

# Investigating Student Perspectives on Dalhousie's Fossil Fuel Investments

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## Executive Summary

Global warming has been increasingly worsening over the last several decades, with fossil fuels being the leading cause of climate change. Large businesses and educational institutions still invest billions of dollars into fossil fuel companies yearly. Dalhousie University is still invested in fossil fuels despite its commitments to sustainability and Environmental, Social, and Governance (ESG) investment practices. To mitigate the effects of fossil fuels on the environment, these institutions and businesses must divest from these companies and shift their focus to more sustainable resources. This study aims to understand how Dalhousie University's investments in fossil fuels affect the student population's opinion of the institution to bring awareness to students and the administration. A survey was distributed throughout campus and on social media to collect responses. The survey results show that Dalhousie's lack of divestment of fossil fuels has a negative impact on the student's opinion of the school, indicating that a change is needed. Although the study only included a fraction of the student population, it provides grounds and a reason for further research to be conducted to encourage the administration to divest from fossil fuels.

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## 1.0 Introduction

### 1.1 Background

Within the past three decades or so, the issue of global warming and climate change has become increasingly more debated and talked about on the political agenda. Since then, there have been actions taken to address the problem of climate change, but still, more needs to be done. We are continuously fighting to bring permanent change. To achieve this, institutions and businesses are shifting away from using fossil fuels since they have one of the most considerable contributions to global warming and, thus, are moving towards more sustainable practices. Fossil fuels contribute directly to climate change but also indirectly. Deforestation contributes 12-20% of global greenhouse gases (London School of Economics, 2023). A statistic from StatsCan shows that 24% of Canada's deforestation is for resource extraction, such as mining, oil, and gas, between 1990 and 2015 (Unite for Change, 2022). Despite the direct and indirect impacts of fossil fuels, some institutions still rely on and support these companies, worsening the problem. Though the impact of individual higher education institutions divesting from fossil fuels is understudied, these institutions can effect significant social change by taking the lead in shifting society to a more sustainability-focused culture (Gunningham, 2017; Healy, 2017).

### 1.2 Rationale

Divestment is the process of withdrawing investments from a company or business to cut capital and ultimately make operating more difficult (Johansmeyer, 2022). Dalhousie University has not divested from fossil fuel companies, and this is an environmental issue and creates tension among the student population, staff, and faculty. Dalhousie is not very public regarding its investments in fossil fuels, leaving the student population in the dark, not knowing where their tuition is being invested. Dalhousie University has signed three international declarations supporting and committing to the use and encouragement of more sustainable and environmentally friendly practices but is still fully invested in fossil fuels (Dalhousie Office of Sustainability, n.d.; Investing to Address Climate Change, 2020). Previously, in 2017, students from this class conducted a similar study determining the students' awareness of divestment to bring light to the issue of the institution's investment in fossil fuels (Bibeau et al., 2017). Our study will aim to update the previously researched topic and determine whether Dalhousie has changed regarding their divestment and its impact on the student population. In 2014 and again in 2019, in response to the student group Divest Dal campaigning, Dalhousie voted on its

investment regarding fossil fuels, but both times voted not to divest (McNutt, 2019). Instead of divesting, the report recommended that Dalhousie commits to investing sustainably in other ways and improve communication regarding the university's existing Environment, Social, and Governance (ESG) investment practices (Dalhousie University Investment Committee, 2019).

If the school were more transparent about its investments, it would make the student population more comfortable knowing where their money is going, especially if the school were to take the money invested in fossil fuels and invest it in greener practices. In March 2022, Dalhousie's direct investments in Canadian fossil fuels were roughly \$12,083,245 (Dalhousie University, 2022). That is in Canadian companies alone. Dalhousie has most of its investments in American and international companies meaning the \$12 million in Canadian fossil fuels is only a drop in the bucket.

Some of the top universities in the world, including Stanford University, Harvard, Oxford, Cambridge, and many others, have committed to fully divest from fossil fuels by a specific date (Adams, 2021; Botter Fabri, 2018). In addition, as of 2021, ten Canadian universities have pledged full or partial divestment from fossil fuel holdings (Leahy, 2021). Even though this statistic includes universities committing to partial divestment, it still sets the standard and increases awareness. Dalhousie has not committed to partial or complete divestment. This is not only a step in the right direction for the environment. It could also increase the schools' attractiveness to foreign and domestic students and increase their presence beyond their academic achievements. The current generation is racing to find solutions to stop global warming and develop ways to live more sustainably to ensure a healthy, habitable world for future generations. Dalhousie's divestment in fossil fuels would help move toward a more sustainable future and help develop a new standard for sustainable universities.

### 1.3 Project Definition

Our data collection focused on determining Dalhousie students' feelings about their school's investment practices. It is crucial for students to feel heard by their school and to feel as though they have a voice. With only a portion of the student body taking part in the push for Dalhousie to divest from fossil fuels, not enough students are aware of the issue or feel their opinion may not make a difference to decision-makers. Many students and young adults have been made aware of the ongoing issue of climate change in recent years but are unaware of the

drivers of climate change all around them and how they can make a difference. Our project aims to bring the issue of fossil fuel investment to light for many undergraduate students, as well as collect our fellow students' perceptions and draw attention to their opinions. We will answer the question, "How do Dalhousie University's undergraduate students perceive their school's investment practices regarding fossil fuels, considering Dalhousie's recent commitments to sustainability?".

## 2.0 Methods

### 2.1 Population

We chose a target population of all undergraduate students at the Halifax campuses of Dalhousie University and the University of King's College. This population was estimated at 16,302 students, according to enrolment numbers from December 1st, 2022, provided by Dalhousie's Registrar's Office (Office of the Registrar, 2022). The total undergraduate population was 16,884 students, and the number 16,302 was reached by subtracting all students in the Faculty of Agriculture, which is housed at Dalhousie's Truro campus. The Truro campus was excluded from our research because it was not feasible to advertise to students there. A minor part of our research involved knowledge of the student group Divest Dal, which operates only on the Halifax campuses.

Our target population was only undergraduate students – excluding graduate students, faculty, and staff – because they are our peers and are more accessible to us. Undergraduate students are also more likely than graduate students to study at Dalhousie University for a longer time, thus, perhaps more likely to care about the university's investment practices. Based on a population of 16,302, a confidence level of 95% and a margin of error of 5%, we hoped for a representative sample of at least 376 respondents. We aimed to sample from a wide range of faculties and years of study to represent the diversity in the student body.

### 2.2 Data Collection

We created a 13-question online survey and distributed it using posters and word of mouth across all Dalhousie & University of King's College Halifax Campuses (King's College, Studley, Carleton, and Sexton). The survey included single response, Likert scale, rating, and open-ended questions to fully grasp the opinions of our study population (see Appendix B: Survey Questions). The survey was distributed on Microsoft Forms and was accessed through a

QR code distributed on posters (Appendix A: Poster 1) in popular buildings on all four campuses, including the Life Sciences Center, Charles Tupper Building, Killam Library, Student Union Building, King's Arts & Administration Building and Wardroom on King's College campus. A link to the survey was also shared online through all four group members' Instagram stories, using the same information on a slightly altered graphic (Appendix A: Poster 2) to gain attention. Word-of-mouth survey distribution included group members' peers, roommates, and friends, encouraging them to share the survey link to obtain a snowball method. The survey was also shared directly with our peers in the Environmental Problem Solving II class. Our survey was open for 16 days, from about 5:30 pm on March 7, 2023, until about 4:00 pm on March 23, 2023.

We used a survey questionnaire rather than interviews to have a large sample size to answer our research question effectively. The survey mainly consisted of simple multiple-choice questions that could be efficiently quantitatively analyzed. The anonymous survey began with a 7-sentence summary that defined divestment, outlined Dalhousie's fossil fuel investments and reasoning behind not committing to divestment, and summarized student group Divest Dal's position on the issue (Appendix B: Survey Questions). After asking respondents to confirm that they were in our target demographic and had read the summary, we gathered general demographic information that could potentially factor into their later answers. Then we asked questions pertaining to prior awareness of the issue of divestment at Dalhousie University. Finally, we asked several questions (rating, Likert-scale, and open-ended text response) to ascertain respondents' opinions regarding divestment and Dalhousie University's fossil fuel investments. Multiple question types were used to target slightly different aspects of the issue to create a complete picture of student opinions.

### 2.3 Data Analysis

We first created graphs and summary statistics of the responses to all qualitative survey questions to see their distribution. Next, we determined that 3 of our questions gave us variables that could be factors potentially influencing respondents' answers to the other six quantitative variables, which were measures of respondents' awareness and opinions of the issue of divestment. We used R to run Chi-square tests for correlation between each of the three independent variables and each of the six dependent variables, 18 combinations in total. The significance level was set at  $p \leq 0.05$ . Tests that were significant or unexpectedly insignificant

then led us to investigate those statistics more closely and create graphs where relevant to illustrate correlations in the data.

We used qualitative coding for the open-ended text response question to analyze the responses. We used a mix of *a priori* and *a posteriori* code creation. In order to find trends in this data, we created a coding tree that roughly organized the responses into categories of positive, negative, neutral, and undecided answers regarding Dalhousie University's current fossil fuel investment practices.

