition to the main barriers planners perceive are preventing them from applying a climate lens to their work. Based on this information, the following next steps have been identified:

1) Increase planners' awareness of the impact of climate change on planning issues and general awareness about how planning work influences climate change.

While 81% of respondents were either *aware* or *very aware* of the impact of climate change on planning issues, there is still an opportunity to build awareness within the planning profession. In addition, there is a need to better improve understanding about how climate change influences planning work. This could apply as much to those who influence and have a stake in planning systems and processes (e.g. public, developers, and politicians) as it does to planners. In support of this objective, CIP will continue to disseminate information about climate change planning through its Continuous Professional Learning program and organizational resources (i.e. *Plan Canada* magazine, strategic partnerships and programs, etc.).

2) Develop training tools and activities focused on high rain/snowfall, inland flooding, and high temperatures.

These three issues - high rain/snowfall, inland flooding, and high temperatures - were the highest ranking issues planners perceive they are facing in their communities now and in the next ten years. CIP will review existing training tools, resources, and toolkits to reflect these priorities and identify where gaps exist. There is also a need to evaluate these three priority areas against existing scientific evidence to better evaluate the specific risk areas (i.e. geography), level of intensity/change anticipated, as well as to identify any additional risks that may have been missed.

3) Implement training on how to use sources of information and tools.

Although a low proportion (approx. 15%) of planners feel they have access to the requisite tools and information to incorporate climate change into their work, there exists a vast array of information and tools available at the local, provincial, national, and international levels. CIP can increase efforts to heighten awareness about current resources through communications and publications. However, only providing a lengthy list of links is unlikely to increase a sense of access and understanding. Therefore, delivering introductory and subsequent specialized training on how to use specific tools and datasets would be an appropriate way to help increase the profession's understanding, confidence, and use of climate change planning information and tools.

4) Build and develop communities of practice.

The survey showed that knowledge transfer between colleagues and amongst professional networks were the most frequently used "sources" of information. Acknowledging that such methods of knowledge transfer can be invaluable, CIP will seek to build networks and communities of practice in order to galvanize planners' current preference for this method of learning. This could take form as an online community, as well as to identify in-person opportunities for information exchange (i.e. topic specific symposia).

Finally, CIP would encourage other organizations and partners to support the implementation of the above recommendations, as well as to identify additional opportunities to advance best practice in climate change planning. To help assess these efforts, it will be critical to monitor the profession's awareness and engagement in climate change related issues, and to this end, CIP will strive to continue to survey profession in the next two to three years.

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APPENDICES

Listed below are the appendices that support this report. Due to their size, they are available only in digital form on CIP's website. They can be found at http://www.cip-icu.ca/ClimateChange.

The specific appendices are as follows:

Appendix 1: Survey Data

Appendix 2: Sources of knowledge and information