

Communicating about Climate Change and Biodiversity Loss

Report on Survey of Attendees

Latonnell Conservation Symposium 2023

“Changing Climates: Our Watershed Moment”



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Executive Summary

A survey of attendees at the 2023 Latornell Conservation Symposium was conducted by email in September 2023, a month in advance of the symposium. A total of 103 out of 204 early registrants completed the survey, for a response rate of 50.5%. The typical respondent identified as female (66.0%), white (81.6%), between the ages of 25 and 44 (65.0%), lives in southern Ontario, in or west of the Greater Toronto Area (75.7%), and works for a conservation authority (46.6%).

The survey was conducted as part of a dissertation research project, in partnership with symposium organizers. The purposes of the survey were: 1) to gather demographic data and opinions on climate change and biodiversity loss, 2) to determine the relative importance of communicating about climate change and biodiversity loss, 3) to gather best practices for engaging constituents on those two issues, and 4) to determine any organizational obstacles to action on climate change and/or biodiversity loss.

The vast majority of respondents (86.4%) personally felt that climate change and biodiversity loss require similar urgency. Respondents on average expressed that climate change was more important for their organization to communicate about than biodiversity loss. Nonetheless, communication about climate change tends to be less explicit than its importance suggests. Representatives of conservation authorities attributed greater importance to communicating about climate change and biodiversity loss than did other types of organizations, but conservation authorities tend to talk about climate change less explicitly. Well over half of respondents (63.2%) indicated that their organization is implementing nature-based climate solutions; many of the remainder (20.0%) were not sure.

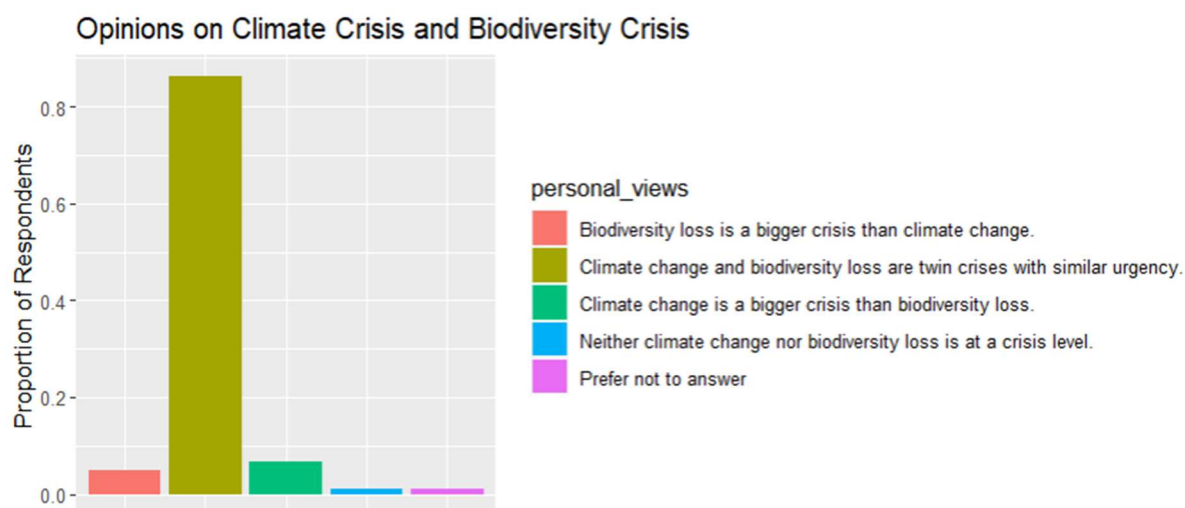
Social media was seen as the most effective engagement tool for both biodiversity loss and climate change, and flyers were seen as least effective. Reports, workshops, websites, and volunteer conservation events were seen as fairly effective. Respondent suggestions are included in the report.

The most cited obstacle to addressing climate change, biodiversity loss, and/or effective watershed management was the cost of adopting new practices, including financial and staffing costs. Costs and lack of capacity were bigger obstacles for addressing climate change than for the other two issues. Government regulations were more of an obstacle for addressing biodiversity loss and effective watershed management. Uncertainty about climate change is mostly a thing of the past.