### 2.4 Limitations

One major limitation of our survey is that our summary of the issue and how our questions were written could have created unintentional bias. While we endeavoured to present the facts of the issue as correctly as possible, we could have received bias from our literature sources, and we recognize that, as environmental science students, we are not unbiased ourselves. To minimize this limitation, the entire survey was discussed and vetted several times with our professor and TAs, and we kept the summary as short as possible. The summary was included in our survey to ascertain if divestment knowledge affected the opinions of students who had not previously known about the issue.

A second major limitation was the short period in which it was conducted, affecting our ability to reach the scope required by our research question. Because this research was conducted for a semester-long class, we could only gather responses for 16 days before moving on to our data analysis. With hindsight from the experience gathered from this research project, we would have had better luck gathering a representative sample if we had begun with a narrower focus on our research question and a smaller population to sample from. As it was, we could only gather about one-fifth of our target sample in the available time. This low sample size limits the representativeness of our results, as they may be more easily skewed by our advertising methods, notably advertising our survey to the Environmental Problem Solving II class.

Finally, there are limitations imposed by our choice to use a survey rather than interviews or a combination of both. As we could not ask more profound questions based on participants' responses, we were limited by the questions we began with. As such, the correlations found in our data cannot be confidently interpreted as causal relationships, only proposed as possible explanations for the trends we found. Including one text response question allowed respondents

to mention factors we might not have accounted for. However, it does not guarantee that we have all the relevant information to explain the correlations found.

### 3.0 Results

#### 3.1 Summary Statistics

Of our 75 respondents, four are enrolled in the faculty of architecture and planning, 21 are enrolled in arts and social science, one is enrolled in computer science, five are enrolled in engineering, two are in health, 0 are in management, 40 are in science, and two respondents preferred not to answer (Appendix C: Graph 2). We had ten respondents in first year, 13 respondents in second year, 34 respondents in third year, 15 respondents in fourth year, and three respondents in fifth year or higher (Appendix C: Graph 1).

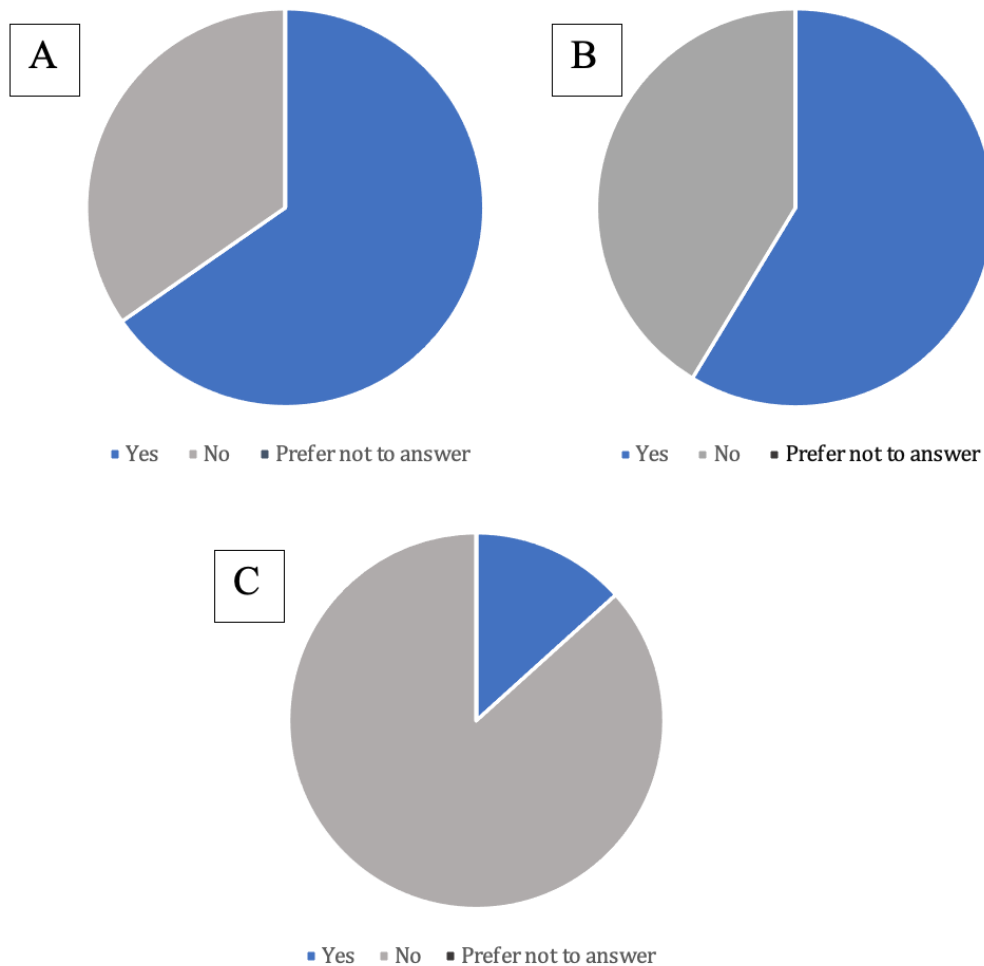


Figure 1. Shows the results of Questions 6-8 of our survey. Question 6, "Prior to the start of this survey, were you aware of the concept of fossil fuel divestment?" yielded the results shown in (A), question 6, "Prior to the



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*start of this survey, were you aware of Dalhousie's investment in fossil fuels?"*, yielded the results shown in (B), and question 8, *"Prior to the start of this survey, were you aware of Dalhousie's Environment, Social, and Governance (ESG) investment practices?"*, yielded the results shown in (C).

Of our survey questions, three had to do with prior awareness of topics related to our research, including awareness of the concept of fossil fuel divestment, awareness of Dalhousie's investment in fossil fuels, and awareness of Dalhousie's Environmental, Social, and Governance (ESG) investment practices. We found that 49 respondents (65.33%) were aware of the concept of fossil fuel divestment prior to the start of completing our survey, while the other 26 respondents (34.67%) were not previously aware (Figure 1A). Forty-four respondents (58.67%) reported not being aware of Dalhousie's investment in fossil fuels prior to completing our survey, while the other 31 respondents (41.33%) were not previously aware of Dalhousie's fossil fuel investments (Figure 1B). Dalhousie's Environmental, Social, and Governance (ESG) investment practices were only known by ten respondents (13.33%) prior to the start of our survey, while the other 65 respondents (86.67%) were not aware of Dalhousie's ESG investment practices until made aware of them through our survey (Figure 1C).

Familiarity with student group Divest Dal was relatively evenly split, with 26 respondents (34.67%) answering that they are aware of the group's aims and arguments, 23 respondents (30.67%) had heard of the group but did not know its aims or arguments, and 26 respondents (34.67%) had not previously heard of the group (Appendix C: Graph 3).

Respondents were then asked to rate the importance of the issue of divestment to them on a scale from 1-5 (1 being not at all important, two being not very important, three being somewhat important, four being important, and five being very important). Five respondents (6.67%) answered 1, 4 respondents (5.33%) answered 2, 12 respondents (16%) answered 3, 32 respondents (42.67%) answered 4, and 22 respondents (29.33%) answered 5 (Appendix C: Graph 8).

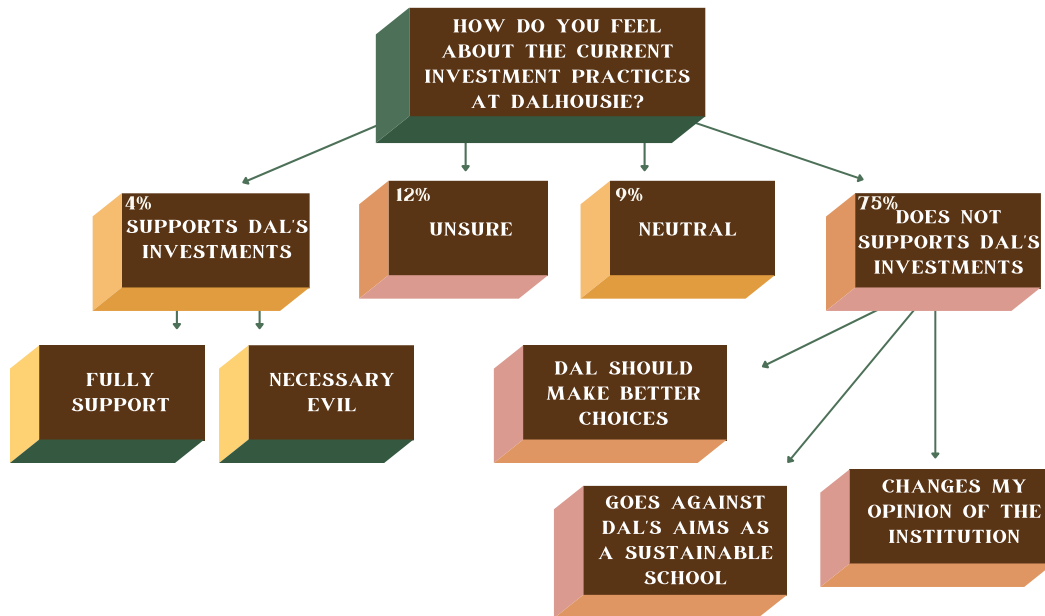


Figure 2. Shows the coding tree used to visualize the results of survey question 11, which asks, "How do you feel about the current investment practices at Dalhousie?". Responses from 75 respondents were included in the results. Percentages shown at the top left-hand corner of the boxes represent the proportion of respondents whose answers lay within that theme. Most respondents answered that they do not support Dalhousie University's investment practices.

