



Court File No. T- 1750-19

**FEDERAL COURT**

CECILIA LA ROSE, by her guardian ad litem Andrea Luciuk,  
SIERRA RAINE ROBINSON, by her guardian ad litem Kim  
Robinson, SOPHIA SIDAROUS, IRA JAMES REINHART-SMITH,  
by his guardian ad litem Lindsey Ann Reinhart, MONTAY JESSE  
BEAUBIEN-DAY, by his guardian ad litem Sarah Dawn Beaubien,  
SADIE AVA VIPOND, by her guardian ad litem Joseph Conrad  
Vipond, HAANA EDENSHAW, by her guardian ad litem Jaalen  
Edenshaw, LUCAS BLAKE PRUD'HOMME, by his guardian ad  
litem Hugo Prud'homme, ZOE GRAMES-WEBB, by her guardian ad  
litem Annabel Webb, LAUREN WRIGHT, by her guardian ad litem  
Heather Wright, SÁJ MILAN GRAY STARCEVICH, by her guardian  
ad litem Shawna Lynn Gray, MIKAEEL MAHMOOD, by his  
guardian ad litem Asiya Atcha, ALBERT JÉRÔME LALONDE, by  
his guardian ad litem Philippe Lalonde, MADELINE  
LAURENDEAU, by her guardian ad litem Heather Dawn Plett and  
DANIEL MASUZUMI

PLAINTIFFS

- and -

HER MAJESTY THE QUEEN IN RIGHT OF CANADA and THE ATTORNEY  
GENERAL OF CANADA

DEFENDANTS

**STATEMENT OF CLAIM TO THE DEFENDANTS**

A LEGAL PROCEEDING HAS BEEN COMMENCED AGAINST YOU by  
the Plaintiff. The claim made against you is set out in the following pages.

IF YOU WISH TO DEFEND THIS PROCEEDING, you or a solicitor acting  
for you are required to prepare a statement of defence in Form 171B prescribed by the  
Federal Courts Rules serve it on the plaintiff's solicitor or, where the plaintiff does not  
have a solicitor, serve it on the plaintiff, and file it, with proof of service, at a local  
office of this Court, WITHIN 30 DAYS after this statement of claim is served on you,  
if you are served within Canada.

If you are served in the United States of America, the period for serving and  
filing your statement of defence is forty days. If you are served outside Canada and

the United States of America, the period for serving and filing your statement of defence is sixty days.

Copies of the *Federal Court Rules* information concerning the local offices of the Court and other necessary information may be obtained on request to the Administrator of this Court at Ottawa (telephone 613.992.4238) or at any local office.

IF YOU FAIL TO DEFEND THIS PROCEEDING, judgment may be given against you in your absence and without further notice to you.

Date: October 25, 2019

**ORIGINAL SIGNED BY  
FRANK FEDORAK  
A SIGNÉ L'ORIGINAL**

Issued by: \_\_\_\_\_

(Registry Officer)

Address of local office: Federal Court of Canada  
Pacific Centre, PO Box 10065  
3<sup>rd</sup> Floor, 701 West Georgia Street  
Vancouver BC V7Y 1B6

TO: Her Majesty the Queen in Right of Canada

AND TO: Attorney General of Canada  
Department of Justice Canada  
900 - 840 Howe Street  
Vancouver BC V6Z 2S9

I HEREBY CERTIFY that the above document is a true copy of  
the original issued out of / filed in the Court on the \_\_\_\_\_

day of OCT 25 2019 A.D. 20\_\_\_\_

Dated this \_\_\_\_\_ day of OCT 25 2019 20\_\_\_\_

\_\_\_\_\_  


FRANK FEDORAK  
REGISTRY OFFICER  
AGENT DU GREFFE

## **CLAIM**

1. The plaintiffs claim as follows: see relief sought at paragraph 222.

## **FACTS**

### **A. Overview**

2. Science is unequivocal that dangerous climate change is upon us and is occurring due to human activities. The threats posed by climate change to Canadians, and especially our children and youth, are existential. The release of anthropogenic greenhouse gases (“**GHGs**”) into the atmosphere is already triggering a host of adverse consequences including global warming. The combustion of fossil fuels is the main driver of GHG emissions.
3. Canada is one of ten highest GHG emitters in the world in terms of total national emissions. Despite knowing for decades that GHG emissions cause climate change and disproportionately harm children, the defendants continue to cause, contribute to and allow GHG emissions that are incompatible with a stable climate capable of sustaining human life and liberties (“**Stable Climate System**”). All human activity in Canada depends upon a Stable Climate System. It is foundational to human life. Without it, society as we know it would cease to exist.
4. Serious harms from climate change are already occurring across Canada and are disproportionately harming children and youth. These climate change harms, caused by the accumulation of GHGs (CO<sub>2</sub> and other greenhouse gas pollutants) in the atmosphere, include dangerously increasing temperatures, changing precipitation patterns, heatwaves, rising seas and storm-surge flooding, increasing droughts and violent storms, ocean acidification and warming, beach and farmland soil erosion, melting of permafrost, freshwater degradation, increased wildfires, resource and species extinctions, increases in human diseases and other adverse health risks, and other adverse impacts which

threaten the habitability of Canada and cause serious and irreversible harm (collectively, “**Climate Change Impacts**”).

5. Despite the gravity of these impacts, the remedial measures proposed and implemented by the defendants remain grossly insufficient. The defendants have and continue to:
  - a. cause, contribute to and allow a level of GHG emissions incompatible with a Stable Climate System;
  - b. adopt GHG emissions targets that are inconsistent with the best available science about what is necessary to avoid dangerous climate change and restore a Stable Climate System;
  - c. fail to meet their own GHG emissions targets; and
  - d. actively participate in and support the development, expansion and operation of industries and activities involving fossil fuels that emit a level of GHGs incompatible with a Stable Climate System

(collectively, the “**Impugned Conduct**”).

6. The plaintiffs to this proceeding are children and youth in Canada who have been and will continue to be exposed to Climate Change Impacts that interfere with their physical and psychological integrity and their ability to make fundamental life choices. Because of their vulnerability and their age, these individuals and the generations of children and youth to follow will continue to bear a disproportionate share of the burden of climate change. The plaintiffs seek declarations that the defendants, by the Impugned Conduct, have unjustifiably infringed their rights, and the rights of all children and youth in Canada, present and future, as guaranteed under ss. 7 and 15 of the *Canadian Charter of Rights and Freedoms* (the “**Charter**”).
7. As well, the plaintiffs say that the defendants have a common law and constitutional obligation to protect the integrity of common natural resources

that are fundamental to sustaining human life and liberties. The plaintiffs seek a declaration that the defendants have failed to discharge their public trust obligations with respect to these resources.

8. There are a variety of feasible pathways to bring Canada's emissions into line with what is required to restore a Stable Climate System. However, the defendants have not committed to reducing GHG emissions to a level consistent with what the best available science demonstrates is necessary to avoid catastrophic impacts. Indeed, the defendants have consistently failed to fulfill their own promised commitments to reduce GHG emissions. They have also aggravated the harms suffered by the plaintiffs by Impugned Conduct that causes, allows and contributes to dangerous levels of GHG emissions.
9. The plaintiffs thus seek an order from this Court that the defendants be required to develop and implement an enforceable plan that is consistent with Canada's fair share of the global carbon budget necessary to achieve GHG emissions reductions consistent with the protection of public trust resources subject to federal jurisdiction and the plaintiffs' constitutional rights (a "**Climate Recovery Plan**").
10. The plaintiffs also ask this Court to retain jurisdiction to ensure that this Climate Recovery Plan is implemented.

**B. The Parties**

11. The plaintiff CECILIA LA ROSE is a 15-year-old who resides in Toronto, Ontario.
12. The plaintiff SIERRA RAINE ROBINSON is a 17-year-old who resides in Westholme, British Columbia.
13. The plaintiff SOPHIA SIDAROUS is an 18-year-old who resides in Gatineau, Quebec.

14. The plaintiff IRA JAMES REINHART-SMITH is a 15-year-old who resides in Caledonia, Nova Scotia.
15. The plaintiff MONTAY JESSE BEAUBIEN-DAY is a 12-year-old who resides in Smithers, British Columbia.
16. The plaintiff SADIE AVA VIPOND is a 13-year-old who resides in Calgary, Alberta.
17. The plaintiff HAANA EDENSHAW is a 16-year-old who resides in the village of Masset on Haida Gwaii, British Columbia.
18. The plaintiff LUCAS BLAKE PRUD'HOMME is a 15-year-old who resides in Ottawa, Ontario.
19. The plaintiff ZOE GRAMES-WEBB is a 13-year-old who resides in Vancouver, British Columbia.
20. The plaintiff LAUREN WRIGHT is a 15-year-old who resides in Saskatoon, Saskatchewan.
21. The plaintiff SÁJ MILAN GRAY STARCEVICH is a 13-year-old who resides in Melfort, Saskatchewan.
22. The plaintiff MIKAEEL MAHMOOD is a 10-year-old who resides in Mississauga, Ontario.
23. The plaintiff ALBERT JÉRÔME LALONDE is a 17-year-old who resides in Laval and Montréal, Québec.
24. The plaintiff MADELINE LAURENDEAU is a 17-year-old who resides in Winnipeg, Manitoba.
25. The plaintiff DANIEL MASUZUMI is a 19-year-old who resides in Fort Good Hope, Northwest Territories.

26. Each of the plaintiffs have constitutional and common law rights that have been and will continue to be unjustifiably interfered with by the defendants' Impugned Conduct.
27. In addition, each of the plaintiffs, or the plaintiffs as a group, have public interest standing to assert the rights of all children and youth in Canada at present and in the future. Each of the plaintiffs have a demonstrated, serious and genuine interest in the subject matter of this litigation. This claim is, in all of the circumstances, a reasonable and effective way to bring the issue before the courts for reasons that include:
  - a. the claim raises issues that transcend the interests of the plaintiffs and clearly impact all children and youth, present and future generations;
  - b. the plaintiffs have the support of non-profit organizations and lawyers who have the expertise, resources and commitment to see their claim through and who will ensure that their claim will be presented in a sufficiently concrete and well-developed factual setting;
  - c. it is not reasonable to expect other children or youth to have to bring their own claims and it is impossible that those of future generations can do so now; and
  - d. the plaintiffs will ensure that all children and youth, present and future, who are disadvantaged by not having access to the political process, in the way that those who have a right to vote do, will have access to justice.
28. The defendant, Her Majesty The Queen in Right of Canada, is named pursuant to s. 48 of the *Federal Courts Act* and the corresponding Schedule, and all references to the defendant, the Crown, or HMTQ in this claim include the Government of Canada.

29. The defendant, the Attorney General of Canada, is named pursuant to the *Department of Justice Act*, R.S.C. 1985, c. J-2, and the *Crown Liability and Procedure Act*, R.S.C, 1985, c. C-50.

30. In this claim, references to the “defendants” include either or both Her Majesty the Queen in Right of Canada and the Attorney General of Canada, as the circumstances require.

### **C. Climate Change**

31. Carbon dioxide (“CO<sub>2</sub>”) is the GHG that is most responsible for trapping excess heat within Earth’s atmosphere. Excess CO<sub>2</sub> and other GHGs (measured together in terms of “Carbon Dioxide Equivalents” or “CO<sub>2</sub>e”) create an “energy imbalance” that drives warming temperatures and climate change. Scientists have known since the late 1800s that atmospheric concentration of GHGs, like CO<sub>2</sub>, affects the Earth’s temperature.

32. A substantial portion of every tonne of CO<sub>2</sub> emitted by human activity persists in the atmosphere for as long as a millennium or more. As a result, CO<sub>2</sub> steadily accumulates in the atmosphere. It is the *cumulative* effect of GHG emissions that causes climate change. The Earth will continue to warm in response to atmospheric concentrations of GHGs caused by past emissions, as well as future emissions. This means that present Climate Change Impacts are substantially the result of past emissions, and that the impact of current day GHG emissions will be mostly borne by today’s children and future generations, including the plaintiffs. This scientific concept has been well understood and accepted by the defendants for many decades.