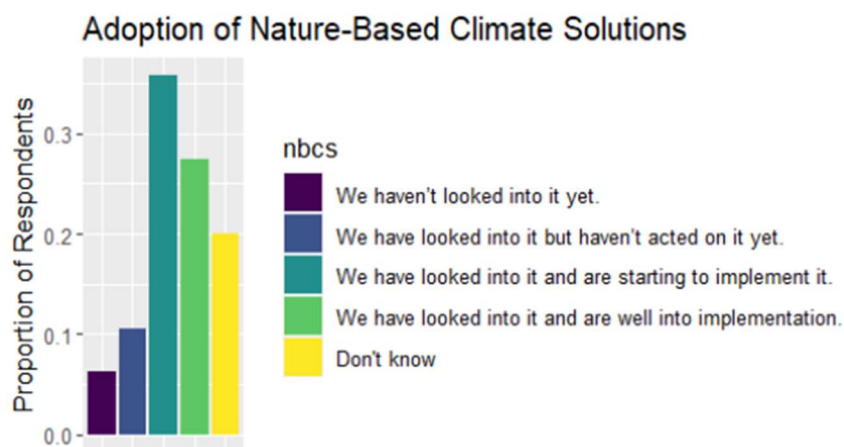
Method and General Results

A survey of attendees at the 2023 Latornell Conservation Symposium was conducted in September 2023, a month in advance of the symposium. A link was sent by email to an anonymous online survey hosted on York University's MachForms platform. A total of 103 out of 204 registrants¹ completed the survey, for a response rate of 50.5%. This is a reasonable response rate for a survey of this type, but results are not generalizable. Descriptive statistics and summaries of open-ended questions are included in this report.

The first notable result of the survey is that the vast majority of respondents (86.4%) personally felt that climate change and biodiversity loss both require similar urgency. All 103 respondents answered this question. Because of the overwhelming unanimity on this item, it was not used in further breakdowns.



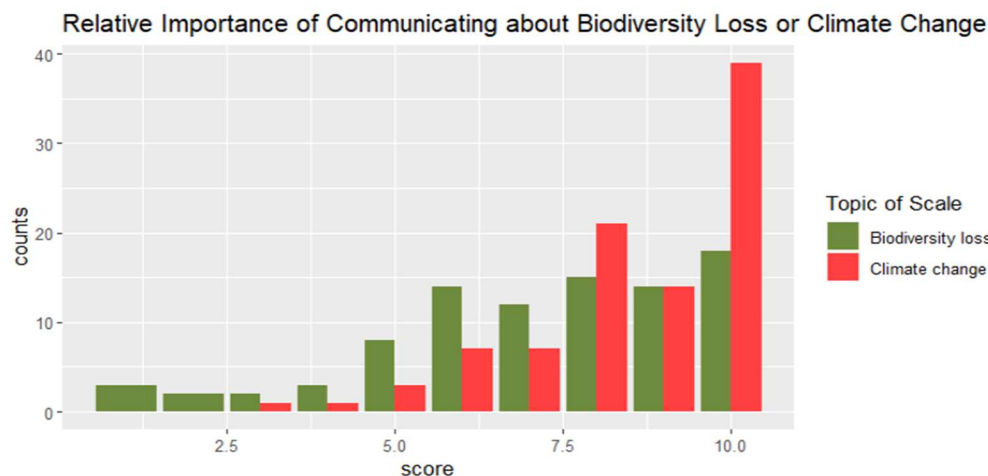
Regarding adoption of nature-based climate solutions, 63.2% of respondents indicated that their organization is implementing it, 16.8% said they were not yet implementing it, and the remaining 20.0% did not know whether their organization is implementing it. Nobody indicated that their organization had rejected the concept. This question was answered by 95 out of 103 respondents. The remaining 8 respondents were attending the symposium as students and were not asked the bulk of the questions.