The only open-ended question in our survey was "How do you feel about the current investment practices at Dalhousie?" which was qualitatively coded using a coding tree to identify patterns and common answers (Figure 2). Responses were split into positive (in support of Dalhousie's investments in fossil fuels), unsure, neutral, and negative (do not support Dalhousie's investments in fossil fuels). There were 3 (4%) positive responses, 9 (12%) unsure responses, 7 (9.33%) neutral responses, and 56 (74.67%) negative responses. When divided further into more specific patterns of response, it was found that of the three positive responses, two fully supported Dalhousie's investments, while one respondent accepted their investments as a 'necessary evil' in order to fund school activities and scholarships. On the negative side of the answers, 33 respondents answered along the line of thinking that Dalhousie should make better choices, seven respondents felt that Dalhousie's investment practices directly contradicted their

sustainability goals, and 16 respondents specified that their opinion of Dalhousie is negatively impacted by this knowledge of Dal's investment practices regarding fossil fuels.

When asked directly whether knowledge of Dalhousie's fossil fuel investments has affected their opinion of the institution, 58 respondents (77.33%) answered yes, 11 respondents (14.67%) answered no, and six respondents (8%) preferred not to answer (Appendix C: Graph 7).

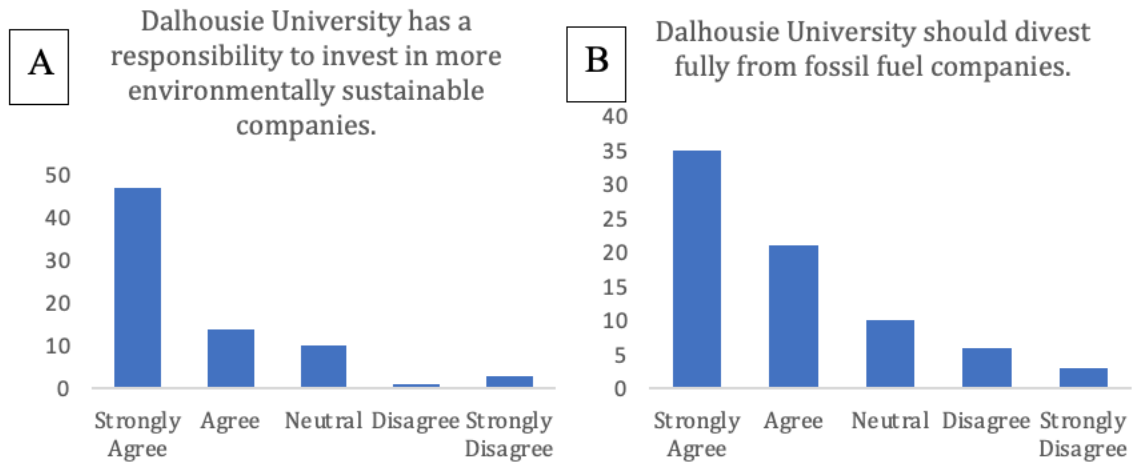


Figure 3. Shows the distribution of responses to survey question 13, which included two parts and asked respondents to indicate their level of agreement with each of the two statements. Responses from 75 respondents were included in the results. Both graphs show a similar trend of most respondents strongly agreeing that Dalhousie University has a responsibility to invest in more sustainable companies (A) and that Dalhousie University should divest fully from fossil fuels (B).

The final questions on the survey asked participants to rate their level of agreement with two statements. The first statement was “Dalhousie University has a responsibility to invest in more environmentally sustainable companies” (Figure 2A). Forty-seven respondents (62.67%) strongly agreed with the first statement, 14 respondents (18.67%) agreed, ten respondents (13.33%) were neutral, one respondent (1.33%) disagreed, and three respondents (4%) strongly disagreed. The second statement was “Dalhousie University should divest fully from fossil fuel companies” (Figure 2B). Thirty-five respondents (46.67%) strongly agreed with the second statement, 21 respondents (28%) agreed, ten respondents (13.33%) were neutral, six respondents (8%) disagreed, and three respondents (4%) strongly disagreed.

### 3.2 R Analyses for Correlation

9 of 18 Chi-square tests found statistically significant correlations (Table 1). The strongest correlations are between familiarity with the student group Divest Dal and awareness of divestment in general and Dalhousie University's fossil fuel investments more specifically. Unexpectedly, student ratings of the importance of divestment are not significantly correlated with any of our potential influencing factors (see Table 1, Row 4).

*Table 1. Shows the output p-values for chi-square tests for correlation between potential influencing factors A-C and measures of awareness 1-7. The use of two asterisks (\*\*) next to the p-values designates which of the tests were found to have a significant correlation ( $p \leq 0.05$ ).*

<u>Variables</u>	<u>A) Year of Study</u>	<u>B) Faculty of Study</u>	<u>C) Familiarity with Divest Dal</u>
<u>1. Awareness of divestment</u>	0.002468 **	0.5859	2.175e-09 **
<u>2. Awareness of Dal's fossil fuel investments</u>	0.01333 **	0.4758	1.583e-10 **
<u>3. Awareness of Dal's ESG investment practices</u>	0.8181	0.01515 **	0.2085
<u>4. Importance of the issue of divestment to respondents</u>	0.09127	0.06403	0.5438
<u>5. Does knowledge of Dal's investments change the respondent's opinion of the institution?</u>	0.3693	0.8715	0.03476 **
<u>6. Level of agreement that Dal has a responsibility to invest in more environmentally sustainable companies</u>	0.2799	0.9631	0.03043 **
<u>7. Level of agreement that Dalhousie should divest fully from fossil fuel companies</u>	0.04901 **	0.6295	0.03344 **

Graphs show that year of study (see Appendix C: Graphs A1, A2, and A7) has a positive correlation such that 3rd-year students have the highest awareness of divestment and Dalhousie's fossil fuel investments, as well as the highest level of agreement that Dalhousie University should fully divest from fossil fuels. Graphs regarding familiarity with Divest Dal also all show strong positive correlations, such that higher awareness of Divest Dal correlates to higher awareness of divestment and Dalhousie's fossil fuel investments (Appendix C: Graphs C1, C2). Those more familiar with Divest Dal also show a higher likelihood of answering "yes" to measure 5 (Table 1, Row 5; Appendix C: Graph C5). Finally, higher awareness of Divest Dal is positively correlated with a stronger level of agreement with the statements in measures 6 and 7 (Table 1, Rows 6 and 7; Appendix C: Graphs C6 and C7).

The faculty of study shows one significant correlation with awareness of Dalhousie's ESG investment policy. The bar graph for this correlation is somewhat unclear as to what this correlation is. However, an examination of the percentages versus counts in this graph shows that the correlation is likely caused by the heavy skew towards respondents from the Faculty of Science, with minimal respondents from other faculties such as Computer Science, resulting in a likely false positive significance due to potential outliers (Appendix C: Graph B3).

## Discussion

After collecting and analyzing the responses to our survey, it is evident that increased awareness of Dalhousie's investments negatively impacts students' perspectives on the institution. Our research question asked how our target population perceives Dalhousie University in light of the institution's investments in fossil fuels, and our summary statistics indicate that, given the background information we provided in our survey, a majority of the undergrad students on Halifax campuses are likely to be critical of Dalhousie's fossil fuel investments. Many respondents indicated that there is a need for change. In the survey questions regarding the agreement with our two statements (Appendix C: Graphs 9 and 10), the average response supported the idea that Dalhousie has a responsibility to divest from fossil fuels and invest in more environmentally conscious investments.

Regarding potential factors that could explain our results, we found that previous familiarity with the student group Divest Dal seems to have a significant impact on awareness of divestment and of Dalhousie's investments but does not affect awareness of Dalhousie's ESG commitments. This suggests that Divest Dal has been influential in increasing awareness of divestment across campus but in a general rather than detailed way. The year of study of respondents also seems to impact the awareness of divestment at Dalhousie University. However, the skew towards 3<sup>rd</sup> year students suggests that this may be impacted by the fact that many of our respondents were from the 3<sup>rd</sup> year Environmental Problem Solving II class. As this is an environmental science class, the effect may stem from knowledge gained in similar classes rather than knowledge gained from being on campus for a longer time. Overall, our results paint a coherent picture of the student body that generally disagrees with Dalhousie University's fossil fuel investment practices, but further investigation into how our results may have been skewed could contradict these findings.

A similar study conducted at Dalhousie University in 2017 by Bibeau et al. aimed to investigate the student population's awareness of divestment and, in particular, divestment of fossil fuels. They found that out of the total respondents, 53% were aware of fossil fuel divestment. Our results showed a 60% awareness of fossil fuel divestment, indicating a possible increase in awareness in the study body over the past six years. However, it is possible that our results are less representative than those of Bibeau et al., as their study received 202 respondents

compared to our 75. Bibeau et al. also had a more even spread of responses across different years of study, potentially yielding a more accurate image of the diversity of knowledge within the student body. Even though our study indicates that divestment awareness affects students' perspectives of Dalhousie University, the 2017 study suggests that a larger sample size could alter our results. This brings into question the validity of the research conducted since it did not represent a significant sample size.

Another point of comparison between our study and Bibeau et al. (2017) is that, as we were investigating how awareness of divestment would affect student opinions, we included a short description of what divestment is, as well as the stances Dalhousie University and student group Divest Dal have taken on the issue. We asked whether respondents were aware of divestment before the survey and how their new knowledge of the group and divestment changed their perspective. The Bibeau et al. 2017 study had a narrower focus. They wanted to know how many students at Dalhousie were aware of divestment and Divest Dal in general without investigating how it affected students' perspectives. Therefore, it was not necessary for them to include any description since it would skew their results. If our study had not included a description of divestment at Dalhousie, it would have been more difficult to investigate whether that information changes student perspectives, but the inclusion of our description may well have created a bias in our results.