33. During the Holocene period (beginning about 11,700 years ago) prior to the Industrial Revolution, the concentration of GHGs in the atmosphere was consistent with a stable climate. During that time, CO<sub>2</sub> levels naturally fluctuated between 260 and 280 parts-per-million (“ppm”). Global average CO<sub>2</sub> concentration is presently approximately 407 ppm and is increasing at a



rate of about 2-3 ppm per year. The rate of increase of atmospheric CO<sub>2</sub> concentration since the end of the pre-industrial era (approximately 125 ppm in around 150 years) is unprecedented in the measurable paleoclimate record. The concentration of other GHGs in the atmosphere, including methane, has also increased since the end of the pre-industrial era as a result of human activity.

34. Atmospheric CO<sub>2</sub> levels, global temperature and sea levels are all closely correlated in the measurable paleoclimate record. The last time CO<sub>2</sub> levels were as high as present levels, at least 10 to 15 million years ago, during the Miocene epoch, the seas were approximately 21-27 metres higher than today. If CO<sub>2</sub> levels are not rapidly reduced, the seas will continue to rise by equivalent amounts as Earth's ice sheets and glaciers continue to melt. Ice melt is non-linear. The paleoclimate record and current observations show that ice sheets can disintegrate rapidly with multi-meter pulses of sea level rise over a short timeframe of just a century or so.
35. The best available and most current scientific research, using multiple lines of evidence, indicates that present levels of warming (approximately 1°C above pre-industrial levels) are not safe, and that redressing Earth's energy imbalance and preventing dangerous Climate Change Impacts in the long-term requires significant and timely reductions in GHGs. The quantum of these required reductions may be measured using carbon budgets that define the total amount of GHGs that may be emitted over time in order to limit or eliminate these impacts. Using this carbon budget methodology, a global carbon budget can be calculated, from which each nation's fair share necessary to comply with this global budget can be derived.

#### **D. Climate Change is Occurring in Canada and Expected to Increase**

36. Increased concentrations of GHGs in the atmosphere have raised average global surface temperature by approximately 1°C relative to the pre-industrial era. In the last 30 years, the rate of change has accelerated, with the Earth warming at a rate three times faster than it did over the previous 100 years. 2016 was the

hottest year in recorded history, 2015 the second hottest, 2017 the third hottest, and 2018 the fourth hottest. For 2019, the period from January to June was tied as the second hottest period on record and June was the hottest June ever recorded. Collectively, the past 5 years are the warmest on record, and 9 of the 10 hottest years in recorded history have occurred since 2005.

37. In Canada, the average annual temperature has increased by approximately 1.7°C since 1948, a rate that is about double that of the global average over the same period. In the Canadian Arctic, average temperature has increased at a rate of nearly three times the global average.
38. Warming has been observed across most of Canada, with stronger trends in the North and West; and in winter and spring. It is expected that Canada's temperature will continue to warm at a faster rate than the world as a whole, with the strongest warming projected for winter and far northerly latitudes.
39. According to Canadian government projections, by 2031-2050, when the plaintiffs will be adults, temperatures in Canada will be approximately 0.8 to 1.9°C warmer under a low GHG emissions scenario, and 1.9 to 5.2°C warmer under a high GHG emissions scenario, relative to a 1986-2005 baseline. Humans have never lived on Earth with those temperature levels.
40. Warming temperatures are already causing a changing, less predictable, and more volatile climate system. Extreme weather events, including wildfires, storm surges and extreme flooding, have increased and are expected to continue to increase in frequency and severity. Precipitation levels are expected to rise overall, with strong regional and seasonal variability.
41. Canada's Arctic region has seen rapid declines in sea ice extent, in both summer and winter. In June 2019, the Arctic sea ice extent was about 10.5% below the 1981-2010 average. Snowfall has decreased across southern Canada, and snow cover is melting earlier in spring. Glaciers in western Canada and the Arctic

are shrinking rapidly. About 50% of Canada's land mass is covered by permafrost, which is thawing at an accelerated rate.

42. The best available and most current scientific research projects an approximately 4.5 to 12.2 metre rise in global sea levels by 2100 if current trends continue, with even greater rises in subsequent centuries. Federal government officials have admitted that changes in relative sea level, rising water temperatures, increased ocean acidity and loss of sea ice and permafrost are posing considerable challenges for those who live in and depend upon Canada's coastal areas. Climate change leads to increasing storm surges, which affect both natural shorelines and human built infrastructure. Coastlines being impacted include the Atlantic Provinces, the Gulf of St. Lawrence, the Beaufort Sea, Haida Gwaii, parts of Vancouver Island and other locations along the British Columbia coast.
43. Rising ocean temperatures are changing circulation patterns and threatening marine life and ice sheets. The vast majority (over 93%) of the excess heat caused by rising CO<sub>2</sub> levels is being absorbed by the oceans, causing thermal expansion and melting of the Earth's largest ice sheets. Oceans will retain that heat for much longer than the surface of the Earth because water must lose more energy in order to cool. The rate of warming in the upper levels of the ocean since 1991 has been approximately five times greater than the rate of warming through the 1970s and 1980s. Increases in water temperatures and ocean acidity impair fisheries, traditional and country foods, and food and water safety, including by harmful algal blooms.
44. Climate change is already causing the degradation of soil and water resources. Other impacts of climate change include reduced snowpack and stream flows, increased drought in low precipitation periods, reduced tolerable habitat ranges for native species, northward migration of noxious invasive species (such as pine bark beetles and hemlock woolly adelgid), increased heat stress on agricultural crops, reduced milk production in livestock, increased incidence of

agricultural pests (including codling moths and cereal leaf beetles) and insufficient winter chilling of some agricultural fruit species.

**E. The Defendants Cause, Contribute to and Allow the GHG Emissions Causing Climate Change**

45. The defendants exercise authority and control over GHG emissions levels in Canada in several ways. In the transportation sector, the defendants are responsible for, *inter alia*, the setting of fuel and emissions standards for automobiles, and the certification of vehicles that may be operated in Canada.

46. The defendants have authority over and regulate emissions from coal-fired and gas-fired electricity generation. They also regulate methane emissions and renewable fuels.

47. The defendants exercise further control over GHG emissions through, *inter alia*, the following:

- a. sole and/or concurrent jurisdiction in Arctic, offshore and territorial mining of fossil fuels;
- b. authority exercised through the Crown-Indigenous Relations and Northern Affairs Canada;
- c. authority exercised through Indian Oil and Gas Canada under the *Indian Oil and Gas Act*, R.S.C. 1985, c. I-7;
- d. jurisdiction over fossil fuel activities in the Northwest Territories, Nunavut and “area[s] of land not within a province,” exercised through the National Energy Board and under the *Canada Petroleum Resources Act*, R.S.C. 1985, c. 36 (2<sup>nd</sup> Supp.);
- e. direct control over the transport, export and import of fossil fuels through s. 91(2) of the *Constitution Act, 1867* and the *Export and Import Permits Act*, R.S.C. 1985, c. E-19; and

- f. enacting legislation establishing standards for carbon pricing.
48. The defendants continue to promote fossil fuel transport, export and import by approving and regulating interprovincial and international fossil fuel infrastructure, including oil and gas transportation pipelines.
49. The defendants also directly or indirectly contribute to emissions of GHGs by continuing to incentivise fossil fuel exploration, extraction, production and consumption through subsidies to the fossil fuel industry. These subsidies include but are not limited to:
- a. direct assistance to the fossil fuel industry in the form of tax deductions and exemptions;
  - b. public finance for fossil fuel exploration;
  - c. direct spending on research and development of fossil fuel production and transportation technologies; and
  - d. financial assistance and/or the provision of market intelligence to GHG-intensive industries.
50. In addition, the defendants have acquired the Trans Mountain pipeline system, the Trans Mountain Expansion Project and the Puget Sound pipeline system (collectively, the “**Trans Mountain Acquisition**”). The Trans Mountain Acquisition is meant to facilitate the extraction of bitumen from the Alberta oil sands by providing transport for bitumen to markets. It is expected that emissions from bitumen production in the oil sands will increase by approximately 62% from 71 Mt CO<sub>2e</sub> in 2015 to 115 Mt CO<sub>2e</sub> by 2030.
51. Due to the defendants’ Impugned Conduct, Canada’s GHG emissions increased approximately 24% between 1990 and 2008, and as of 2017 remained at levels approximately 19% above 1990 levels. Canada’s transportation emissions have increased by an even greater amount (approximately 42%) over the same 1990-2017 period. Emissions from the oil and gas sector increased by about

20% between 2005 and 2014. These numbers do not account for the significant amount of GHG emissions that are caused by Canada's extraction and export of fossil fuels, which are then consumed in other countries. Consequently, these numbers significantly understate the full extent of Canada's global contribution to climate change.

**F. The Defendants Have Consistently Failed to Fulfill Their Own Commitments to Limit GHG Emissions**

52. The defendants have promulgated numerous national plans aimed at reducing the country's GHG emissions. None of these plans, if fully implemented, would have met the defendants' constitutional obligation to protect public trust resources, or Canada's children. Moreover, the defendants have failed to implement any of these plans.
53. At the 1988 International Conference on the Changing Atmosphere, held in Toronto, the defendants agreed to reduce CO<sub>2</sub> emissions by approximately 20% from 1988 levels by 2005. In 1988, Canada's emissions were about 594 Mt CO<sub>2</sub>e. However, between 1988 and 2005, GHG emissions actually *increased* by about 23% (136 Mt CO<sub>2</sub>e) above 1988 levels. The 2005 target was approximately 475 Mt CO<sub>2</sub>e. The actual 2005 emissions were about 730 Mt CO<sub>2</sub>e.
54. In 1992, as part of the United Nations Framework Convention on Climate Change (the "UNFCCC"), the defendants committed to reduce GHG emissions to 1990 levels by 2000. The 1990 emissions were 602 Mt CO<sub>2</sub>e. In 1992, when the commitment was made, Canada's emissions were only about 8 Mt in excess of that (610 Mt CO<sub>2</sub>e). However, Canada's actual emissions in 2000 were about 731 Mt CO<sub>2</sub>e.
55. In the 1998 Kyoto Protocol (UNFCCC), the defendants agreed to reduce Canada's GHG emissions by an average of 6% below 1990 levels between 2008 and 2012. However, between 2008 and 2012, Canada's average annual GHG

emissions *increased* by about 17% from 1990 levels, instead of the agreed to 6% decrease. The reduction target for 2008-2012 average was 566 Mt CO<sub>2e</sub>. Canada's actual average emissions for 2008-2012 were about 702 Mt CO<sub>2e</sub>.