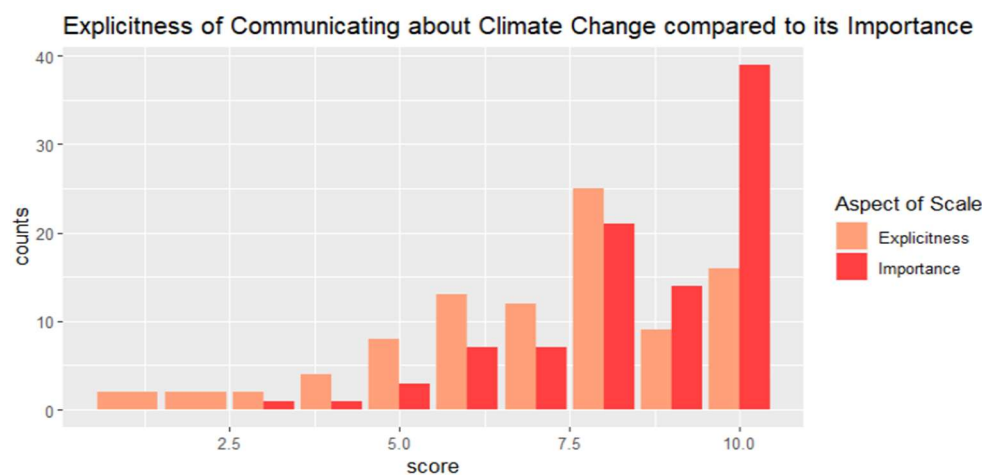
¹ Although attendance at the annual symposium was approximately 300 people, only 204 had completed the registration process in time for the survey.

Relative Importance of Communicating about Climate Change versus Biodiversity Loss

The survey asked representatives of organizations to indicate, on a scale from 1 to 10, how important climate change and biodiversity loss are as issues for their organization to communicate with their constituents about. The overall result was that climate change (mean = 8.57) is more important than biodiversity loss (mean = 7.24), as shown by the table below.



A third question asked representatives of organizations to indicate, on a scale from 1 to 10, how implicit or explicit their messaging about climate change is. As expected, those organizations tend to communicate less explicitly (mean = 7.22) about climate change than their importance (mean = 8.57) suggests, as shown by the table below. These questions were answered by 93 respondents. The red bars for the importance of climate change are the same in the above and below charts.



Interestingly, representatives of conservation authorities (who made up 50.5% of respondents that represent organizations) rated the importance of communicating about climate change (mean = 9.04) higher than did other respondents (mean = 8.11) but simultaneously indicated that they communicate about climate change less explicitly (mean = 7.09) than others (mean = 7.34). Conservation authority representatives also rated the importance of communicating about biodiversity loss (mean = 7.58) higher than did others (mean = 6.91). Because of low numbers of respondents in other categories, all organizations other than conservation authorities were grouped together.

Effectiveness of Communications Mechanisms

The survey asked about the relative effectiveness of various mechanisms for communicating about biodiversity loss and climate change. Between 90 and 93 respondents answered each question. The differences between the various mechanisms and between the two topics are reported in the following table. A more detailed set of graphs is included in Appendix A.

Communications Mechanisms in Descending Order of Average Perceived Effectiveness

(scale: 1=we don't use this mechanism, 2=not at all effective, 3=not very effective, 4=fairly effective, 5=very effective)

Mechanism	Biodiversity Loss	Mechanism	Climate Change
Social media	4.15	Social media	4.13
Reports	3.96	Reports	4.00
Workshops	3.85	Websites	3.80
Volunteer events	3.85	Workshops	3.80
Websites	3.80	Volunteer events	3.62
Newsletters	3.24	Newsletters	3.27
Open houses	2.94	Open houses	2.96
Flyers	2.64	Flyers	2.65

The clearest indicators from the above tables are that social media is seen as the most effective engagement tool for both biodiversity loss and climate change, and flyers are seen as least effective. Reports on specific issues, workshops, websites, and volunteer conservation events are seen as fairly effective, except that volunteer conservation events are less effective for communicating about climate change than biodiversity loss. Open houses scored lower than newsletters in the above table only because they are the least used of all the options, as can be seen in Appendix A.

Respondents were also asked to describe any particularly effective mechanisms for engaging constituents on these issues. Here is an edited selection of responses, organized by theme:

Making it real for people

- “Regional or local reports / projects that ‘make it real’ for people. ‘Never let a good disaster go to waste’....”
- “Any method used that conveys the personal impacts related to climate change or how it could benefit residents financially, seems to be the most effective.”
- “Awareness and educational programs that relate climate change impacts to the specific interest of the community or organization. For instance, the potential impacts of extreme weather events (e.g., flood) on private home owners living in high risk areas.”
- “Specific programs e.g. shoreline or wetland restoration, crop rotation - are more readily understood or used by residents versus 'climate change mitigation/adaptation' or biodiversity.”
- “Storytelling and tying these large issues to the personal and the local tend to reverberate with our audience.”
- “Keep it concise. Include graphics / infographics. Relate the urgency/risks to the day-to-day lives of audience.”