Possible reasons for Dalhousie's lack of divestment could be due to the effectiveness of divestment. As previously mentioned, the goal of divestment is to cut capital from a company making it difficult to operate. However, in order to sell an asset, it requires someone else to buy it. This is where lies the issue of divestment. When one divests from a company, they ultimately leave an open space for someone else to invest in the company and fill "an empty void." If shareholders divest from a company they no longer wish to be associated with, they are essentially leaving an avenue for growth for that said company. For divestment to work correctly, when one divests from a company, they must reallocate their investment elsewhere to strengthen the opposition (Johansmeyer, 2022). This would ensure that despite any growth within the undesired company, there will be an equal amount and, ideally, more growth within the desired business. At the same time, divestment is used as an awareness tactic and statement of their recognition of a need to change. In addition, Dalhousie's investments in fossil fuel

represent the core of its portfolio (Dalhousie University, 2022), meaning that this is where they see the most significant returns on investment. Pulling out their largest investments could have a negative impact on the value of their portfolio if not reinvested properly. To do this effectively, it would be in the best interests of the school and the students if they slowly started pulling smaller investments and putting them into green stocks to create a more seamless transition over a given period. This may take much work, but it would have a better chance of satisfying both parties.

This study has many limitations, such as sample size, choice of survey questions, target population, and so on. As previously mentioned, we aimed to receive 376 respondents from having a representative sample, yet we only received 75. This poses an issue to the overall research since it does not accurately represent the targeted 1% of the undergraduate population. In addition, most of the respondents were in the faculty of science. Undeniably, climate change, global warming, and divestment are topics that are more likely to be brought up in science rather than management. The result of this limitation can cause skewed and/or inaccurate findings. Finally, the choice of survey questions limits the kind of results we receive. With survey questions, the results will only be as good as the questions chosen. For example, if we decided only to use yes or no questions for the entire survey, it would be hard to analyze whether there was a change in perspective. In contrast, if we had decided to use 13 open-ended questions, there is a greater chance that respondents would be less inclined to write out their opinions and perspectives 13 times over, which could ultimately lead to less accurate results.

The best approach to building on this research project is to take steps to lessen the impact of the limitations we encountered. A larger sample size would ensure an accurate representation of the student population and potentially yield more accurate results. This could be done by advertising the survey earlier and more effectively to save time before having to collect the number of respondents. Also, this study could be built upon by studying the awareness and importance of fossil fuel divestment at other Canadian universities. This way, the data from our research could be compared to those from other universities to determine whether Dalhousie is doing a good job at spreading awareness of divestment or ways to improve awareness.

Lastly, Dalhousie University should consider divesting from these companies to align with their values and mission, which would alleviate tensions within the university community.

By taking these steps, Dalhousie University can demonstrate its commitment to environmental sustainability and regain the trust of its students, staff, and faculty.

## Conclusion

After researching to better understand how Dalhousie University's fossil fuel investments affect student perspectives on the institution, the results showed that the school's investments have a negative impact on students' outlook. Most respondents who were not previously aware of the concept of divestment or Dalhousie's investment practices stated that they had a different opinion of the school after taking the survey. In addition, the students who were aware of both divestment and Dalhousie's investments also stated that there is a need for change. The outcome of our research could result from Dalhousie's lack of transparency, meaning that our survey brought awareness of the issue that the school does not advertise. This study was conducted on a very small scale, however; our findings indicate a correlation between awareness of investments in fossil fuels and negative opinions, providing a reason for further investigation.

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Appendix A: Survey Advertisement

1

ARE YOU AN UNDERGRADUATE STUDENT AT DALHOUSIE OR KINGS?

# TAKE OUR SURVEY

We want to hear your opinion on Dal's fossil fuel investments!

SCAN ME



Your answers will be anonymous and used only for a third year research project for ENVS3502! for more information reach out to [z2901084@dal.ca](mailto:z2901084@dal.ca)

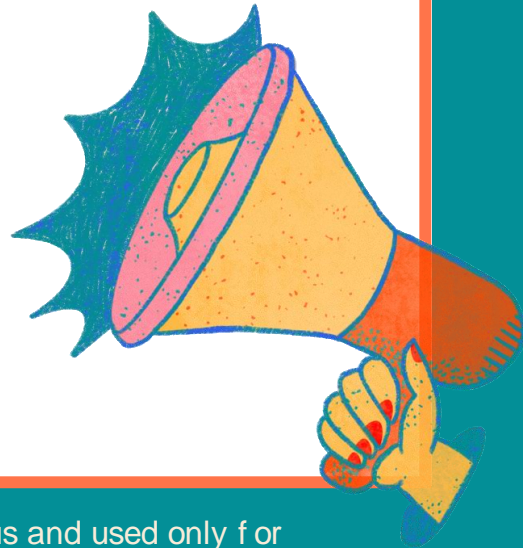
2

ARE YOU AN UNDERGRADUATE  
STUDENT AT DALHOUSIE OR  
KINGS?

# TAKE OUR SURVEY

We want to hear your opinion  
on Dal's fossil fuel  
investment!

SWIPE UP OR CLICK  
THE LINK IN BIO



Your answers will be anonymous and used only for  
a third year research project for ENV S3502! For more information  
reach out to [zz901084@dal.ca](mailto:zz901084@dal.ca)

## Appendix B: Survey Questions

### 1. Consent Form:

You are invited to take part in a research study being conducted by undergraduate students in the Environmental Problem-Solving II course at Dalhousie University. The purpose of this research is to investigate undergraduate student perceptions and knowledge of Dalhousie University's investments in fossil fuels, by asking undergraduate students to complete a survey to share their opinions. The study is unfunded.

If you choose to participate in this research, you will be asked to answer 12 questions in an anonymous online survey. The survey should take approximately 15 minutes.

Your participation in this research is entirely your choice. You are welcome to stop the survey at any time if you no longer want to participate. All you need to do is close your browser. We will not include any incomplete surveys in our analyses. If you do complete your survey and you change your mind later, we will not be able to remove the information you provided as we will not know which response is yours.

Your responses to the survey will be anonymous. This means that there are no questions in the survey that ask for identifying details such as your name or email address. All responses will be saved on a secure Dalhousie server. Only Faye Little, Eric Guimont, Zoe Coulter, and Lynn Fraser will have access to the survey results.

We will describe and share general findings of this research in a research document for ENVS3502. All information gathered in this survey will be destroyed 1 month after reporting the results.

The risks associated with this study are no greater than those you encounter in your everyday life.

There will be no direct benefit to you in participating in this research. The research, however, will contribute to new knowledge on student opinions and knowledge of the issue of divestment at Dalhousie University. If you would like to see the final report, please feel free to find it in this Dal Library collection after April 25th, 2023:

<https://dalspace.library.dal.ca/handle/10222/76555>.

You should discuss any questions you have about this study with Faye Little, Eric Guimont, Zoe Coulter, Lynn Fraser, or our professor Dr. Caroline Franklin. Please ask as many questions as you like before or after participating. We can be contacted at [atzz901084@dal.ca](mailto:atzz901084@dal.ca).

## Investigating Students' Perspective on Dalhousie's Fossil Fuel Investments

By submitting your responses, you consent to having your anonymous answers used in our research.

### 2. Short write-up respondents were asked to read and confirm having read:

Divestment is the act of moving investments out of certain companies or investment portfolios. Dalhousie University currently has \$12,083,245 invested directly in Canadian fossil fuel companies, and 1.3% of its total investment fund is in the 200 oil and coal companies with the largest carbon reserves.

Dalhousie University most recently addressed the topic of divestment from fossil fuel companies in February 2019, when the Board of Governors voted not to divest from fossil fuel companies, instead voting to enhance the university's Environment, Social, and Governance (ESG) investment practices, which were established in 2013. The ESG framework is a voluntarily adopted guideline for investing which factors in environmental, social, and governance issues. As of 2019, 80% of Dalhousie's investment portfolio uses ESG.

Divest Dal is a student group campaigning for Dalhousie University to divest from fossil fuel companies because of the dangers these companies pose to the environment both directly through their extraction operations and through carbon emissions driving climate change. They argue that Dalhousie's ESG practices are too weak to achieve any of the benefits of divestment and want Dalhousie to join other top universities like Harvard, Stanford, and Cambridge in committing to divesting fully from fossil fuels.