56. Under the 2009 Copenhagen Accord (UNFCCC), the defendants agreed to reduce their GHG emissions by 17% below 2005 levels by 2020. This would require 2020 emissions to be 606 Mt CO<sub>2e</sub>. The Crown has acknowledged it will not meet this target. One estimate for 2020 emissions is that they will be about 690 Mt CO<sub>2e</sub>.
57. Under the 2010 Cancun Agreement (UNFCCC), the defendants reiterated their commitment under the Copenhagen Accord. In addition, by signing this agreement, the defendants agreed to a recommendation of 25-40% reduction from 1990 levels by 2020 for countries like Canada. This target was drawn from an Intergovernmental Panel on Climate Change (“**IPCC**”) report, which Canada approved. Meeting this target would require Canada's 2020 emissions to be between 361 and 452 Mt CO<sub>2e</sub>, but Canada's GHG emissions are projected to be 768 Mt CO<sub>2e</sub> in 2020.
58. Under the 2015 Paris Agreement (UNFCCC), the defendants committed to a 30% reduction below 2005 levels by 2030. This commitment is referred to as Canada's Nationally Determined Contribution (“**Canada's NDC**”). An NDC is designed to embody efforts by each country to reduce national emissions and adapt to the impacts of climate change. Canada's NDC would require 2030 emissions to not exceed 511 Mt CO<sub>2</sub>. The defendants estimate that 2030 emissions will range from about 592 to 701 Mt CO<sub>2e</sub>. This would represent a net *increase* from 2005 levels of between about 16% and 37%.
59. The defendants acknowledge that the IPCC's Special Report on Global Warming of 1.5°C, released on October 8, 2018 (the “**Special Report**”), presents the results of a broad-based scientific consensus as to the severity of Climate Change Impacts and the urgent need to reduce emissions. The Special Report provides scientific evidence on the impacts on the environment, public

health, and communities from 1.5°C of warming, and emphasizes both the urgency and the breadth of action needed to address climate change. It finds that 1.5°C of warming is not safe and that “rapid and far-reaching” reductions in human-caused emissions of CO<sub>2</sub> and other GHGs are required.

60. Despite this, the defendants have failed to prepare a plan to achieve the “rapid and far-reaching” emission reductions required to restore a Stable Climate System and avoid catastrophic Climate Change Impacts. They have not even prepared a plan to achieve a 45% reduction by 2030 (such a reduction would mean that Canada’s GHG emissions could not exceed approximately 381 Mt CO<sub>2</sub>e by 2030). Instead, the defendants continue to exercise their authority in a way that results in dangerous levels of GHG emissions and harms children.
61. Because GHGs, particularly CO<sub>2</sub>, remain in the atmosphere for many centuries, each year that emissions fail to decline increases the rate of emissions reductions needed in following years to avoid irreversible damage.
62. None of the GHG emissions reduction targets set by the defendants described above is compatible with mitigating, reversing and preventing dangerous climate change and Climate Change Impacts. The level of emissions contemplated by Canada’s NDC is consistent with at least 3°C of warming by 2100, the consequences of which would be catastrophic.
63. Best available and most current climate science indicates that, in order to prevent dangerous climate change, ensure maintenance of a Stable Climate System, and mitigate, reverse and prevent Climate Change Impacts, average global atmospheric CO<sub>2</sub> concentrations must be reduced to below 350 ppm by 2100 and large amounts of carbon must be sequestered from the atmosphere and into the Earth’s soil.

**G. The Risks to Human Health Created by Climate Change**

64. GHG emissions, given their role in global climate change, create a risk of harm to both human health and the environment on which all life depends. More



frequent and severe extreme weather events increase the risk of physical injury, illness and death.

65. Extreme heat events are projected to increase. Heat waves can cause heat-related illness and death, as well as exacerbating existing health conditions. Higher temperatures also contribute to increased air pollution and pollen production, worsening allergies and asthma.
66. Climate change contributes to the likely increasing prevalence and spread of potentially life-threatening diseases, like Lyme disease, West Nile virus and leishmaniasis.
67. Increased flooding has caused and will increasingly cause injuries or deaths due to exposure to dangerous pollutants, respiratory illnesses from resulting mold growth and the disruption of infrastructure.
68. Smoke from wildfires impacts air quality. The increased occurrence and scale of wildfires, from drought conditions, warming and increased tree die-off due to climate-related beetle and pest increases, has resulted and will increasingly result in respiratory problems, including asthma and pneumonia, from associated air pollution.
69. Increased production of allergens due to longer pollination seasons is resulting and will increasingly result in more severe allergies and increased asthma attacks.
70. Higher water temperatures promote harmful algal blooms by allowing harmful algae to expand into new areas and extend their blooming seasons. Toxic algal blooms can cause the shut-down of shellfish harvesting operations and can poison marine mammals and humans who eat contaminated shellfish.
71. Other risks to health and well-being from climate change include risks to food security and water safety.

72. Mental health disorders are one of the most dangerous immediate health effects of climate change. The psychological toll of climate change can be attributed, in part, to displacement, loss of property and associative loss of place and belonging, and the sheer stress from actual and anticipated episodes of extreme weather. By engaging in the Impugned Conduct, the defendants have and will continue to cause or exacerbate mental health disorders and psychological harm.

#### **H. Impacts of Climate Change on Communities**

73. As a result of climate change, coastal communities are experiencing challenges that include: unstable shorelines; flooding damage to property and agricultural lands; permanent loss of archaeological sites and cultural heritage landmarks; contamination of water supplies; increasing costs for protection, maintenance and insurance; disrupted transportation along previously navigable rivers, trade routes and infrastructure; and impacts on human health, such as waterborne diseases.
74. Urban areas have complex and unique risks arising from climate change. Risks include extreme rainfall leading to urban flooding, heatwaves, wildfires and coastal infrastructure failing during storm-surge events. The density of urban environments can lead to the urban heat island effect, which intensifies heatwaves and limits the extent to which nighttime cooling occurs.
75. Warmer temperatures are causing the permafrost to melt in many Arctic communities. The results of this are already dire and in some cases catastrophic. Serious damage has been done to infrastructure designed for colder weather conditions. As the permafrost continues to melt, some communities are being forced to relocate entirely, with profound economic and cultural consequences. Homes, businesses and other structures are suffering structural damage due to permafrost melt requiring unforeseen and costly repairs. Roads and other transportation infrastructure are subsiding and/or

sinking, putting travellers and others at risk, increasing transportation costs and forcing unbudgeted-for infrastructure expenditures.

**I. Climate Change is Harming Indigenous Peoples and Communities in Canada**

76. Climate change is harming and will continue to harm the livelihoods and cultural rights of Indigenous communities in Canada. These Climate Change Impacts include the melting of permafrost that results in impaired access to northern communities, as well as degraded water quality, increased energy costs and loss of biodiversity within Indigenous communities. These impacts have concomitant impacts on Indigenous hunting, fishing and subsistence rights. Loss of sea ice, and other Climate Change Impacts, can alter animal ranges and opens new pathways for disease, impacts which are felt especially by Indigenous communities.

77. Climate Change Impacts are causing psychological impacts on Indigenous communities flowing from the loss of cultural rights, impacts on traditional knowledge, loss of enjoyment of land and the threat of relocation. Indigenous peoples are among the most vulnerable to climate change and experience unique challenges, in part because Indigenous peoples have a strong cultural connection to the land, water and air that increases their exposure and sensitivity to climate change. Indigenous children and youth are particularly vulnerable to Climate Change Impacts.

**J. Climate Change is Harming Children and Youth in Canada**

78. Children and youth are uniquely vulnerable to the impacts of climate change and air pollution associated with fossil fuels. Children and youth's bodies are not fully developed or mature, including vital organs like their lungs and the brain. Lung growth and development continues through childhood so the respiratory system of children is more susceptible to environmental-related injuries and may be altered by environmental exposures. Additionally, children

and youth have a higher respiratory rate with higher minute ventilation and entry of polluted air to the lungs. Children and youth also have immature immune systems, higher metabolic demands and immature central nervous systems. Children and youth are also more vulnerable because they spend more time outside than adults, which exposes them to excess heat, polluted air and disease carrying insects.

79. Climate change already harms children and youth's health and welfare, including by causing an increase in asthma, heat-related morbidity and mortality, food borne diseases, infectious diseases and neurological diseases and disorders, which will only worsen without immediate action. Increased atmospheric concentrations of CO<sub>2</sub> result in food crops with decreased nutritional content, which negatively affects health and development. Climate change threatens basic needs – clean air and water, sufficient food and nutrition, and adequate shelter.
80. Children and youth, and especially those with asthma, are among those most at risk from exposure to particulate matter in the smoke from wildfires. This particulate matter can contribute to acute and chronic illnesses of the respiratory system, particularly in children and youth, including pneumonia, upper respiratory diseases, asthma and chronic obstructive pulmonary disease.
81. Children and youth have an especially high risk from severe heat, which begins as early as the prenatal period (where heat increases the risk of preterm birth) and then continues into infancy, later childhood (where children's visits to physicians and emergency rooms increase disproportionately during heat waves), and teenage years (where hot days endanger high school athletes and recreation, and make it more difficult to concentrate and perform well in the school environment).
82. Children and youth have a higher risk of dying from excessive heat exposure and are among those most vulnerable to health problems from excessive heat. Increasing temperatures and heat waves also affect the physical, emotional and

cognitive development of children, and adversely impact their learning. Cumulative heat exposure may inhibit children's cognitive skill development.

83. Children and youth are particularly vulnerable to climate change-related diseases. The vast majority (over 88%) of current sufferers of diseases due to climate change are children. Allergies are highly prevalent among children and youth and climate change is exacerbating allergy symptoms, including asthma. An increase in these symptoms can affect children and youth's physical and emotional health by interfering with sleep, play, school attendance and performance. Climate change is thus limiting these children's potential for development and inhibiting their opportunity to be involved in Canada's most important institutions.
84. Children and youth exposed to an increasing frequency of climate change-induced disasters and associated trauma are at risk of suffering irrevocable harms to their physiological and cognitive development. During extreme weather events, children face a disproportionate risk of injury, loss of or separation from caregivers, exposure to infectious diseases and mental health consequences.
85. Children and youth are particularly vulnerable to adverse mental health impacts from climate change. These mental health impacts include elevated levels of anxiety, depression, post-traumatic stress disorder and a distressing sense of loss. The impacts of these mental health effects include chronic depression, increased incidences of suicide, substance abuse and greater social disruptions like increased violence.
86. The risks of climate change will play out over the course of these children's lives to a greater extent than older generations and today's children and youth are already experiencing cumulative risks that will intensify over coming decades. Some exposures, sustained during childhood, increase the risk of diseases these children will face as adults. Given the current pace of climate

change, today's children and youth are born into a dangerous climate system and are facing a lifetime of worsening risks.

87. Certain categories of children and youth are especially vulnerable to the impacts of climate change and air pollution. Communities of colour, immigrants, Indigenous peoples, those living in coastal areas, those with pre-existing or chronic medical conditions and the economically disadvantaged are disproportionately vulnerable to public health threats due to climate change.
88. Because temperatures have increased by more than 1°C above pre-industrial levels, climate change is already dangerous and already injuring the plaintiffs. Any further GHG emissions increase the risk, frequency and severity of imminent future Climate Change Impacts, which in turn impairs these children's capacity for growth and development.
89. The time to avoid dangerous climate change is quickly dwindling. There is a domestic and international scientific consensus that global GHG emissions and temperatures are rapidly approaching a critical threshold, which if surpassed would lock in catastrophic and dangerous Climate Change Impacts for these children and generations to come.

**K. The Costs of Climate Change**

90. The costs of climate change are increasing rapidly. Insured losses associated with extreme weather events in Canada rose from an average of \$405 million per year between 1983 and 2008 to \$1.8 billion per year between 2009 and 2017.
91. Between 1970 and 1994, the federal government paid out an average of \$54 million each year from their disaster fund, adjusted to 2014 dollars. By contrast, the Parliamentary Budget Office estimates that weather events connected to climate change over the next few years will cost the federal government \$900 million annually. The wildfires in Alberta deducted about 1% of Canada's GDP in the second quarter of 2016.

92. The Bank of Canada estimates that in the absence of action to reduce GHGs, Canada could face annual costs of between \$21 billion and \$43 billion by the 2050s.
93. Every year of delay on GHG reductions and mitigation efforts increases the costs.