Involving constituents

- “we created a tool box kit on how to talk to people about Climate Change that was created by and for the residents - it's been pretty successful.”
- “we created a conversation tool kit with the public to engage and talk about climate change, and this has been pretty effective - it's at a grade 10 reading level to be accessible to the majority of the community.”

Empowering constituents

- “Fighting apathy/despair in the general public with talk about agency, specifically how RURAL climate action can pertain to things you see everyday in the countryside: nature, water cycle, regenerative agriculture, regenerate everything, and also youth issues. With an explicit message about agency and nature based solutions people seem to get engaged.”

Specific forums

- “incorporating climate change issues and consequences into Open Houses through Class EAs for infrastructure projects tends to make it more common and better understood by the public”
- “When explaining the restrictions on land use due to the presence of natural hazards required through the implementation of the Regulations associated with the Conservation Authorities Act, landowners are given a first-hand lesson on how the impacts of climate change impact them directly.”
- “Engaging external staff brings in unique perspectives, bringing a comprehensive view to action plans. Workshops are great means to obtain information, not just provide. They also work to interconnect organizations for networking and potential future partnerships.”
- “Workshops where colleagues can share their experiences and best practices seem to be the most effective at engaging participants and preparing them to spread the word to others.”
- “Hands on participation is most effective; however, sometimes we end up preaching to the converted in those situations. That said, if participants invite friends or those not previously engaged, it is an opportunity to amplify the message to folks who may not otherwise hear the message.”
- “Most constituents are aware that climate change and loss of biodiversity are dependent on one another and are being lost at an alarming rate if things are to continue at the current rate of development. Reports and workshops where solutions to these issues are analyzed for effectiveness incorporated into the design / policy is the most effective use of resources. Who is currently doing it right? Which projects / policies are effective and what can we learn from them to inform how we can individually preserve biodiversity and help lower increasing temperatures?”
- “Website features like StoryMap”
- “board reports, surveys for stakeholders and the public”
- “At this point, the most effective engagement would be children. Engagement and education at Schools (elementary and high schools) to educate the young people who can make the future a better place.”
- “Teach through schools. Send the kids with homework to engage parents/guardians.”

Obstacles to Addressing Climate Change, Biodiversity Loss, and Effective Watershed Management

Between 85 and 90 respondents answered each of these questions. Combining biodiversity loss and effective watershed management into one set of questions was intended to see where there are differences with addressing climate change. The most cited obstacle to addressing all three issues was the cost of adopting new practices, including financial and staffing costs. Costs and lack of capacity were identified as bigger obstacles for addressing climate change than for the other two issues. Internal conflict and uncertainty about climate change were least cited. Government regulations were considered to be more of an obstacle for addressing biodiversity loss and effective watershed management. This might be a reflection of the provincial government's recent cutbacks on the power of conservation authorities. The differences in responses between conservation authorities and other organizations were generally not remarkable, but lack of a mandate and the scope of climate change appeared to be bigger problems for other organizations.

The differences between various obstacles to action are listed in the table below in descending order of degree of obstacle for all respondents. Means for conservation authorities separate from other organizations are presented along with all respondents. A set of graphs is included in Appendix B.

Obstacles to Action in Descending Order of Average Perceived Degree

(scale: 1=not at all a problem, 2=a little bit, 3=somewhat, 4=a great deal, 5=in the past, but not now)

Obstacles to Addressing Climate Change

Obstacle	All respondents	Conservation authorities	Others
Costs of adopting new practices	3.21	3.25	3.17
Lack of capacity	2.90	3.02	2.78
Lack of political will	2.76	2.71	2.80
Scope of the problem	2.67	2.51	2.84
Path dependence constraints	2.65	2.60	2.69
Government regulations	2.64	2.72	2.57
New practices not seen as legitimate	1.97	1.84	2.09
Relationships with other organizations	1.90	1.74	2.04
Not part of mandate	1.83	1.56	2.09
Feedback from constituents	1.82	1.70	1.93
Internal conflict	1.54	1.39	1.69
Uncertainty about climate change	1.35	1.41	1.29