3. Are you an undergraduate student attending Dalhousie University or King's College at a Halifax campus (Studley, Sexton, Carleton)? (Yes, No)

4. What is your year of study at Dalhousie University or King's College? (1, 2, 3, 4, 5+, Prefer not to answer)

5. Which faculty is your program of study? (Architecture & Planning, Arts & Social Science, Computer Science, Engineering, Health, Management, Science, Other/Prefer not to answer)

## Investigating Students' Perspective on Dalhousie's Fossil Fuel Investments

6. Prior to the start of this survey, were you aware of the concept of fossil fuel divestment? (Yes, No, Prefer not to answer)

7. Prior to the start of this survey, were you aware of Dalhousie's investment in fossil fuels? (Yes, No, Prefer not to answer)

8. Prior to the start of this survey, were you aware of Dalhousie's Environment, Social, and Governance (ESG) investment practices? (Yes, No, Prefer not to answer)

9. On a scale from 1-5, how important is the issue of divestment to you? (1 being not at all important, 2 not very important, 3 somewhat important, 4 important, 5 being very important)

10. Prior to the start of this survey, how familiar were you with the student group Divest Dal? (Aware of its aims and arguments, Have heard of it but did not know its aims and arguments, Had not previously heard of it)

11. How do you feel about the current investment practices at Dalhousie? (open-ended text response)

12. Does knowledge of these investment practices affect your opinion of the institution? (Yes, No, Prefer not to answer)

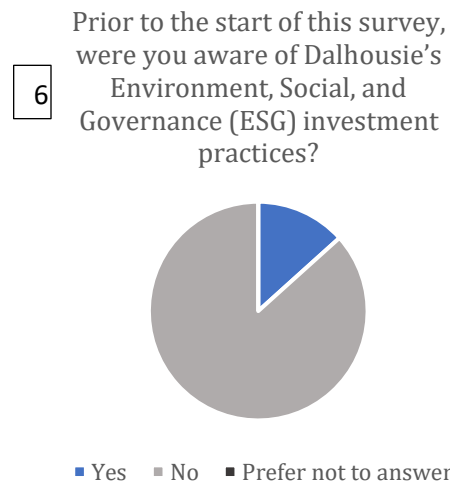
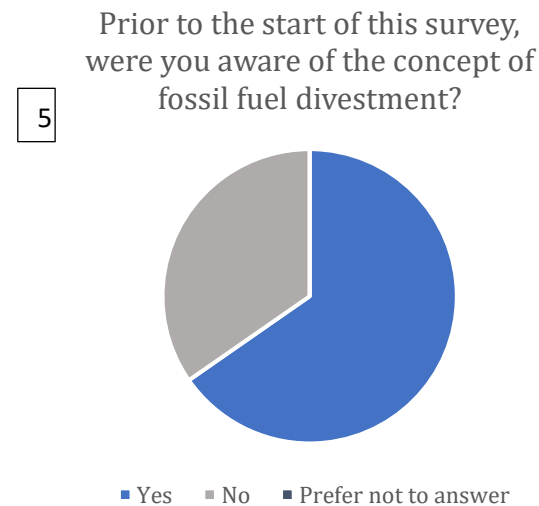
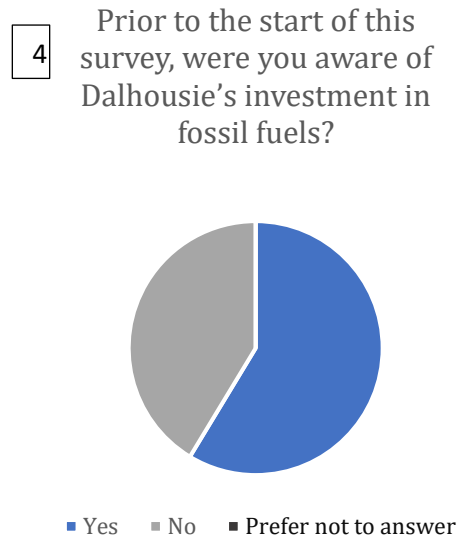
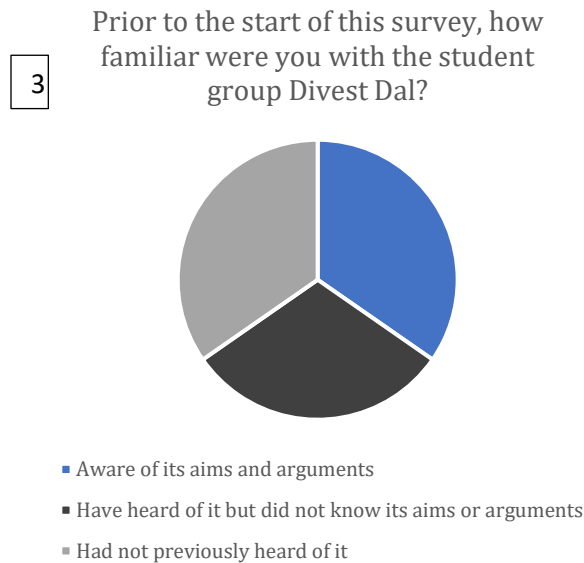
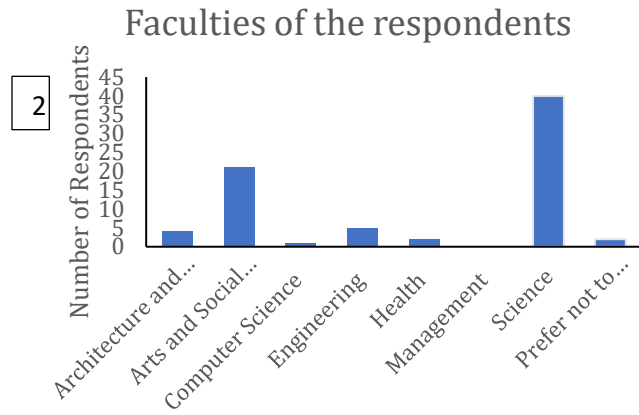
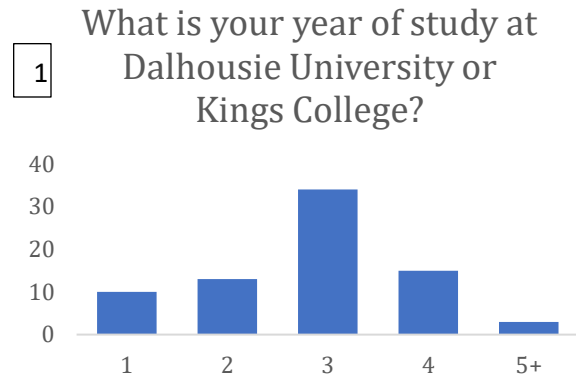
13. State your level of agreement with the following statements (Likert scale: Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree)

A) Dalhousie University has a responsibility to invest in more environmentally sustainable companies.

B) Dalhousie University should divest fully from fossil fuel companies.



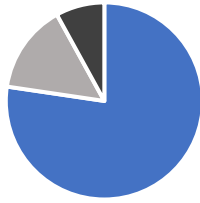
## Appendix C: Results Graphs



# Investigating Students' Perspective on Dalhousie's Fossil Fuel Investments

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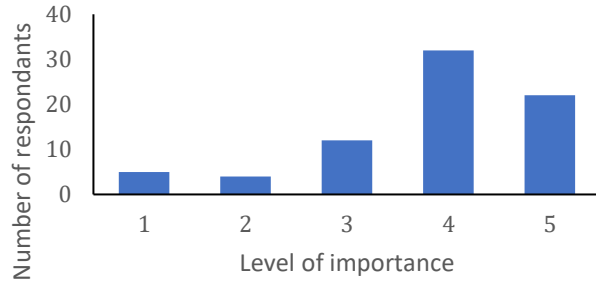
Does knowledge of these investment practices affect your opinion of the institution?



■ Yes ■ No ■ Prefer not to answer

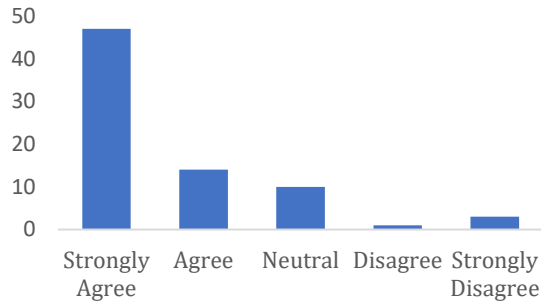
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On a scale from 1-5 how important is the issue of divestment to you? (1 not at all important, 2 not very important, 3 somewhat important, 4 important, 5 very important)



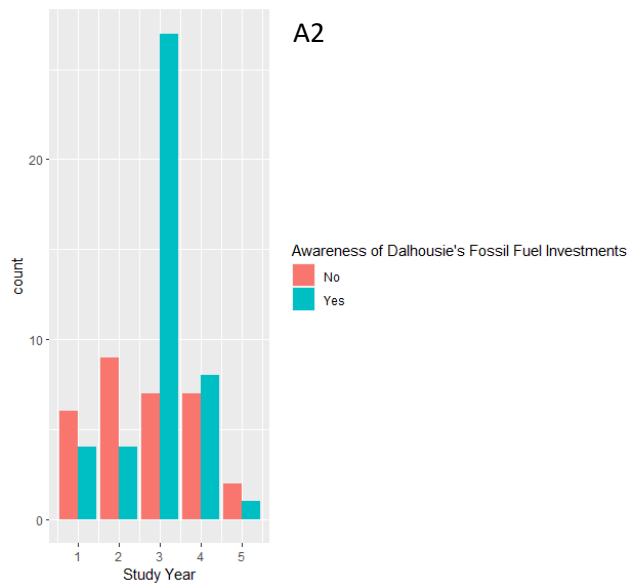
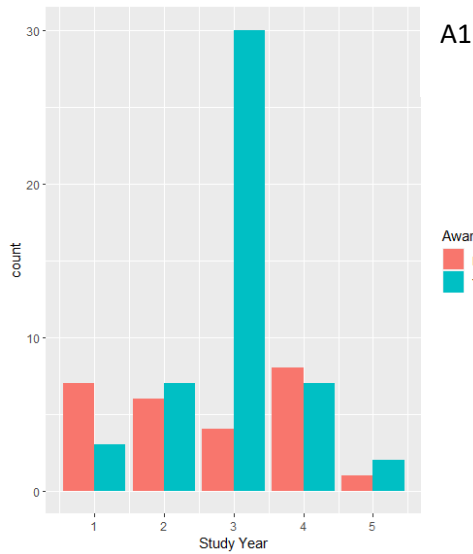
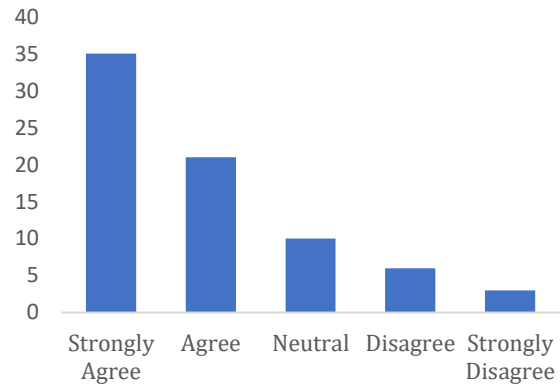
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Dalhousie University has a responsibility to invest in more environmentally sustainable companies.