**L. Climate Change Impacts on the Plaintiffs**

**i. Cecilia La Rose (“Cecilia”)**

94. Cecilia is 15 years old and resides in Toronto, Ontario. Her ancestry is Arawak (an Indigenous Guyanese group), Indian, Irish and Ukrainian.
95. Cecilia has asthma, which she was diagnosed with at the age of six. Following an acute asthma attack in 2010, Cecilia was taken to the hospital. She was subsequently diagnosed with allergy-induced asthma, which is triggered by airborne pollutants. To manage her asthma, Cecilia regularly visits an asthma specialist at the hospital, and a pediatrician at a local clinic. She has also been prescribed anti-allergy and asthma medication, to which she initially experienced a strong adverse reaction. Cold temperatures exacerbate Cecilia’s asthma. She has cold urticaria, a reaction to cold temperatures. In the last two to three years, Cecilia has experienced more severe asthmatic episodes due to the extreme rise and fall in temperatures, and longer periods of high pollen counts due to a longer warm season in Toronto.
96. The extreme temperatures in Ontario and its severe impact on her lungs have affected Cecilia’s daily activities. Cecilia’s asthma and allergies place her at risk of anaphylactic shock. She carries several inhalers to deal with asthma attacks, and is required to carry an epinephrine injection to use in case of a reaction. In 2019, after playing competitive soccer for approximately nine years, Cecilia was forced to quit because of the strain on her lungs. Before having to quit, she was increasingly dependent on using inhalers during games and found the physical toll too great.

97. Cecilia is exposed to increased risks of contracting Lyme disease, an illness transmitted by blacklegged ticks in the area where she lives. Contracting the disease was never much of a problem until recently, when the number of ticks in the area greatly increased because of the northward expansion of the tick's habitat. Cecilia has found ticks on her before and "tick checks" are now a necessity when she has been in certain outdoor areas. With changing climates, Cecilia must face the new reality that she is increasingly at risk of contracting Lyme disease.
98. Cecilia was temporarily taken out of school in June 2018 due to unusually high temperatures in Toronto. Emergency cooling centres were set up within her school gymnasium and Cecilia witnessed several of her classmates faint and lose consciousness during this time. As a result of the heat, Cecilia experienced loss of concentration and severe difficulties breathing. The risk of an acute asthma attack in these conditions caused Cecilia and her family to keep her home.
99. Cecilia and her family have experienced severe flooding events due to the increase in precipitation and rainfall. Cecilia's home first experienced major flooding in or around 2008. The flooding caused water damage to the property, and Cecilia's family had to spend money for repairs and the installation of a backwater valve to prevent rising water. Cecilia and her family expect further flooding in the future.
100. The impacts to Cecilia's health and changes to her home and surrounding environment have had a serious emotional and psychological effect on Cecilia. She has concerns over Climate Change Impacts that are adversely affecting her childhood and has been diagnosed with anxiety, for which she sees a therapist. Cecilia worries about how the impacts of climate change jeopardize her life and future.



**ii. Sierra Raine Robinson (“Sierra”)**

101. Sierra is 17 years old and resides in Westholme, British Columbia, on her family’s farm in the Cowichan Valley.
102. Sierra has Lyme disease, which she likely contracted on or around the age of 13. She was formally diagnosed with the disease in June 2017. Lyme disease is caused by a type of tick-borne bacteria called *Borrelia burgdorferi* and is transmitted through infected blacklegged ticks.
103. In Canada, rising temperatures have significantly increased the range of blacklegged ticks and their hosts (such as mice and deer), the population of blacklegged ticks, and the length of the season during which blacklegged ticks are active.
104. Lyme disease has had a debilitating impact on Sierra. Effects of Lyme disease on Sierra include fibromyalgia, joint pain, chronic fatigue, dizziness, headaches and migraines, fainting, weight loss, panic attacks and consequential mental health issues. At times, Sierra has been confined to bed rest and/or a wheelchair. These impacts have been more severe and prolonged during periods of higher temperatures and extreme weather events.
105. Sierra also has asthma. She experienced more severe asthmatic symptoms when she was younger, but she continues to experience symptoms periodically and particularly during periods of higher temperatures and the wildfire season. The poor air quality during the wildfire season irritates Sierra’s respiratory system and increases her risk of an asthmatic episode.
106. Sierra’s family grows a large proportion of the food they consume on their farm. Sierra has actively participated in planting, growing, and harvesting the food crops since she was seven years old. She practises, teaches and has a certificate in permaculture design.

107. Rising temperatures and declining rainfall have made it increasingly difficult for Sierra and her family to grow many of the crop varieties they previously grew. This has caused them to switch to planting more drought- and heat-resistant crop varieties, and from planting annuals to perennials.
108. Sierra's family also raises livestock, including chickens, ducks, and pigs, and has approximately 50 honeybee hives. Several of Sierra's chickens died from heatstroke during heatwaves in the summer of 2018. Sierra and her family used to have a larger farm, which included cows and approximately a dozen goats. Sierra was forced to sell her cows and goats because she could no longer care for them after contracting Lyme disease.
109. In the summer of 2016, Sierra's family farm experienced extremely low water pressure due to a drought. Sierra and her family had to ration their water use, both for farm and personal use. Their neighbours' well nearly ran dry during the same period. Sierra was helping on their neighbours' farm at the time and because of the scarcity of water they had to prioritize giving drinking water to livestock over watering crops, resulting in crop loss.
110. Lower rainfall and higher temperatures have led to increased wildfire risk to Sierra's home. In 2018, wildfires burned through areas of the Cowichan Valley and came within close proximity to Sierra's home (approximately six kilometres). Sierra's family had packed up their essential belongings and were prepared to flee their farm, until winds changed the trajectory of the fire and spared their home. Increased wildfire smoke exacerbates symptoms relating to Sierra's asthma and Lyme disease, making it difficult for her to go outdoors during periods of heavy smoke. In 2018, when traveling to Tofino on Vancouver Island, Sierra had to wear a N95 mask, which filters fine particulates, to prevent exacerbation of her Lyme disease and asthma.
111. Rising temperatures and lower rainfall are impacting Sierra's ability to enjoy the outdoors. The water level in the Cowichan River and Chemainus River is now too low for Sierra to access and swim in at certain points during the

summer. Bacterial and algal outbreaks due to warming in nearby Fuller Lake have caused Sierra to avoid swimming in order to not come in contact with cercarial dermatitis-causing parasites. Also, western red cedar forests in which Sierra hikes are now experiencing die-back. Sierra is frightened for the future of these forests and concerned over the greater ecological impacts this die-back will likely have.

112. These impacts to her health and changes to her home and surrounding environment have had a serious emotional and psychological effect on Sierra. Sierra experiences anxiety and bouts of depression when thinking about the impacts climate change is having on her future and livelihood. During a depressive state, she feels alone and helpless, and she experiences loss of energy levels and self-esteem. Because of her knowledge of climate change and regenerative agriculture, Sierra worries about the ability of her family and community to grow certain foods for themselves as temperatures increase and rainfall and snowpack melt declines.
113. Sierra's anxiety and depressive symptoms have increased in correlation with the impacts she has experienced due to climate change.

**iii. Sophia Sidarous ("Sophia")**

114. Sophia is 18 years old and resides in Gatineau, Quebec.
115. Sophia is of Mi'kmaq descent and a member of the Metepenagiag First Nation. In the summer months, Sophia regularly visits and stays with her community on the Metepenagiag First Nation Reserve along the New Brunswick northeastern shore.
116. Sophia's community fish for and rely upon salmon and eel for their cultural and spiritual fulfillment and physical sustenance. Salmon are a central part of her Mi'kmaq cultural heritage and are also a critical food staple for Sophia and her community. Climate change has impacted Sophia's ability to partake in this cultural and spiritual activity. She has been unable to learn how to fish or

participate in this central part of her culture because, within the last two to three years, the time frame to find salmon in the river has significantly decreased due to the warming water and, as a consequence, she has not had the opportunity to be taught to fish by her family.

117. Sophia's community traps lobster on the Atlantic Ocean. Lobster is a traditionally important source of food that Sophia's community relies upon and that she eats while visiting the reserve. Warming ocean temperatures and ocean acidification have resulted in declining lobster populations. This has made it difficult and more dangerous for Sophia's family to trap lobster. Sophia's community also traps snow crab, which is a culturally-significant food source that has been impacted by warming waters and ocean acidification. Warming ocean temperatures have also shortened the period of time Sophia's community is able to trap lobster and snow crab, which in turn creates lower yields during the summer to sustain their year's supply of lobster and snow crab. As a result, Sophia's community is forced to rely on less culturally-significant food.
118. Sophia's community hunts wild game in the area, and moose is a primary and culturally-significant food source for Sophia as a member of the Mi'kmaq community. Sophia's family and community hunt in the fall and freeze the meat to share and eat in other seasons. Sophia's family and other Mi'kmaq families use moose meat caught over the fall season for the entire year. This activity also strengthens the bonds within the community as moose are so large that the meat is divided and shared. Members of the community living off the reserve are sometimes gifted meat. Sophia has been gifted moose, salmon and other meats caught on the reserve by her community.
119. Over the past decade, and particularly in recent years, the moose population in or around the reserve has severely declined due to climate change-induced heat and habitat loss due to flooding and deforestation. As a result, moose have become increasingly scarce. The change in the abundance of moose has impacted Sophia's family's ability to hunt for their food supply, and infringed upon a culturally significant practice that has sustained her community for

thousands of years. Moose hides are traditionally used to make drums and drum sticks for ceremonies, and are draped over tee-pees, but moose hides are increasingly harder to prepare as the population declines. If the moose population continues to decline, Sophia's community will no longer be able to make and use drums and drum sticks as it traditionally has, which is central to Sophia's cultural and spiritual practices.

120. Collecting a variety of plants that can be used for medicinal purposes is an important practice that Sophia and other members of her community engage in. Sophia's uncle collects chaga, a fungus that grows on the side of birch trees, to make tea that has been used for centuries for medicine and sacred purposes. However, chaga has been increasingly difficult to find because it is sensitive to the rising temperatures and changing environment. This has negatively impacted Sophia's community's ability to collect and use chaga. Chaga is also traditionally used to treat cancer. Sophia has seen an increase in cancer rates within her community, and thus worries about the decline in the availability of chaga. She is also increasingly concerned that, as the availability of chaga and other traditional medicines declines, her generation and future generations will lose this knowledge held by her elders that is essential to her spiritual beliefs.
121. Sophia and her community have also traditionally gathered sweetgrass, a central medicine for her people. Sophia is no longer able to gather sweetgrass on her reserve and community members must now travel long distances to engage in this culturally important gathering activity. However, the sweetgrass in New Brunswick and Nova Scotia has been increasingly difficult to find and gather due to increased flooding, heavy rainfall and sea level rise impacts caused by climate change.
122. Cedar is a central component of Sophia's traditional cultural and spiritual practices, in particular it is used in ceremonies and traditional medicines for cleansing and energizing. Many elders in Sophia's community have described a significant decline in the number and health of cedar trees around the reserve, which is largely due to climate change. The rising temperatures have caused

drought and made it too hot for cedar trees to survive, and many are being lost in neighboring wildfires or extreme heat spells. Cedar is used in many traditional ceremonies. For example, it is used to line the floor of sweat lodges, for smudging ceremonies, as well as in healing and fasting ceremonies, and as gifts from community members. The loss of cedar has had a substantial negative impact on Sophia's ability to participate in these traditional cultural activities.

123. The extreme heat in the summer and rising temperatures have also made it difficult, at times impossible, for Sophia and her community to participate in sweat lodge ceremonies during the summer, as doing so would be dangerous in the severe heat. Sweat lodges are traditionally held during every season, but this practice has been unavailable to Sophia and other community members during recent periods of extreme heat. In July and August 2019, while Sophia was visiting the reserve, her community planned on holding sweat lodge ceremonies every two weeks. However, due to the extreme heat, only two sweat lodge ceremonies were held during that time and four ceremonies were cancelled. The extreme heat has harmed Sophia's ability to participate in this culturally-significant practice, which is Sophia's connection to the spirit world and her ancestors. The inability to participate in this activity, as was done in the past, is a great stress on Sophia and other members of the Mi'kmaq community, and has had an impact on the overall mental health and well-being of the community, including Sophia.
124. Due to the increase in temperature and periods of drought, there have been a number of fire bans issued in the New Brunswick area. Sophia's community uses sacred fires in a number of traditional activities, such as sweat lodges, fasts, traditional feasts, death feasts and Powwows. Because of fire bans, many of these ceremonies have had to be cancelled. During fire bans, which are becoming more frequent because of climate change, Sophia's community is unable to engage in cultural practices that are central to their spirituality and individual dignity.