Obstacles to Addressing Biodiversity Loss and Effective Watershed Management

Obstacle	All respondents	Conservation authorities	Others
Costs of adopting new practices	3.09	3.16	3.02
Government regulations	2.94	2.95	2.93
Lack of political will	2.84	2.79	2.89
Lack of capacity	2.65	2.67	2.64
Scope of the problem	2.62	2.52	2.72
Path dependence constraints	2.20	2.23	2.16
Relationships with other organizations	2.03	1.90	2.16
Not part of mandate	1.89	1.74	2.02
Feedback from constituents	1.87	1.79	1.96
New practices not seen as legitimate	1.81	1.74	1.89
Internal conflict	1.57	1.56	1.59

Opportunities to Address Current Challenges of “Our Watershed Moment”

Thirty-two respondents replied to this open-ended question about opportunities to address the challenges of our changing environmental, political, social, and/or economic climates. The word cloud on the cover of this report was generated from the responses. The responses fell under a number of categories, listed below followed by an edited selection of responses.

Collaboration

- “More integration and collaboration among our attendees. I look forward to networking to expand the scope of our work, given that these issues cross jurisdictional boundaries and require large scale approaches.”
- “It provides an opportunity to discuss the problems from different perspectives and share ideas and examples of how the problems can be addressed.”
- “Learning best practices, seeing good examples of case studies, networking”
- “Collaborating with other organizations and staff. Seeing examples of projects implemented by other organizations.”
- “A confluence of organizers/attention on issues that all intersect, which can be challenging to address, but give more momentum from different players to push for action!”
- “As a watershed based agency, conservation authorities' ability to bring together key government agencies and stakeholders to drive implementation of actions”
- “Building a constituency of ‘unlikely allies’ from NGOs, private sector, finance, and (hopefully) government - who ultimately have the regulatory and policy powers. Realistically, it will be forward thinking leaders who take action on the challenge who will lead the way; whether government is onside, or not.”
- “It is a big opportunity for Government agencies, private companies, non-profit organizations, academia, citizens and others to work to reduce differences and focus on the main goal. I see how different actors could share information, make collaborative efforts, and try not to overlap work. Furthermore, going to the same big goal we can present to politicians improvement in environment regulation.”
- “Creating common standards / using overarching organizations to 'test' and offer guidance to ensure advancement is available to all”

Leadership from government

- “How to empower / support our municipalities in becoming the champions and leads in this work as the 'on the ground' decision-makers for many things (e.g., land use) which directly affect implementation.”
- “The need for strong government leadership to put policies/laws into place and then back up implementation with the funding to make solutions happen.”

Funding

- “Still some federal funding out there to help with certain projects, so keep your eyes open for opportunities.”
- “Collective funding agreements from multiple partners that address long-term goal vs. short-term reactionary projects.”

- “Continue to build awareness with public and politicians. Need to realize that without serious investment the problem will not go away.”

Challenges of politics

- “Discussing / considering / understanding how we might work to navigate within the context of political parties who do not place high value on these issues.”
- “that Canada is a liberal democracy (for now) and that governments can be removed from office.”
- “The only climates that are changing are the environmental and, I suppose, economic. The political and social climates remain unchanged and uninterested in changing. That needs to be remedied. I suppose that's an opportunity in and of itself.”

Increasing awareness

- “A public that is increasingly engaged and the fact that climate change is now part of the public discourse with much less dispute about its existence or cause than there was 10 or 20 years ago”
- “The biggest challenge is the time frame over which people see change. However, a lot of people now believe that climate change is a real thing and the consequences of our apathy and lack of regard for the environment are now being questioned - hopefully a critical mass of public opinion will help to prompt more attention and action to adapt to or mitigate climate change effects.”

Communications

- “We need to be more entrepreneurial in our approaches; need to monitor and tell the story of what is happening in ways that resonate with folks (we haven't done a great job at that); we need talk about cause-effect relationships and what the consequences of our activities are on climate and in turn on our social and economic health and sustainability.”
- “Make connections for people between their actions and the health of the local environment, and benefits to changing behaviours. Point out 'what's in it for them'. Sometimes people don't grasp how one small action multiplied by others can equate to big impact.”
- “Hope to make people aware of the climate change urgency and how this can affect our day-to-day life and economy in the long run.”
- “Focus on educating younger population because they are the ones that will be dealing with the serious implications in the long term. Older generations are too busy in the workforce to have time to care. Start grass roots and grow from there.”