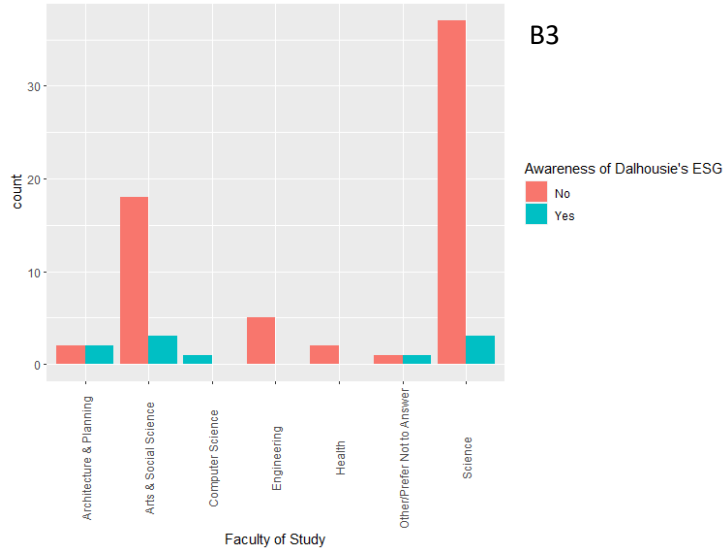
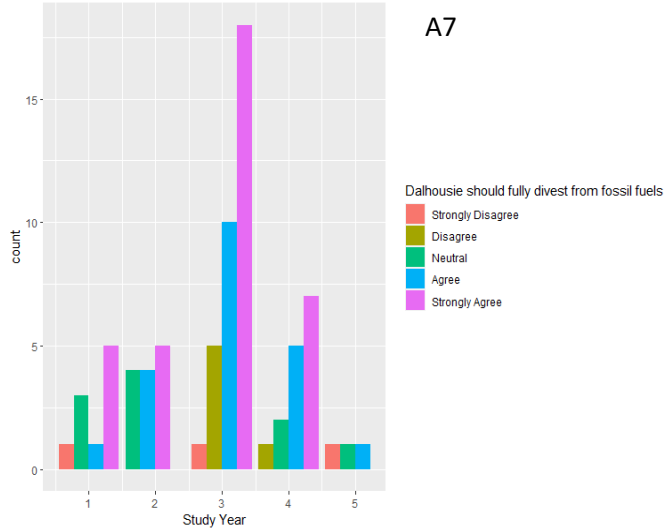


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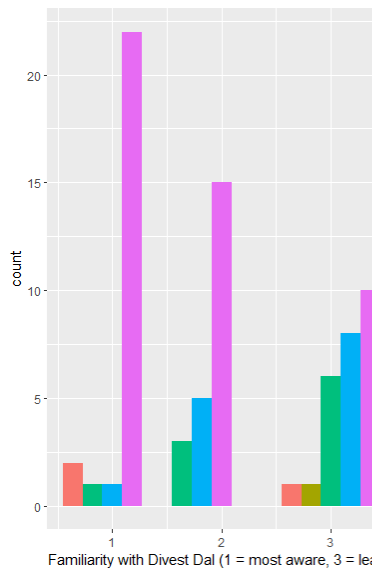
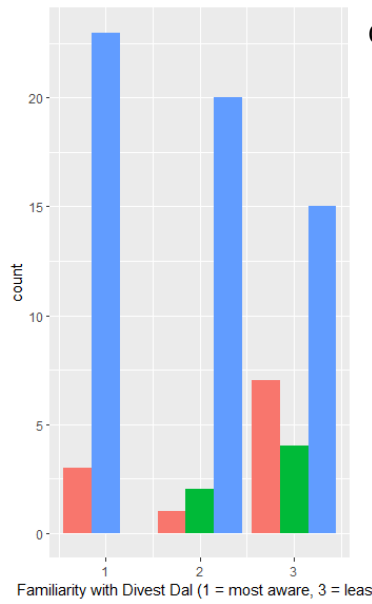
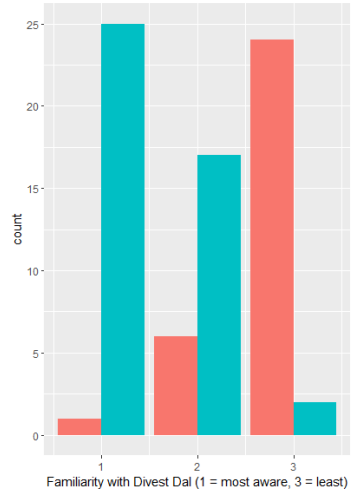
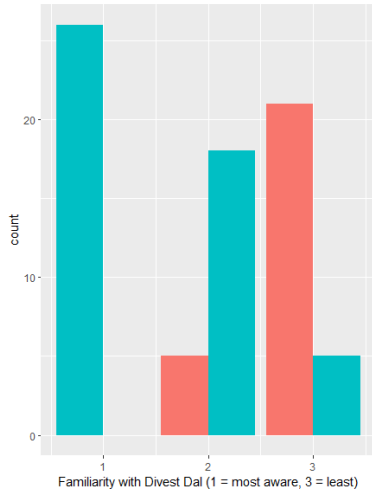
Dalhousie University should divest fully from fossil fuel companies.



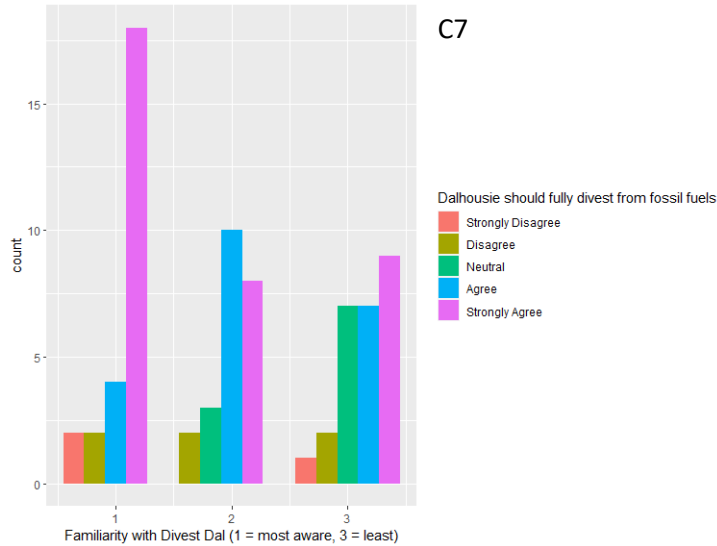
# Investigating Students' Perspective on Dalhousie's Fossil Fuel Investments



# Investigating Students' Perspective on Dalhousie's Fossil Fuel Investments



## Investigating Students' Perspective on Dalhousie's Fossil Fuel Investments



## Appendix D: REB Form



# RESEARCH ETHICS BOARDS APPLICATION FORM

## Prospective Research

This form should only be used if new data will be collected. For research involving only secondary use of existing information (such as health records, student records, survey data or biological materials), use the *REB Application Form – Secondary Use of Information for Research*.

This form should be completed using the [Guidance for Submitting an Application for Research Ethics Review](#).

### SECTION 1. ADMINISTRATIVE INFORMATION [File No: \_\_\_\_\_ office only]

Indicate the preferred Research Ethics Board to review this research:  
 Health Sciences OR  Social Sciences and Humanities

#### Project Title:

Investigating Student Perspectives on Dalhousie's Fossil Fuel Investments

1.1 Research team information		
Lead researcher	Name	Faye Little

Investigating Students' Perspective on Dalhousie's Fossil Fuel Investments

(at Dalhousie)	Email (@dal)		Phone	
	Banner #		Academic Unit	
Co-investigator names, affiliations, and email addresses	Lynn Fraser Zoe Coulter Eric Guimont			
Contact person for this submission (if not lead researcher)	Name			
	Email		Phone	
Study start date	March 6, 2023	Study end date	March 19, 2023	

<b>1.2 For student submissions</b> (including medical residents and postdoctoral fellows)			
Degree program	Environmental Science		
Supervisor name and department	Caroline Franklin, Environmental Science		
Supervisor Email (@dal)		Phone	
Department/unit ethics review (if applicable). <b>Undergraduate minimal risk research only.</b>			
Attestation: <input type="checkbox"/> I am responsible for the unit-level research ethics review of this project and it has been approved.			
Authorizing name:			
Date:			

<b>1.3 Other reviews</b>			
Other ethics review (if any) for this research	Where?	N/A	
	Status?		
Scholarly/scientific peer review (if any)	N/A		
Is this a variation on, or extension of, a previously approved Dal REB submission?		<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes Dal REB file # _____
<b>If yes</b> , describe which components of the current submission are the same as the previously approved submission (list section numbers), and which components are different from the previously approved submission (list section numbers). You may also use highlighting to clearly indicate revised text.			