125. Sophia is a jingle dress dancer and often travels to dance at different Powwows along the East Coast. Sophia has been a jingle dress dancer for approximately three years. The extreme heat prevents her from dancing for longer periods of time and limits her ability to dance. In July 2019, Sophia was participating in the Eel Ground First Nation Powwow, which is on the neighboring Eel Ground Reserve. The heatwave impaired Sophia's ability to dance and participate in the entire Powwow weekend, and many dancers became ill due to the extreme heat and exertion. Jingle dress dancing is a healing ceremony that impacts Sophia's entire community. When Sophia is unable to focus on the healing and spiritual aspects of the dance, and is only able to focus on her stamina and health under extreme heat and stress, her spirituality and individual dignity are impacted.
126. Rising sea levels and substantial flooding around New Brunswick, Nova Scotia and Prince Edward Island have impacted Sophia's ability to retrieve red ochre with her uncle. Sophia's uncle uses the red ochre to mix into a paste, which is then used as traditional face paint for the Mi'kmaq community. Because of its increasing inaccessibility due to sea level rise, red ochre is less commonly used in Sophia's traditional ceremonies and many people on her reserve are unable to experience the same traditions and practices as once existed.
127. Sophia is distressed at the thought of her community losing its culture again, at the same time as her people are working to regain such practices and restore their community. The continuous threat to Sophia's culture is exacerbated by Climate Change Impacts. The threat of losing their culture because of climate change is extremely stressful on Sophia and her community.
128. Sophia and her family have also experienced increased tornadoes in the Gatineau area and extreme weather events. In or around September 2018, the strong wind storm from the nearby Dunrobin-Gatineau tornado ripped shingles off of Sophia's roof and knocked down her fence. The tornado touched down approximately 10 to 15 minutes away from Sophia's home.

129. Flooding is increasingly frequent and more severe in areas near Sophia's home in Gatineau, including flooding events in May 2016 and May 2018. In or around July 2013, Sophia and her grandmother also endured severe flooding in Sophia's grandmother's house in Etobicoke in Toronto, Ontario.
130. The Climate Change Impacts Sophia is experiencing are making her and her peers question the morality of bringing children into this world. Sophia and many of her friends experience anxiety, depression and hopelessness when thinking of their future and climate change.

**iv. Ira James Reinhart-Smith ("Ira")**

131. Ira is 15 years old and resides in Caledonia, Nova Scotia. He and his family also spend time at their ocean property in Wreck Cove, a coastal community on Cape Breton Island.
132. Ira and his family are being negatively affected by Climate Change Impacts in Nova Scotia, including rising sea levels, extreme rainfall, and storm flooding that are eroding coastlines and will make parts of the province uninhabitable. Many of his family members live on the coastline. He is also concerned about the impacts on coastal cities such as Halifax, where he intends to pursue further education.
133. Nova Scotia, and Atlantic Canada generally, are susceptible to sea level rise caused by rising temperatures and increased rainfall and precipitation. For example, the piece of land that connects Nova Scotia to the mainland of Canada is vulnerable to sea level rise and storm surges. This narrow strip of land is Nova Scotia's only connection to the mainland. Its destruction would interrupt all rail and road transportation and significantly restrict food sources and security for Ira and other Nova Scotians.
134. In 2019, Hurricane Dorian resulted in thousands of downed trees, power outages and storm surges along the coast. A large tree narrowly missed Ira's home. Ira was not able to go to school for several days, he missed his



extracurricular activities, and he and his family were without power for four days. Hurricanes are also becoming more frequent and intense in Nova Scotia, causing greater erosion and damage to property. The winter storms in 2019 were also severe, hitting the mainland with greater impact due to warming ocean temperatures.

135. Higher temperatures are leading to increased wildfire risk in Nova Scotia. In August 2016, wildfires came in close proximity to Caledonia and Ira and his family. There were also droughts that year limiting residents' water supplies.
136. The rivers and waters near Ira's home suffer from increased temperatures and acidification, which has reduced fish populations. Ira enjoys fishing and likes eating fish. However, due to climate change, cold water fish like trout are in decline and high mercury levels impact human health. Mercury levels in fish and other aquatic species become higher with warmer water temperatures.
137. Ira's family's property is home to a number of Eastern Hemlock groves. Eastern Hemlock is vulnerable to hemlock woolly adelgid, an invasive, sap-sucking pest. Warming temperatures in Nova Scotia are causing and increasing the range and prevalence of hemlock woolly adelgid. As a result, in recent years Ira has observed an increasing number of dead hemlock trees on his property and in surrounding forests.
138. The South Shore of Nova Scotia, where Ira and his family live, has one of the highest rates of Lyme disease in Canada. Warming temperatures have increased the presence and number of blacklegged ticks and therefore Lyme disease. Friends and family of Ira have contracted Lyme disease. Ira's father has taken antibiotics twice as a precaution after being bitten. In the summer of 2019, Ira's grandmother took antibiotics after noticing symptoms. Also in 2019, his great-aunt was diagnosed with Lyme disease. Every time he comes inside after being in the outdoors, Ira checks himself for ticks.

139. Ira's family property in Wreck Cove suffers from significant erosion, and continues to suffer from erosion, due to rising sea levels, storm surges and extreme rainfalls. This property on Cape Breton Island will be severely impacted unless immediate action is taken to reduce GHG emissions.
140. These impacts to Ira's life and changes to his home and surrounding environment have caused him extreme discomfort and worry, leading him to participate in school strikes to raise awareness. Rising sea levels, extreme rainfall and precipitation have led to erosion on the coastline and threaten Ira's friends and family. These impacts have had an adverse effect on his emotional and psychological health.

**v. Montay Jesse Beaubien-Day ("Montay")**

141. Montay is 12 years old and resides in Smithers, British Columbia. His mother is Wet'suwet'en and his father is Tahltan.
142. Montay spends much of his time participating in traditional Wet'suwet'en and Tahltan cultural practices, such as drumming, fishing, traditional plant harvesting and basket making. Game meat, harvested fish and berries form a large proportion of his family's food supply. Montay's maternal grandfather hunts and provides meat for Montay's family, particularly elk, moose and bear.
143. Montay has been told by his maternal grandfather that hunting is becoming more difficult due to changes in the range and abundance of these animals. In or around October 2018, Montay saw his maternal grandfather return from a month-long hunting trip with no meat, which was unusual. In years when his maternal grandfather is less successful at hunting, Montay and his family must rely on pigs they raise or otherwise must purchase meat from the grocery store, which adversely impacts their food security, as well as their connection to their culture.
144. Montay and his family fish for sockeye salmon, pink or humpback salmon, and steelhead trout, which fishermen gather from the Bulkley River in the Witset

(formerly Moricetown) Canyon near Smithers. In recent years, rising temperatures, reduced rainfall and snowpack, and consequential reduced river flow have caused sharp declines in fish numbers in the canyon. As a result, permitted fish catch quotas for Montay and his family have been reduced. 2019 was the first year since 2011 that Montay and his family were unable to get any fish.

145. Montay and his family also regularly forage for berries, including huckleberries, blueberries and saskatoon berries. Climate change, particularly changes to the length of the seasons in northern British Columbia, has resulted in decreased productivity and size of huckleberries around Smithers. Increased competition from plants that thrive in warmer territories and northward migrating invasive species have also reduced the availability of berries. Montay and his family noticed that the quality of the huckleberries around Smithers was particularly poor in 2019. Montay and his family also harvest stinging nettle and devil's club for medicinal uses, harvest birch bark for basket making, and plan to use western red cedar bark for weaving traditional headwear. But the abundance of devil's club and western red cedar near Montay's home is being adversely affected by rising temperatures and changes to the length of the seasons.
146. Montay participates in local drumming gatherings of Wet'suwet'en and other First Nations one to two times per month, and in larger gatherings of different groups approximately five times per year. These larger gatherings involve singing, drumming, dancing, story-telling, eating traditional foods and participating in other cultural activities. Traditional Wet'suwet'en drums are made from deer hide, but decreasing deer populations near Smithers make it impractical to hunt for the hide needed to make drums. Instead, Montay and his family must purchase drum kits commercially in order to participate in traditional practices.
147. Changes to the environment and to the availability of plants and animals traditionally used in these ceremonies make it more difficult for Montay to learn

about and practice his culture and for elders to pass on knowledge about these resources to him. Wet'suwet'en traditions have always involved large amounts of storytelling, but the disappearance or decreased abundance of plant and animal species like wild rice and deer mean that Montay is less familiar with what his elders describe to him, which threatens Montay's cultural well-being.

148. Montay also spends approximately two weeks per year at his family's other home in Telegraph Creek, located on the Stikine River within the boreal forests of northern British Columbia. The house is a very special place to Montay and his family, and has significant traditional cultural significance. Wildfires in Northern British Columbia are increasing in frequency, intensity and seasonal duration due to climate change. In early August 2018, a large wildfire broke out in Telegraph Creek, causing devastating structural damage to the First Nations community. The fire destroyed Montay's paternal grandfather's ranch house and the homes of many of Montay's Tahltan relatives.
149. The destruction of Montay's family home in Telegraph Creek had an adverse effect on Montay's emotional and psychological health and cultural well-being. Montay and his father visited his grandfather's ranch house in 2019 to take photos and videos of the damage. Visiting the destroyed ranch home was a very difficult and sad experience for Montay. His family were unable to visit other relatives in Telegraph Creek, because many are yet to return as many homes are still uninhabitable. Montay becomes sad when thinking about the many environmental and cultural changes occurring around him due to warmer temperatures and other climatic changes, and fears future wildfires will affect his home in Smithers.

**vi. Sadie Ava Vipond ("Sadie")**

150. Sadie is 13 years old and resides in Calgary, Alberta.
151. Sadie's family home is located close to the Bow River. In June 2013, she was directly affected by the floods in Calgary, the most costly in Alberta's history.

The rapid rise in Bow River levels forced Sadie and her family to evacuate their home for five days, while they took shelter in a friend's basement. Her home lost power during the floods, spoiling the food in their fridge and freezer. Because of the floods her school was cancelled.

152. Then seven years old, the 2013 floods were particularly distressing and traumatic for Sadie. She remembers being frightened when her grandmother woke her in the middle of the night in response to a mandatory evacuation order. Sadie is very concerned that flooding near her home will happen again, and become more frequent and severe.
153. Cycling is important to Sadie, particularly for her mental health. But the increasingly large wildfires and longer wildfire season in Alberta have compromised Sadie's ability to be active outside. Wildfires, such as the one in High Level in 2019, have exposed her to an increasing amount of air pollution, an exposure that government health officials say is hazardous to her health and well-being. Sadie feels light-headed and very uncomfortable when cycling in wildfire smoke, particularly when cycling uphill in thick smoke conditions. While she normally cycles to school in the fall, spring and summer, she was forced to start taking the bus last spring during the early fire season because her route to school involves several large hills and the wildfire smoke made cycling these hills too harmful and hazardous to her health.
154. In August 2018, Sadie attended a summer camp at Camp Chief Hector, in Exshaw, Alberta. Wildfire smoke in the area forced Sadie and her fellow campers to stay inside and refrain from physical activity for the last three days of camp, negatively impacting her health and well-being. Sadie spent approximately one hour outdoors during this three day period, during which she was coughing a lot, while those around her expressed near-fainting symptoms. Because of severe late summer wildfires in recent years, her family has begun to avoid planning major outdoor activities in August, even though this is traditionally a time her family would spend a lot of time outdoors.