Empowerment

- “Rural Ontario can lead in regeneration, urban Ontario can lead in mitigation. We all need to adapt. Being rural, REGENERATION can cross political divides because ecological farmers are often working holistically, repairing nature and creating hope. The concept of Regeneration also comes with less baggage than climate action in rural communities. Rural challenges to be a participant in mitigating climate change seem insurmountable right now, beyond the low hanging fruit of municipal climate action plans. Hence, focusing on ‘agency’ can engage everyone to contribute to combating biodiversity & climate crises.”

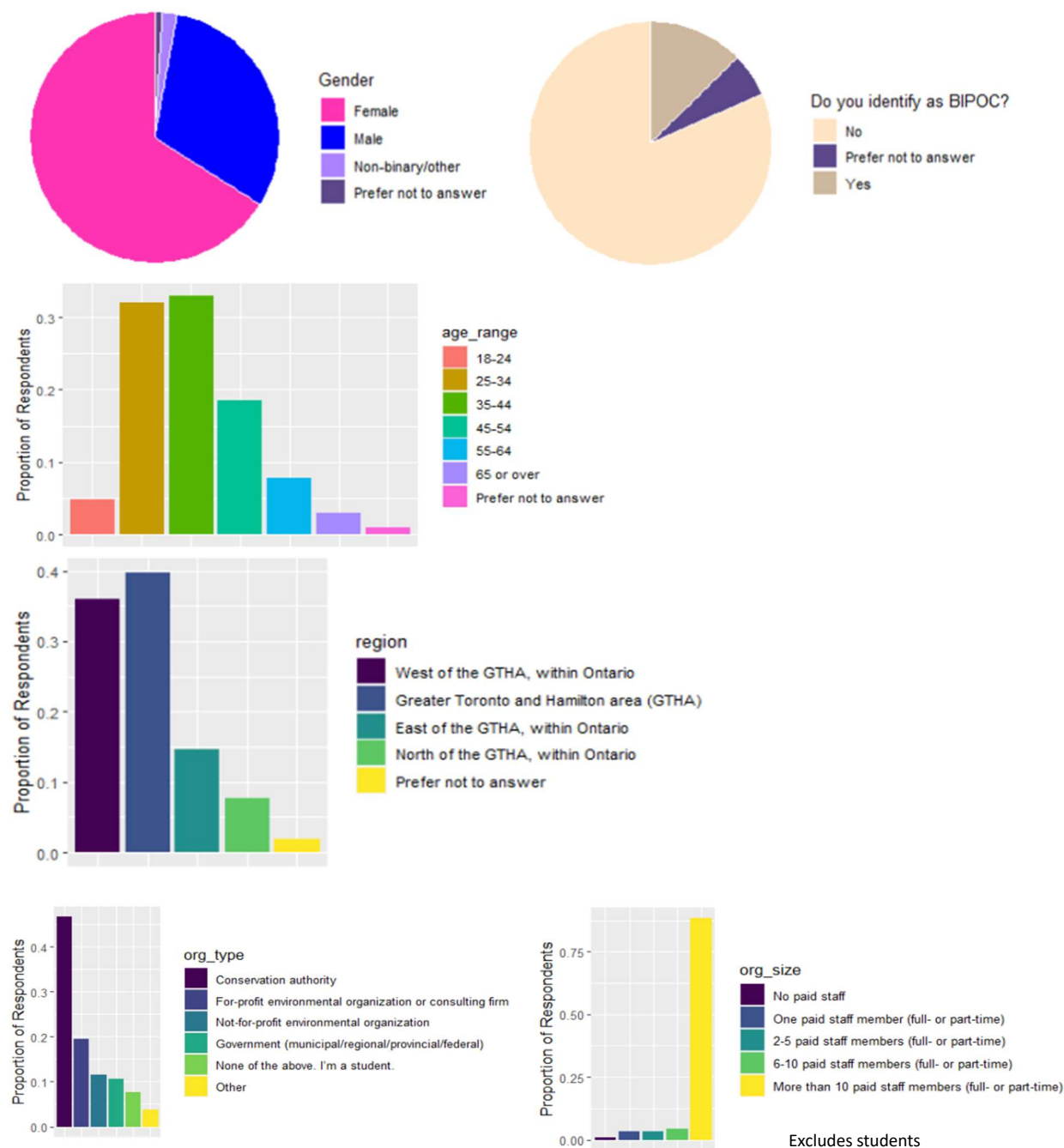
- “Organized protests help dismantle current energy/political systems that keep us reliant on fossil fuel industries. Community engagement/empowerment”
- “Find a way to encourage citizens and regular people to act to mitigate climate change and diversity loss.”