<b>1.4 Funding</b> <input checked="" type="checkbox"/> Not Applicable			
Funding (list on consent form)	Agency		
	Award Number		
	Institution where funds are/will be held	<input type="checkbox"/> Dalhousie University <input type="checkbox"/> Other: _____	

Was a Dal release of funds agreement issued for this award?		<input type="checkbox"/> Yes      Date of RoF Agreement: _____

**1.5 Attestation(s).** The appropriate boxes *must* be checked for the submission to be accepted by the REB

I am the **lead researcher** (at Dalhousie) named in section 1.1. I agree to conduct this research following the principles of the Tri-Council Policy Statement *Ethical Conduct for Research Involving Humans* (TCPS) and consistent with the University [Policy on the Ethical Conduct of Research Involving Humans](#).

I have completed the TCPS Course on Research Ethics ([CORE](#)) online tutorial.

Yes     No

For Supervisors (of student / learner research projects):

I am the **supervisor** named in section 1.2. I have reviewed this submission, including the scholarly merit of the research, and believe it is sound and appropriate. I take responsibility for ensuring this research is conducted following the principles of the [TCPS](#) and University [Policy](#).

I have completed the TCPS Course on Research Ethics ([CORE](#)) online tutorial.

Yes     No

**SECTION 2. PROJECT DESCRIPTION**

**2.1 Lay summary**

2.1.1 In **plain language**, describe the rationale, purpose, study population and methods to be used. Include a summary of background information or literature to contextualize the study. What new knowledge, or public or scientific benefit is anticipated? [maximum 500 words]

Fossil fuels are a large contributor to climate change, and investment in fossil fuel companies drives the market that continues to contribute to fossil fuel emissions. Many schools, including Dalhousie, have invested in fossil fuel companies, while other top ranked schools across the world including Stanford University, Harvard, Oxford, Cambridge, and many others, have divested from fossil fuels. Divestment has been pushed for at Dalhousie since 2013 by a group known as Divest Dal, but Dalhousie has not budged on their investment practices. This issue is not widely talked about on campus, and many students are unaware, we aim to educate and survey a sample of the undergraduate student body for their opinions on the matter. We aim to collect opinions from at least 160 undergraduate students (approximately 1% of the undergraduate student body on Halifax campuses) on Dalhousie's Halifax campuses using an online survey that will be advertised through posters around campus and online postings on online forums that students frequent. The survey questions range from open-ended opinions to rating questions, in order to analyze quantitatively and qualitatively in our study to best summarize students' feelings and opinions. This study aims to update a previous study done in 2017 by students in Environmental Problem-Solving II: The Campus as A Living Laboratory, which gathered information on Dalhousie students' awareness of the university's fossil fuel investments. Additionally, our study will gather data on how knowledge of Dalhousie's investments in fossil fuel affects their perceptions of the university. This information could then be used to inform future student organizing and university policy regarding fossil fuel investments.

- This is a pilot study.  
 This is a fully developed study.

2.1.2 Phased review. If a phased review is being requested, describe why this is appropriate for this study, and which phase(s) are included for approval in this application. Refer to the [guidance document](#) before requesting a phased review.

Not applicable

## 2.2 Research question

State the research question(s) or research objective(s).

How do Dalhousie University's undergraduate students perceive their school's investment practices regarding fossil fuels, considering Dalhousie's recent commitments to sustainability?

## 2.3 Recruitment

2.3.1 Identify the study population. Describe and justify any inclusion / exclusion criteria. Also describe how many participants are needed and how this was determined.

The study population consists of the entirety of Dalhousie University's undergraduate student body on Halifax campuses. We will be including only Halifax campuses as it is more feasible for our team to reach out to students near to us that we share a campus with. We determined that we need 160 participants in this study, as this is approximately 1% of the undergraduate population on Dalhousie's Halifax campuses.

2.3.2 Describe recruitment plans and append recruitment instruments. Describe who will be doing the recruitment and what actions they will take, including any screening procedures.

An online survey will be advertised to students through social media and posters on campus. This will be done by the research team. The survey itself will screen for the target audience, asking respondents to self-identify as Dalhousie students studying on one or both Halifax campuses.

2.3.3 If you require permission, cooperation, or participation from a community, organization or company to recruit your participants, describe the agreement obtained from the relevant group(s). Attach correspondence indicating their cooperation and/or support (required). Describe any other community consent or support needed to conduct this research. (If the research involves Indigenous communities' complete section 2.11).

Not applicable

## 2.4 Informed consent process

2.4.1 Describe the informed consent process:

- A) How, when and by whom will the study information be conveyed to prospective participants? How will the researcher ensure prospective participants are fully informed?



<p>The study information will be conveyed to the participants before they take the online survey, through the posters and online postings that will recruit said participants. The participants will be asked to indicate their awareness of the study information before they start the survey.</p> <p>B) Describe how consent will be documented (e.g. written signature, audio-recorded, etc). Consent will be documented in the online survey taken by participants, with a question asking whether the participant agrees for their responses to be recorded anonymously in our study</p> <p>[X] Append copies of all consent information that will be used (e.g. written consent document, oral consent script, assent document/script, etc).</p> <p><i>Note: If the research will involve third party consent (with or without participant assent), and/or ongoing consent, ensure these are described above.</i></p>
<p>2.4.2 Discuss how participants will be given the opportunity to withdraw their participation (and/or their data) and any time (or content) limitations on this. If participants will not have the opportunity to withdraw their participation and/or their data, explain why. Participants will have the option to withdraw at any time before submitting the online survey, but due to anonymization of the data they will not be able to request withdrawal after they have submitted their survey responses.</p>
<p>2.4.3 If an alteration/exception to the requirement to seek prior informed consent is sought, address the criteria in TCPS article <a href="#">3.7A</a>. If the alteration involves deception or nondisclosure, also complete section 2.4.4.</p> <p>[ X] Not applicable</p>
<p>2.4.4 Describe and justify any use of deception or nondisclosure and explain how participants will be debriefed.</p> <p>[ X] Not applicable</p>

<p><b>2.5 Methods, data collection and analysis</b></p>
<p>2.5.1</p> <p>A) Where will the research be conducted? Online survey from the Undergraduate sample at Dalhousie University Studley and Sexton campuses</p> <p>B) What will participants be asked to do? Read a brief write-up and answer online survey questions</p> <p>C) What data will be collected using what research instruments? <i>(Note that privacy and confidentiality of data will be covered in section 2.6)</i> Undergraduate students will be asked to answer the survey on Microsoft Forms or Google Forms.</p> <p>D) How much of the participant's time will participation in the study require? The online survey will have 6 questions to answer and will take approximately 10 minutes</p> <p>[ X] Append copies of all research instruments (questionnaires, focus group questions, standardized measures, etc.)</p> <p>[ ] This is a clinical trial (physical or mental health intervention) – ensure section 2.12 is completed</p>
<p>2.5.2 Briefly describe the data analysis plan. Indicate how the proposed data analyses address the study's primary objectives or research questions. The data will be analysed quantitatively (for multiple-choice questions) and qualitative coding will be done on open-ended question responses.</p>

2.5.3 Describe any compensation that will be given to participants and how this will be handled for participants who do not complete the study. Discuss any expenses participants are likely to incur and whether/how these will be reimbursed.

As the study consists of a short online survey that will only take between 5-15 minutes of respondents' time, no compensation will be offered.

## 2.6 Privacy and confidentiality

### 2.6.1

A) Describe who will have knowledge of participants' identities.

No one in our study will have knowledge of participants' identities.

B) Describe the level of identifiability of the study data (anonymous, anonymized, de-identified/coded, identifying) (see [TCPS Chapter 5A – types of information for definitions](#)).

Anonymous

C) Specify which members of the research team (or others) will have access to participants' data and for what purpose.

All members of our research team will have access to participants' data, though with no knowledge of who the participants are. The research team will need to access the data in order to analyze it for our study.

D) Describe measures to ensure privacy and confidentiality of study documents and participant data during the data collection and analysis phase. *[Note that plans for long term storage will be covered in 2.6.2]*

- Address: handling of documents/data during data collection; transportation or transfer of documents/data; storage of documents/data (during the study).
- If a key-code will be maintained, describe how it will be kept secure.
- For electronic data, describe electronic data security measures, including file encryption and/or password protection [as applicable](#).
- For hard copy documents, describe physical security measures (specify location).

Our data will be collected through the online server Microsoft forms and will only be able to be accessed through our team members' password protected Microsoft accounts.

This research involves personal health records (ensure section 2.13 is completed)

2.6.2 Describe plans for data retention and long-term storage (i.e. how long data will be retained, in what form and where). Will the data eventually be destroyed or irreversibly anonymized? If so, what procedures will be used for this? Discuss any plans for future use of the data or materials beyond the study currently being reviewed.

The data collected will only be stored for the period in which we are analyzing it and finalizing our report. It will be stored temporarily in an excel file in order to complete analyses on it, and then deleted upon completion of the study.