155. Sadie feels that spending time outdoors in the forests, prairies and badlands around Calgary, and in more remote areas of Western Canada, rejuvenates and energizes her. Outdoor activities have been a part of her life for as long as she can remember. But she is increasingly concerned by the adverse changes she observes in the climate and ecology of these places. For example, Sadie is distressed by pine beetle outbreaks and pine tree die-off in the forests in Alberta, impacts that she knows are linked to climate change. Sadie was particularly distressed by the incredible amount of pine beetle damage she saw while camping in Jasper, Alberta in 2019.
156. Sadie’s growing concerns about the impacts of climate change, in her own life and globally, have brought her to attend school strikes and other protests, speak at Calgary city council on climate change, adopt a vegetarian diet and take other steps to reduce her personal carbon footprint.

**vii. Haana Edenshaw (“Haana”)**

157. Haana is 16 years old and resides in the village of Masset on Haida Gwaii, British Columbia. She is currently attending boarding school in Metchosin, British Columbia.
158. Haana is a member of the Tsitts Gitanee clan of the Haida Nation.
159. Haana and her family’s home in Masset is located on an inlet on the coast of Haida Gwaii, adjacent to the community dock. Sea-level rise caused by climate change threatens Haana’s home and traditional lands. Haana and her family are noticing increasing shoreline erosion, and Haana knows that sea level rise will damage their house, as their porch is already damaged by the tide. Haana’s paternal grandfather’s village of Skedans – an ancient Haida village that is part of the Gwaii Haanas National Park Reserve and Haida Heritage Site, and is a registered National Historic Site of Canada – is experiencing increasing damage as a result of rising sea levels, extreme weather and erosion. Burial sites are being disturbed and unearthed and totem poles have been damaged. These

Climate Change Impacts jeopardize the continued existence of this culturally and personally significant site.

160. Haana is learning to speak the Haida language, which is endangered, and spends much of her time engaging in Haida cultural practices. Haana believes that her Haida language, culture and mythology is deeply interconnected with the animals, plants, waters, natural resources, climate and ecology of Haida Gwaii. As part of her cultural practices, Haana fishes and harvests berries, roots, cedar bark and other plants from her local environment.
161. Harvested and hunted foods, particularly fish, form a large and culturally-significant part of Haana's diet on Haida Gwaii. Haana and her family regularly fish for salmon. Warm river temperatures and low rainfall and river levels in recent years have led to low salmon numbers on Haida Gwaii. Haana's experiences deeply contrast with the stories she has heard from her elders of the rivers being full with salmon. During a fishing trip in 2019, Haana's family expected to catch 50 salmon to last them the winter but were only able to catch five. As a result, Haana and her family have had to supplement their traditional diet with more store bought food.
162. In the spring, Haana and her family traditionally harvest large amounts of berries and seaweed. In recent years, drier temperatures and lower rainfall have affected the quality and quantity of the berries harvested. Haana's family noticed that salal bushes were particularly affected in 2019. The availability and quality of the edible seaweed (laver, Haida name "sgiw") that Haana's family harvests is also increasingly sparse and inconsistent.
163. As her ancestors did before her, Haana and her family harvest cedar bark from yellow cedar (*Cupressus nootkatensis*). Higher temperatures and drier weather are contributing to die-off and range-shifts of this species. Yellow cedar, which Haida culture particularly values for its use in blanket weaving and other utilitarian and artistic uses, is becoming increasingly-scarce on Haida Gwaii. Haana feels that the decline in yellow cedar makes it more difficult for her to

learn her culture, as less cedar bark availability means fewer people using the bark, and therefore fewer opportunities to pass on these cultural practices to the next generation.

164. Haana feels a deep connection to and spends a lot of her spare time hiking and exploring the rainforests of Haida Gwaii. She fears the risk of future wildfires from the drier conditions in recent years, which have resulted in an increasing number of fire advisories and fire bans on Haida Gwaii.
165. In 2019, Haana spent much of her summer vacation working at the Rediscovery culture camp located at T'aalan Stl'ang, a remote beach on the west coast of Haida Gwaii, where she increased her knowledge about the connection between forests, beaches and oceans and Haida culture, and participated in cultural learning with her siblings. Haana sees her commitment to the resurgence in Haida culture as imperiled because the natural world on which Haida language and culture are based are disappearing because of climate change.

**viii. Lucas Blake Prud'homme ("Lucas")**

166. Lucas is 15 years old and resides in Ottawa, Ontario. He was born in Inuvik, Northwest Territories, where he lived until he was six years old.
167. Lucas is of Gwich'in descent from Fort McPherson, Northwest Territories. A number of his family members continue to reside in Fort McPherson and Inuvik. His family members participate in traditional hunting practices around Inuvik and Fort McPherson. Lucas knows that game meat forms a large part of his family's diet in the Northwest Territories, and that rising temperatures are making it increasingly difficult for his family to hunt on the land. Changing caribou and moose migration patterns mean that the number of caribou and moose around these communities is declining, resulting in a decreased availability of affordable and traditional food. As a result, many of his family members are now moving away from these communities.



168. Rising temperatures and increasingly frequent heatwaves are having a major impact on Lucas, who is sensitive to extreme heat, and susceptible to heat stress, heat stroke and heat-triggered anxiety. Lucas visited two doctors and spoke with a therapist in 2018 to treat his increased anxiety associated with extreme heat.
169. On several occasions between the spring of 2018 and the summer of 2019, Lucas has attended school or extracurricular events during heatwaves and has found it difficult to concentrate and think, particularly when the school buildings do not have working air conditioning. His math class in ninth grade did not have working air conditioning, and Lucas experienced sweating, discomfort and difficulty concentrating as a result.
170. Lucas started playing baseball in 2015, and has become an avid baseball player. Heat was not an issue for Lucas when he first played baseball, but he has felt that each summer in recent years has been hotter than the last. Particularly extreme heat during the 2018 and 2019 baseball season caused Lucas to experience symptoms of heat stress and heatstroke while playing baseball. On several occasions, these symptoms resulted in panic attacks and forced Lucas to withdraw from games because of heat-related difficulties and illness. On these occasions he felt fearful and light-headed and had stomach aches and difficulty breathing.
171. Lucas has been playing hockey since he was four years old, and it is one of his favorite things to do in his spare time. In the evenings and on weekends he spends hours playing hockey outside at the outdoor rink in Stanley Park, which is close to his home in Ottawa. In the last two years, because of fluctuations in the temperature and weather, the outdoor rink has frequently been closed, and the outdoor season is starting several months later than in previous years (late-January compared to late-November). During the winter Lucas used to head out to play hockey whenever he did not have homework or other commitments. Now he finds that there is only a 50-50 chance the rink will be open.

172. Lucas's mother's home is located near the banks of the Rideau River in Ottawa. In the spring of 2019, heavy rainfall raised water levels in the Rideau River and blocked off a trail through Stanley Park that Lucas regularly takes in order to save time and avoid traffic when traveling to school. Lucas is increasingly concerned about the risk that high river levels and increasing flooding in Ottawa will cause major damage to his mother's home.
173. Lucas's concerns about the changes he is experiencing due to rising temperatures and increasingly extreme weather events have led to frustration about the unfairness of the burden placed on him as a young person.

**ix. Zoe Grames-Webb ("Zoe")**

174. Zoe is 13 years old and resides in Vancouver, British Columbia.
175. Zoe and her family regularly spend time at their family cabin in Hopkins Landing, British Columbia, a small coastal community near the town of Gibsons. From the time she was an infant, Zoe has spent two months every summer in Hopkins Landing.
176. In recent years, historically unprecedented smoke from summer wildfires in British Columbia has affected Zoe's ability to live healthfully in Vancouver and Hopkins Landing. She has felt the wildfire smoke irritate her lungs and cause her nasal congestion, throat and eye irritation, and headaches. Because of the wildfire smoke, she has felt fear and sadness about the destabilizing of local and global ecosystems. At times, the wildfire smoke has been so thick that Zoe and her family have been forced to stay inside and/or limit outdoor activities for days at a time, in compliance with advice of local health and government officials. Zoe understands that breathing in wildfire smoke is especially harmful to children's developing lungs. Because of the wildfire smoke, Zoe has been unable to participate in a number of activities that are important for her health, well-being and lifestyle, including running, swimming, and enjoying outdoor games, events and activities. The wildfires have made her feel afraid

for her own well-being and the well-being of her family members who live and keep animals in Kamloops, British Columbia, an area particularly vulnerable to wildfires.

177. Western red cedars are vital to the local ecology that Zoe has grown up with. In recent years, Zoe has witnessed large scale die-off, and subsequent removal, of hundreds of western red cedars within one kilometre of her home. She is witnessing firsthand the negative impacts this is having on her community and local ecology. Zoe is aware the trees are dying off because climate change is creating summer drought conditions. Witnessing these iconic trees, which have lived for centuries, die-off makes Zoe feel sad and worried about the ecosystem around her because it shows the urgency and severity of the climate crisis.
178. Sea level rise, storm surges, and coastal erosion also affects Zoe's community in both Vancouver and Hopkins Landing. Her family home is within the area recognized by the City of Vancouver's official report on sea level rise as prone to flooding during this century. In Hopkins Landing, the community has suffered significant shoreline erosion, which threatens to destroy a 50-foot stretch of community property that links the community – the Hopkins Landing heritage path. This stretch of waterfront land is a site where many community events take place and is critical to the enjoyment and culture of Zoe's family and community in Hopkins Landing. Zoe is afraid that due to climate change the path will no longer exist, thereby breaking community bonds and irrevocably changing the character and identity of her community there.
179. Zoe has a deep and personal understanding of how climate change is affecting her life in Vancouver and Hopkins Landing. Seeing climate change impacts play out in real time is making her fearful and anxious about her future. Because she is unable to vote and participate in the political process, she has begun to participate in school strikes and other forms of protest.

**x. Lauren Wright (“Lauren”)**

180. Lauren is 15 years old and resides in Saskatoon, Saskatchewan.
181. Lauren’s extended family on her father’s side are crop and cattle farmers. The extreme temperatures and weather events related to climate change have greatly impacted the agricultural industry on which her extended family largely depends. Irregular precipitation, erratic temperatures, early freezes, irregular snow events and drought have negatively affected her family’s crops and crop yields. These environmental changes jeopardize her family’s financial stability.
182. In June 2019, the South Saskatchewan River was at a record low water level due to drought. The river is a primary source of drinking water for Lauren and her family. She and her father have also traditionally fished on the South Saskatchewan River. However, fishing and her ability to access the river have been increasingly difficult for Lauren due to low river levels. Entire sections of the river have dried up, making it difficult to canoe on the river due to the low water levels. The rate of river flow has dropped 12% over the past century and is anticipated to fall at an even higher rate over the next century, in part due to climate change. The South Saskatchewan River was designated Canada’s “most threatened river” in 2009.
183. Extreme weather events and storms, including torrential rains, severe snowstorms and hailstorms, have caused increased and erratic power outages for Lauren and her family. The power outages have lasted for several hours. Her father works as a power lineman, so her family is directly affected by these incidents. Increased storms and other weather events mean he is at work for lengthier periods of time and exposed to dangerous working conditions. Increased flooding in Draggins Car Club Park directly behind her house has caused property damage, including to her fence and deck. Sections of fence at her family home have been ripped out by the wind, and they have lost siding because of torrential rain and windstorms.