Issue-specific opportunities

- “I think the acute economic and social stress caused by the housing crisis - which is very unlikely to disappear without significant systemic change - offers an opportunity (or "watershed moment") to promote a healthier and more ecological development model as a solution to this socio-economic crisis - rather than a further burden to those already struggling. But centring equity and socio-economic security is crucial to this.”
- “In my opinion, construction of new wetlands, watercourses, expanded floodplains, and woodlands are imperative to the health of communities going forward. As we continue to intensify, conservation is not enough. We need to design/engineer/construct new natural systems and allow a fresh-start for nature in these areas. This requires suitable land within new subdivisions or acquisition of lands in rural areas to rebuild natural systems and ideally, create a connected, linked, natural corridor for wildlife. This has the benefit of climate change adaptation from the perspectives of GHG reduction (more trees) as well as conveyance of floodwaters, and should allow for more biodiversity with healthier, larger natural systems.”
- “A renewed focus on ‘rewilding’ on small, medium and large scales (e.g., from ‘mini’ forests in urban areas to expansive natural areas on the Escarpment and elsewhere to help mitigate and adapt to climate change while also trying to sustain native biodiversity.”
- “Water. Our lack of care towards an essential resource. Our abuse of this resource since it's so abundant in our nation. Environmentally, economically, politically, and socially this is important. How we treat our water and dispose of our wastewater. How we handle agricultural run off and the consequences on the animals and other creation in the watershed and aquifer. ... Economically, why do we stock certain fish species while our native whitefish population is struggling? ...Politically, why do people in our province struggle to simply have water? ... How can we change our practices to be less harmful to our watersheds?”
- “Watershed-based planning in areas with little capacity to complete.”
- “Modular/Micro grids increasing access to renewable energy for rural communities”