This research will be deposited in a data repository (ensure section 2.14 is completed)

### 2.6.3

Describe if/how participant confidentiality will be protected when research results are reported:

A) For quantitative results - In what form will study data be disseminated?

Only aggregate data will be presented

Individual de-identified, anonymized or anonymous data will be presented

Other. If "other", briefly describe dissemination plans with regard to identifiability of data.

Not applicable, only qualitative data will be presented

B) For qualitative results - Will identifiable data be used in research presentations/publications? If participants will be quoted, address consent for this and indicate whether quotes will be identifiable or attributed.  
 Not applicable, only quantitative data will be presented  
Only non-identifiable data will be used in research presentations/publications.

2.6.4 Address any limits on confidentiality, such as a legal duty to report abuse or neglect of a [child](#) or [adult in need of protection](#), and how these will be handled. Ensure these are clear in the consent documents. (See the [guidance document](#) for more information on legal duties and professional codes of ethics).

Not applicable

2.6.5 Will any information that may reasonably be expected to identify an individual (alone or in combination with other available information) be accessible outside Canada? And/or, will you be using any electronic tool (e.g. survey company, software, data repository) to help you collect, manage, store, share, or analyze personally identifiable data that makes the data accessible from outside Canada?

No

Yes. If yes, refer to the University [Policy for the Protection of Personal Information from Access Outside Canada](#), and describe how you comply with the policy (such as securing participant consent and/or securing approval from the Vice President Research and Innovation).

## 2.7 Risk and benefit analysis

2.7.1 Discuss what risks or discomforts are anticipated for participants, how likely risks are and how risks will be mitigated. Address any particular ethical vulnerability of your study population. Risks to privacy from use of identifying information should be addressed. If applicable, address third party or community risk. (If the research involves Indigenous communities also complete section 2.11)

There are no risks or discomforts anticipated for the participants. Participants will respond to the survey anonymously, and there should not be any particular ethical vulnerability of our study population.

2.7.2 Identify any direct benefits of participation to participants (other than compensation), and any indirect benefits of the study (e.g. contribution to new knowledge).

Participants will not receive any direct benefits for participating in our study, but the indirect benefits will be their contribution to our new knowledge of student opinions on Dalhousie's fossil fuel investment practices, and that their opinions and voice will be published and potentially heard by many people.

## 2.8 Provision of results to participants and dissemination plans.

2.8.1 The TCPS encourages researchers to share study results with participants in appropriate formats. Describe your plans to share study results with participants and discuss the process and format.

Because we will not be collecting any identifiable data from our participants, we will not be able to distribute the results directly to them, but we will inform our participants that the results will be posted on our public class project page online, along with all other reports for this project, so that they can access the results themselves this way.

2.8.2 If applicable, describe how participants will be informed of any material incidental findings – a discovery about a participant made in the course of research (screening or data collection) that is outside the objectives of the study, that has implications for participant welfare (health, psychological or social). See [TCPS Article 3.4](#) for more information.

Not applicable

2.8.3 Describe plans for dissemination of the research findings (e.g. conference presentations, journal articles, public lectures etc.).

We do not plan to disseminate the research findings in any conferences, journal articles, or public lectures. Our final report and findings will be posted online on our class project page, where anyone can view it, and we will be sending a copy of our findings to the Dalhousie University president and board members that vote on matters such as divestment, in order for the voices of our participants to be heard by those who can make a difference.

## 9. Research Team

2.9.1 Describe the role and duties of all research team members (including students, RA's and supervisors) in relation to the overall study.

The four research team members are all undergraduate students in the course ENVS 3502: Environmental Problem-Solving II, and the responsibilities of the study are shared equally.

2.9.2 Briefly identify any previous experience or special qualifications represented on the team relevant to the proposed study (e.g. professional or clinical expertise, research methods, experience with the study population, statistics expertise, etc.).

The research team members have relevant experience from coursework in their undergraduate programs, but no other special relevant qualifications.

## 2.10 Conflict of interest

Describe whether any dual role or conflict of interest exists for any member of the research team in relation to potential study participants (e.g. TA, fellow student, teaching or clinical relationship), and/or study sponsors, and how this will be handled.

Not applicable

Although we will be collecting data from fellow students, and potentially friends of ours, the survey will be completely anonymous and we will not have any knowledge of who we are collecting data from, so there will be no conflict of interest.

## 2.11 Research involving Indigenous peoples

Consult TCPS [Articles 9.1 and 9.2](#) in determining whether this section is applicable to your research.

Not applicable – go to 2.12

<p>2.11.1 If the proposed research is expected to involve people who are Indigenous, describe the plan for community engagement (per TCPS Articles <a href="#">9.1 and 9.2</a>). If community engagement is not sought, explain why the research does not require it, referencing TCPS article 9.2.</p>
<p>2.11.2 State whether ethical approval has been or will be sought from <a href="#">Mi'kmaw Ethics Watch</a> and if not, why the research does not fall under their purview. If the research falls under the purview of other Indigenous ethics groups, state whether ethical approval has been or will be sought.</p>
<p>2.11.3 Describe plans for returning results to the community and any intellectual property rights agreements negotiated with the community with regard to data ownership (see also 2.11.4 if applicable). Append applicable research agreements.</p>
<p>2.11.4 Does this research incorporate OCAP (Ownership, Control, Access, and Possession) principles as described in TCPS <a href="#">Article 9.8</a>?</p> <p><input type="checkbox"/> Yes. Explain how.</p> <p><input type="checkbox"/> No. Explain why not.</p>

<p><b>2.12 Clinical trials</b></p> <p><input checked="" type="checkbox"/> Not applicable – go to 2.13</p>
<p>2.12.1 Will the proposed clinical trial be registered?</p> <p><input type="checkbox"/> No. Explain why not.</p> <p><input type="checkbox"/> Yes. Indicate where it was/will be registered and provide the registration number.</p>
<p>2.12.2 If a novel intervention or treatment is being examined, describe standard treatment or intervention, to indicate a situation of clinical equipoise exists (TCPS <a href="#">Chapter 11</a>). If a placebo is used with a control group rather than standard treatment, please justify.</p>

2.12.3 Clearly identify the known effects of any product or device under investigation, approved uses, safety information and possible contraindications. Indicate how the proposed study use differs from approved uses. <input type="checkbox"/> Not applicable
2.12.4 Discuss any plans for blinding/randomization.
2.12.5 What plans are in place for safety monitoring and reporting of new information to participants, the REB, other team members, sponsors, and the clinical trial registry (refer to TCPS <a href="#">Articles 11.6, 11.7, 11.8</a> )? These should address plans for removing participants for safety reasons, and early stopping/unblinding/amendment of the trial. What risks may arise for participants through early trial closure, and how will these be addressed? Are there any options for continued access to interventions shown to be beneficial?

<b>2.13 Use of personal health information</b> <input checked="" type="checkbox"/> Not applicable
2.13.1 research using health information may be subject to Nova Scotia's <a href="#">Personal Health Information Act</a> . Describe the personal health information ( <a href="#">definition explained in the guidance document</a> ) required and the information sources, and explain why the research cannot reasonably be accomplished without the use of that information. Describe how the personal health information will be used, and in the most de-identified form possible.
2.13.2 Will there be any linking of separate health data sets as part of this research? <input type="checkbox"/> No <input type="checkbox"/> Yes  If yes: A) Why is the linkage necessary? B) Describe how the linkage will be conducted (it is helpful to append a flow diagram) C) Does that linkage increase the identifiability of the participants?
2.13.3 Describe reasonably foreseeable risks to privacy due to the use of personal health information and how these will be mitigated.

<b>2.14 Data Repositories</b> <input type="checkbox"/> Not applicable
2.14.1 Identify and describe the data repository in which the research data will be deposited. What is its focus, who are its target users, who can access deposited data and under what circumstances? For how long will the data be kept in the repository?

<p>The raw data collected for this study will be deleted upon completion of the study, and the final report containing aggregate results will be published in the Dalhousie library collection housing all student papers from the course ENVS3502L Environmental Problem-Solving II.</p>
<p>2.14.2 Describe the data set to be released to the repository. If there is personal and/or sensitive information in the data, describe how you will prepare the data for submission to the repository and mitigate risks to privacy. Identify all fields that will be included in the final data set (include as an appendix).</p> <p>Only the aggregated results will be published in the final report, and no other data will be retained after the publication of the final report.</p>
<p>2.14.3 Is agreeing to have one's data deposited a requirement for participation in the study? If yes, provide a justification. If no, indicate how participants can opt in or out.</p> <p>N/A</p>

### SECTION 3. APPENDICES

**Appendices Checklist.** Append all relevant material to this application in the order they will be used. This may include:

- Reference list
- Permission or support/cooperation letters (e.g. Indigenous Band Council, School Board, Director of a long-term care facility, anyone whose permission you need to conduct recruit participants or conduct research)
- Research agreements (required for research involving Indigenous communities)
- Recruitment documents (posters, oral scripts, online postings, invitations to participate, etc.)
- Screening documents
- Consent/assent documents or scripts
- Research instruments (questionnaires, interview or focus group questions, etc.)
- Debriefing and/or study results templates
- List of data fields included in data repository
- Confidentiality agreements

#### Consent Form Templates

Sample consent forms are provided on the [Research Ethics website](#) and may be used in conjunction with the information in the [Guidance](#) document to help you develop your consent form.