184. Lauren enjoys playing sports and outdoor activities, such as running track, playing ringette, canoeing and camping. However, Lauren's fair skin, pale complexion, and genetic makeup mean she is more prone to sunburn and heatstroke in extreme heat and vulnerable to skin cancer. Lauren has had heat stroke several times over the past ten years. When exposed to extreme heat she experiences nausea, stomach pains, dizziness and overall discomfort. She has seen two to three doctors for her health concerns, which are induced by extreme heat, and has been advised to stay inside during periods of extreme heat. Because of the preventative measures she must take, she has been prevented from participating in outdoor activities crucial to her health and well-being. She is distressed by the thought that, as time goes on, she will be able to pursue her outdoor interests with even less frequency because it will be hazardous to her health.
185. Lauren is also unable to leave her home in freezing temperatures. She has been diagnosed with Raynaud's syndrome and she cannot expose her feet to the cold. During periods of extreme cold, Lauren experiences intense pain due to her syndrome. Her symptoms are worsened if the temperature falls below -20°C. In cold temperatures, Lauren cannot enjoy or access activities outdoors, including camping, ice fishing and enjoying nature. In February 2019, the temperature in Saskatoon dropped to -46°C, causing her extreme pain and forcing her to largely stay indoors. In the fall of 2019, Lauren had to cancel camping and canoeing trips because of unexpected severe cold temperatures that would likely have caused her pain.
186. Lauren has experienced intense anxiety and depression facing the realities of climate change. She has been diagnosed with generalized anxiety disorder and clinical depression. Anxiety related to the uncertainty of her future interferes with Lauren's daily life and mental well-being. She has been prescribed medications to manage her anxiety and depression which have resulted in physical side effects, such as loss of appetite and tremors, that interfere with her ability to participate in outdoor activities. Lauren often feels depressed

about the state of our planet and has had to adopt coping strategies that impact her daily routines.

**xi. Sáj Milan Gray Starceвич (“Sáj”)**

187. Sáj is 13 years old and resides in Melfort, Saskatchewan. She is of Carry the Kettle (Ceg-A-Kin) Nakoda Nation descent.
188. Sáj’s rural farming community is located in the “Prairie Pothole Region,” an area surrounded by thousands of lakes and wetlands. Increased precipitation and heavy rain events have resulted in increasingly frequent and severe flooding in the region. As a result of this flooding, Sáj has witnessed significant damage in her close-knit community, including flooded basements and other property damage to homes, permanently destroyed cabins, widespread crop damage and destruction of and costly repairs to roads and highways. Melfort is now classified as a “high risk” community for recurrent flood damage by the Saskatchewan and federal governments. She routinely fears that her home will be flooded, as floods increase in frequency and severity in the future, given what she understands about the impacts of climate change and the impacts of the floods she has already seen in her community.
189. Sáj’s community is also experiencing seasonal increases in the frequency of drought periods and wildfires, and in hot and cold temperature extremes. This intensified wet-dry cycle has impacted her ability to recreate outdoors. In May 2018, because of the density of the wildfire smoke in the area, Sáj and her family had to cancel a previously planned May long weekend camping trip to Prince Albert National Park. In August 2018, wildfire smoke from Saskatchewan and Northern Alberta caused her extreme discomfort and difficulty in breathing, and forced her to stay indoors and refrain from physical activity. In the winter of 2018-2019, extreme cold temperatures and wind chill caused frequent closures at the local ski hill at Wapiti Valley and prevented her from enjoying downhill skiing and other outdoor activities.

190. Sáj's family owns a cabin at Kipabiskau Regional Park, which was originally purchased by her great-grandparents in 1972. Seasonal algal blooms in Kipabiskau Lake have been exacerbated by higher summer temperatures, leading to increased risk of toxic and hypoxic lake conditions. In the summer of 2019, her younger sister developed a respiratory illness after waterskiing at Kipabiskau Lake. Sáj and her family now fear that recreating at Kipabiskau Lake will pose increasing risks to their health.
191. Sáj and her family often visit family and friends on Treaty 4 territory, which includes the Carry the Kettle Nakoda Nation. In this region, the saline Quill Lake has expanded as a result of increased precipitation, rising groundwater and subsequent flooding. Saltwater from Quill Lake is intruding into surrounding freshwater aquifers, leading to contamination of drinking water and soils where crops are grown. Her friends and family in this region are increasingly concerned that further precipitation will lead to saltwater contamination of Last Mountain Lake in the Qu'Appelle Valley and negatively impact their ability to live and spend time in their traditional lands.
192. Sáj's great aunt's house is located on the Carry the Kettle/Assiniboine reserve. In 2016, due to unusually dry conditions across the prairies, a neighbouring controlled burn grew out of control and surrounded her great aunt's house. The fire burned all the vegetation on her great aunt's property, but the house was saved by local firefighters.
193. Sáj is deeply concerned about climate change and its impacts on her ability to live her life as a young person. Partly because she cannot vote, she is increasingly engaged in activism; she has become a vegan and participates in strikes, protests and rallies throughout the province and Canada related to climate activism and related animal rights.

**xii. Mikael Mahmood ("Mikael")**

194. Mikael is 10 years old and resides in Mississauga, Ontario.

195. Rising average temperatures and periods of extreme heat in Ontario have made it difficult for Mikaeel to participate in outdoor activities and school, both of which are important to his development and well-being. Repeated heatwaves and warnings from Environment Canada in July 2019 prevented Mikaeel and his family from planning activities and spending time outside during the day for weeks at a time. Even when he tried to go fishing with his father in Forks of the Credit Regional Park during the summer of 2019, higher-than-average temperatures meant that the pike fish that were normally abundant that time of year were avoiding the warmer and shallower parts of the river, and were therefore inaccessible.
196. The lengthening summer season and earlier heatwaves have caused Mikaeel's school to cancel recess approximately one to two times a week towards the end of the 2018 and 2019 school years, forcing the children to remain inside. Mikaeel finds it much more difficult to focus in school, learn and take exams during periods of extreme heat. This in turn causes him frustration and anxiety.
197. Mikaeel's family does not own a car, so he must walk or ride his bike to school, even during heat waves or during periods of extreme cold weather, such as the polar vortex events that are becoming more common and extreme in Ontario. On these occasions, Mikaeel has risked frostbite and suffered regular falls in precarious conditions of ice and snow, and heat exhaustion in conditions of sweltering heat. Mikaeel experienced what he believes was heat exhaustion on two occasions during the summer of 2018, which resulted in loss of concentration and drowsiness, and perspiration during his sleep.
198. Because of these experiences, Mikaeel and his family are concerned about the impact that this exposure to extreme temperatures has on his health and well-being. School cancellations have occurred on several occasions due to high heat or frigid cold, and on other occasions Mikaeel's family has elected to not send him to school due to fears that his commute is unsafe. This frustrates Mikaeel, who feels it is unfair that he cannot attend school because the conditions make it too dangerous to walk.



199. Mikaeel reads and watches news reports regularly. As a result, he has developed a deep awareness at a young age of the impact that climate change is having on his life, the planet and his future, as well as how his government is contributing to the climate crisis. This awareness has caused him to think about how things he wants to do in the future may no longer be possible in a world affected by climate change. For example, since he was around seven years old, he has had plans to become a farmer when he grows up. However, because he has seen how crops and livestock are being adversely affected by extreme temperatures and other climate change impacts, Mikaeel now questions the viability of pursuing this career path.

**xiii. Albert Jérôme Lalonde (“Albert”)**

200. Albert is 17 years old and resides in Laval and Montréal, Québec.

201. Albert has noticed that in recent years his home town is experiencing heatwaves more often and over a longer period of the year (sometimes as early as May and as late as September). Temperatures that he considered “extreme” in his childhood are now regularly exceeded during the summer. The increase in the frequency and severity of heatwaves has negatively affected his ability to spend time outdoors, as he has experienced episodes of dehydration and dizziness when hiking or biking during heatwaves.

202. Changes in the climate of Laval and the greater Montréal area are making winter weather increasingly unpredictable. As a result of these changes, in recent years Albert has experienced an increase in the number of “frost-defrost” events, where temperatures rise above freezing and quickly refreeze. He has also experienced increasingly frequent freezing rain. Beyond making the streets of Laval and Montréal particularly icy and slippery and increasing the risk of injury when walking, these events have led to cancellations of public transportation services that Albert relies on to commute to school and to his extracurricular activities. In recent years, he has also noticed a significant increase in cancellations at his school due to icy conditions, compared to when

he was younger. He has also experienced more unusual and intense winter storms, including a major blizzard in March 2017.

203. Albert is intellectually, emotionally and psychologically invested in the fight against climate change, to protect himself and other young people. In conjunction with the climate change impacts that he has seen and experienced in his home town, Albert has also read widely about present ecological, economic and socio-political impacts from climate change, and the dire projections if emissions are not reduced consistent with the best available science. As a result, he is fearful about the impact that climate change is having on his childhood and will have on his future as an adult. He considers himself to have a form of “eco-anxiety,” which brings him to routinely question the value of attending school, having a career, owning a home, and having and raising children.

204. Albert has been a committed environmentalist since he was seven years old, and has been organizing and regularly participating in school strikes, protests and other civic actions since February 2019. He now dedicates most of his spare time to the youth climate movement, which he feels helps combat his eco-anxiety.

**xiv. Madeline Laurendeau (“Madeline”)**

205. Madeline is 17 years old and resides in Winnipeg, Manitoba.

206. In October 2019, Madeline and her family endured a severe early-season snowstorm, in which a record or near-record amount of October snow fell and approximately 150,000 homes and businesses lost power across the province. The storm and resulting damage caused the City of Winnipeg and the Province of Manitoba to declare states of emergency. Madeline and her family were instructed to stay inside due to the treacherous conditions, and intermittently lost power to their home. During this time Madeline experienced bouts of

anxiety and feared further and more-prolonged power outages and trees falling on her home.

207. The freezing rain and heavy, wet snow from the October 2019 storm damaged or felled over 30,000 trees in Winnipeg, damaged houses and knocked down power lines throughout Manitoba. After the snowstorm, Madeline and her family discovered several downed tree limbs in their yard, some of which were left hanging from power lines. One of the large tree limbs was left charred because of its impact on the wires. Some of the limbs landed on Madeline's house, and one of them (which could not be removed by the family because it was touching hydro wires) was left hanging from the garage roof, making it dangerous to use the garage. In addition, Madeline's family gazebo was crushed under the weight of the snow.
208. Madeline was diagnosed with asthma at the age of six. She uses a regular corticosteroid (fluticasone or "Flovent") inhaler during regular asthmatic episodes, and a bronchodilator (albuterol or "Ventolin") for severe episodes and emergencies. Summer wildfire smoke from surrounding forest fires in Manitoba, Alberta and British Columbia irritate Madeline's lungs and aggravate her severe asthma. In recent years, wildfire smoke from nearby provinces – such as from the Fort McMurray fire in 2016 – has lingered in Winnipeg for days at a time, and often has been so thick that Madeline has been forced to stay indoors on the advice of Environment Canada and her doctors. The heavy smoke irritates Madeline's throat and lungs, and has triggered acute asthmatic symptoms including breathing difficulties, congestion, and coughing fits. During days when there is smoke, Madeline is also forced to use her emergency Ventolin inhaler to relieve bronchial spasms.
209. Madeline is experiencing first-hand how climate change is driving Winnipeg and Manitoba's cyclical weather patterns towards extremes. Madeline has noticed that wet periods are increasingly wetter, and that the air in Winnipeg is increasingly humid at unusual times of the year, such as the fall. The increased humidity provokes Madeline's asthma, and she has suffered increasing and

more frequent asthmatic episodes as a result. In the past two to three months, since on or around August 2019, Madeline has been unable to rely on her prescribed Flovent inhaler as her asthma worsens and she is increasingly forced to use her emergency Ventolin inhaler. Madeline has been seeing asthma specialists for a number of years, and they have told her that her breathing difficulties are likely due to increased mold spores in the damp air.