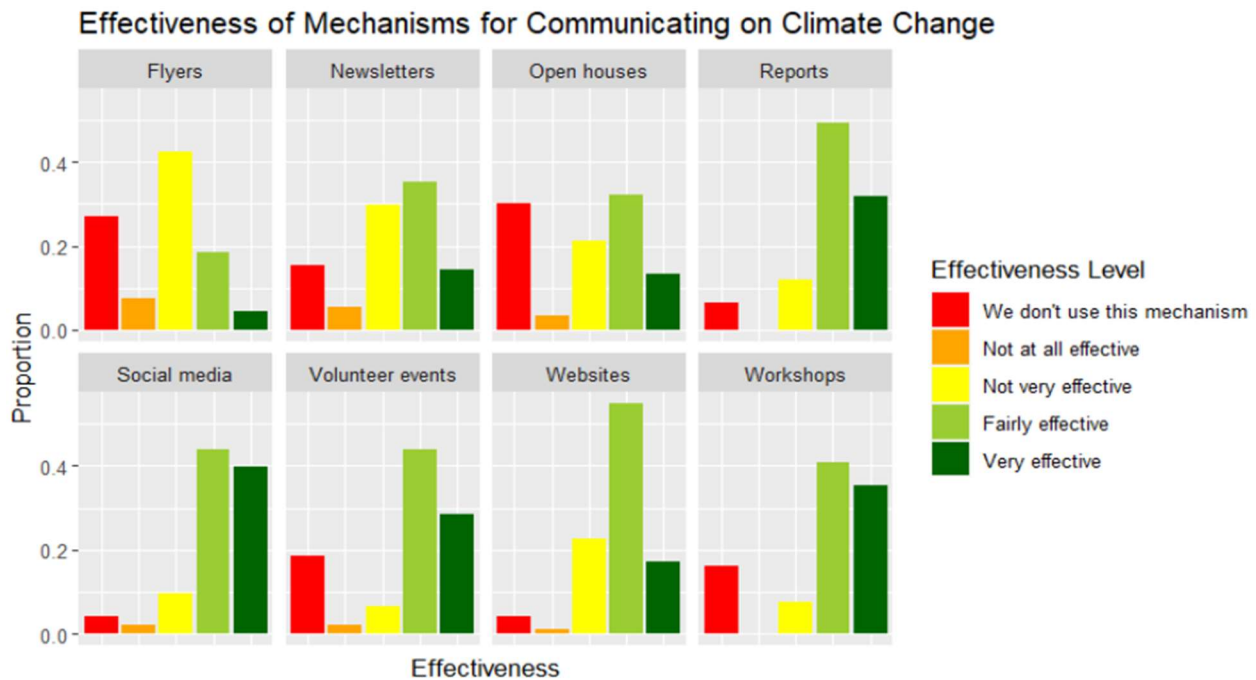
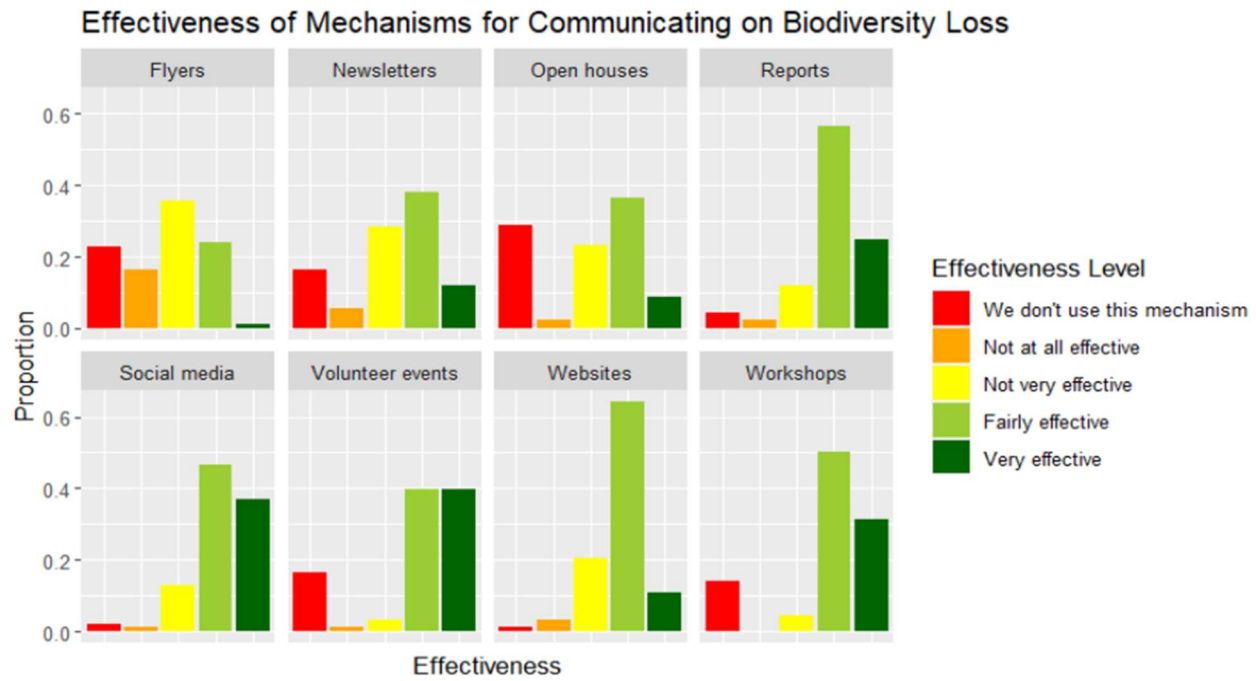
Demographics of Respondents

The typical respondent identified as female (66.0%), white (81.6%), between the ages of 25 and 44 (65.0%), lives in southern Ontario, in or west of the Greater Toronto Area (75.7%), and works for a conservation authority (46.6%). Over 80% of all respondents work for an organization with 10 or more paid staff members. Students represented 8% of respondents. The graphs below are based on 103 responses, with the exception of the bottom right graph, which is based on 94 responses.



Appendix A: Charts on the Effectiveness of Various Mechanisms

Between 90 and 93 respondents answered each question. The mechanisms are coloured stoplight-style (red means stop, green means go), so the greener mechanisms were considered by respondents to be more effective.



Appendix B: Charts on the Level of Various Obstacles to Action

Between 85 and 90 respondents answered each question. The twelve obstacles were: 1) lack of capacity to consider adopting new practices, 2) the costs (financial, staff-wise, etc.) of adopting new practices, 3) feedback from constituents, 4) government regulations, 5) conflict within the organization, 6) not part of the organization's mandate, 7) the perception that new practices are not legitimate, 8) path dependence constraints from previous decisions, 9) lack of political will, 10) relationships with other organizations, 11) the scope of the problem, and 12) uncertainty about whether climate change is human-caused.