210. Late-season wet spells and other weather extremes are also disrupting Madeline's life. Climate change-influenced "polar vortex" events have increased in Winnipeg in recent years, resulting in extremely cold temperatures. Madeline cannot go outside during these periods, other than to travel to school, as the extreme cold combined with her asthma causes severe breathing difficulties.
211. Madeline was diagnosed with generalized anxiety disorder and social anxiety disorder at the age of 12. Her doctor has prescribed medication for her anxiety, and she regularly visits a therapist for treatment. Concerns about how her future is imperiled due to climate change exacerbate her anxiety. She has engaged in climate change activism to help cope with her increasing anxiety, including organizing climate strikes at the local and national level and participating in her school's environment club. However, Madeline still experiences bouts of depression, despair and hopelessness regarding the impact of ongoing environmental damage on her life and future.

**xv. Daniel Masuzumi ("Daniel")**

212. Daniel is 19 years old and resides in Fort Good Hope, Northwest Territories, on the banks of the Mackenzie River.
213. Along with the rest of Arctic Canada, the Northwest Territories is warming more rapidly than the rest of Canada, approximately 2°C since the 1940s. Fort Good Hope itself has warmed approximately 1.9°C since the 1970s.

214. Daniel is of Fort Good Hope Dené / K'asho Got'ine descent. Daniel's family, including at certain times Daniel himself, hunts in the area around Fort Good Hope, and game is a primary and culturally-significant food source for his family and the entire Fort Good Hope community. Wild game animals that Daniel's family and community rely on – including barren-ground, boreal and porcupine caribou, as well as moose – have become increasingly scarce and difficult to find due to rising temperatures and resulting changes in herd range and behavior. For example, the Bluenose–West herd of barren-ground Caribou's range used to extend to the outskirts of Fort Good Hope on the Mackenzie River, but now can only be found hundreds of kilometres from Daniel's community.
215. These changes to game availability have meant that Daniel's family must spend several hours on winter roads, or charter a helicopter at other times, in order to hunt for food that for thousands of years traditionally had sustained his community. Hunting trips that used to take only a day now take a week or more, which Daniel finds frustrating. His family has also noticed changes in the quality of the meat they hunt, discarding meat they believe may be contaminated.
216. Rising temperatures in Fort Good Hope are also impacting the Mackenzie River. Daniel and his community rely on being able to travel over the frozen Mackenzie River in the winter via snowmobile to transport goods. However, warmer winter temperatures mean the Mackenzie River does not freeze over completely and contains non-frozen patches that are hazardous to travel over, increasing the isolation of Daniel's community and the risks associated with winter travel. For example, last winter Daniel and his family were unable to visit their cabin (a 20 minute journey from Fort Good Hope) or travel on the ice at all because they felt the non-frozen patches were too dangerous.
217. In warmer, ice-free seasons, Fort Good Hope relies on barge transportation along the Mackenzie River to provide the town with affordable groceries, equipment and other supplies. Increasingly warm and dry weather is

contributing to lower water levels on the Mackenzie River, restricting barge traffic and causing increasingly frequent delays or cancellations of deliveries to Fort Good Hope. This reduces Daniel's food security and access to basic goods and services. Fort Good Hope does not have all-weather road access, and the only alternative access to supplies in warmer seasons is via air freight, which increases costs tremendously. These impacts are compounded by the decreased opportunities Daniel and his family have to hunt and live off the land. Low summer water levels on the Mackenzie River and its tributaries have also adversely affected navigation and travel in the region.

218. Customary fishing practices in the Mackenzie River are also being impacted. Burbot, a traditional delicacy in the Northwest Territories that Daniel's family eats, has been found to contain increased mercury levels in the proximity of Fort Good Hope, due to the higher rates of mercury methylation that occur in organisms when there is a longer ice-free season and warmer river temperatures.
219. Fort Good Hope is largely situated on permafrost. Rising temperatures and a warming climate in the Northwest Territories are contributing to increasingly rapid permafrost melt, which is adversely affecting the foundations of homes and infrastructure in Fort Good Hope. As a result of permafrost melt, the joints holding the walls, floors and ceilings of Daniel's home together are expanding and contracting as the ground underneath shifts in centimeters. Daniel has seen cracks, gaps and sinks in the walls and floors of his home due to the ground shifting. These impacts are imposing increasing economic costs on Daniel and his family as they try to repair the damage to their home and adapt to the increasingly unstable permafrost terrain. There are also cracks due to shifting in the walls of public buildings such as the school.
220. Permafrost melt and riverbank erosion from heavy precipitation events cause even more severe impacts. For example, as a result of a landslide, the foundations of Daniel's parents' previous cabin on the Mackenzie River shifted

in such a way that it cannot be rebuilt. Daniel fears further shifts will occur, including to his home in Fort Good Hope.

221. Daniel is a youth advisor to the K'ahsho Got'ine Self-Government Negotiations Secretariat and is increasingly aware of and concerned about impacts from warming temperatures and other climate change-related changes in Fort Good Hope. Daniel hears from his family and elders that their world is changing, and he feels that as a young person he now needs to take extra steps to address and adapt to these unprecedented changes. The costs of these adaptations, some of which may not even be possible given the severity of the impacts, also concern and frustrate him.

## **RELIEF SOUGHT**

### **A. Orders Sought**

222. The plaintiffs therefore claim as follows:
- a. an order declaring that the defendants have a common law and constitutional obligation to act in a manner compatible with maintaining a Stable Climate System, i.e. one that is capable of sustaining human life and liberties, and to refrain from acting in a manner that disrupts a Stable Climate System;
  - b. an order declaring that, as a result of their Impugned Conduct, the defendants have and continue to unjustifiably infringe the plaintiffs' rights under s. 7 of the *Charter* and puts at risk the s. 7 rights of all children and youth now and in the future;
  - c. an order declaring that, as a result of their Impugned Conduct, the defendants have and continue to unjustifiably infringe the plaintiffs' rights under s. 15 of the *Charter* and puts at risk the s. 15 rights of all children and youth now and in the future;

- d. an order declaring that, as a result of their Impugned Conduct, the defendants have breached and continue to be in breach of their obligation to protect and preserve the integrity of public trust resources and has violated the right of the plaintiffs and puts at risk the rights of all children and youth now and in the future to access, use and enjoy public trust resources including navigable waters, the foreshores and the territorial sea, the air including the atmosphere, and the permafrost (“**Public Trust Resources**”);
- e. an order requiring the defendants to prepare an accurate and complete accounting of Canada’s GHG emissions, including the GHG emissions released in Canada, the emissions caused by the consumption of fossil fuels extracted in Canada and consumed out of the country, and emissions embedded in the consumption of goods and services within Canada;
- f. an order requiring the defendants to develop and implement an enforceable climate recovery plan that is consistent with Canada’s fair share of the global carbon budget plan to achieve GHG emissions reductions compatible with the maintenance of a Stable Climate System, the protection of Public Trust Resources subject to federal jurisdiction and the plaintiffs’ constitutional rights;
- g. an order retaining jurisdiction over this action until the defendants have fully complied with the orders of this Court and there is reasonable assurance that the defendants will continue to comply in the future absent continuing jurisdiction;
- h. costs, including special costs and applicable taxes on those costs; and
- i. such further and other relief as this Honourable Court deems just.



**B. Legal Basis**

**i. The defendants' actions infringe the plaintiffs' rights protected under section 7 of the *Charter***

223. Section 7 of the *Charter* states as follows:

Everyone has the right to life, liberty and security of the person and the right not to be deprived thereof except in accordance with the principles of fundamental justice.

224. Through the Impugned Conduct, the defendants knowingly allow, cause and contribute to the dangerous destabilization of the climate, thereby depriving the plaintiffs and all children and youth in Canada present and future of their constitutionally guaranteed rights under s. 7. The stability of the climate system is profoundly connected to children's basic health and development (or security of the person) and to a child's survival (or life interest). The changing climate already harms and poses an unprecedented existential threat to the well-being of Canadian children and youth. The Impugned Conduct deprives the plaintiffs and all children and youth present and future of the right to life because it increases the risk of death for children exposed to dangerous climate change.

225. The Impugned Conduct deprives the plaintiffs and all children and youth present and future of the right to security of the person because it increases the risk of, and exposes these vulnerable persons to, physical injury and disease, and serious psychological, social and spiritual trauma resulting from Climate Change Impacts, and interferes with their capacity for growth and development.

226. The Impugned Conduct deprives the plaintiffs and all children and youth present and future of the right to liberty because it interferes with their freedom of movement, right to choose where to establish a home, right to personal and cultural autonomy, and the right to make other decisions of fundamental importance.

227. The deprivation on the plaintiffs and all children and youth present and future from the Impugned Conduct is exacerbated where these persons are Indigenous persons who rely on a Stable Climate System to meaningfully engage in traditional practices and cultural rights and on whom Climate Change Impacts have disproportionately more serious effects than the general population.
228. These deprivations are not in accordance with the principles of fundamental justice because, *inter alia*:
- a. there is no principle of fundamental justice that would be in accord with the catastrophic and existential threats that climate change is causing the plaintiffs and all children and youth present and future;
  - b. they are incompatible with the obligation on the defendants to protect children's and youth's lives and health under the *parens patriae* power when it is necessary to do so;
  - c. they are incompatible with the defendants' commitments and obligations under international law and agreements relating to children's right to life and well-being, relating to Indigenous people, and relating to climate change;
  - d. they are incompatible with Canada's obligation as a nation to do its fair share to respond to the global climate crisis;
  - e. they violate the defendants' obligations to protect and preserve the integrity of resources subject to a public trust;
  - f. they are arbitrary because they undermine the individual and collective purpose of the Crown's stated goals relating to preventing dangerous climate change and are inconsistent with Canada's national security;
  - g. they are grossly disproportionate in relation to any economic, national security or other objective that may be served by the Impugned Conduct; and

h. they infringe the plaintiffs' and all children and youth present and future right to equal protection of the law.

229. In addition, the ability to grow up with a Stable Climate System is a fundamental freedom or right underpinning s. 7, and the threat posed by climate change cannot be effectively addressed without action by the federal government.

230. The ability of the plaintiffs and all children and youth present and future to exercise that right or freedom will be irrevocably harmed, and they will therefore be deprived of their life, liberty and the security of person if the defendants fail to sufficiently reduce GHG emissions in a timely and effective way. The particular vulnerability of children and youth and the inability of their parents to protect them from the effects of climate change imposes on the defendants a positive obligation to ensure that climate change plans are designed to and actually reduce Canada's GHG emissions to a level consistent with a Stable Climate System. The defendants' failure to adopt such plans, or to bring about the reduction of Canada's emissions to levels commensurate with maintenance of a Stable Climate System, has the effect of orchestrating, encouraging and sustaining the violation of the plaintiffs' rights and freedoms.

**ii. The defendants' actions infringe the plaintiffs' rights protected under section 15 of the *Charter***

231. Section 15(1) of the *Charter* states as follows:

Every individual is equal before and under the law and has the right to the equal protection and equal benefit of the law without discrimination and, in particular, without discrimination based on race, national or ethnic origin, colour, religion, sex, age or mental or physical disability.

232. The defendants' Impugned Conduct in causing, allowing and substantially contributing to Canada's GHG emissions, infringes the plaintiffs' right to the equal protection and equal benefit of the law without discrimination based on their age and, for some, their indigeneity under s. 15(1) in the following ways:

- a. Because of the specific vulnerabilities associated with their age, climate change poses a wide range of risks that have and will continue to have disproportionate negative health impacts on children and youth.
- b. Because the economic and social costs of addressing climate change will increase significantly the longer the reduction of GHGs is delayed, the failure to address climate change in an effective and timely manner means that those who are now children and youth will bear a disproportionate burden of the economic, social and human costs of maintaining or restoring a Stable Climate System.
- c. As a result of the consequences of climate change, children and youth will be denied the ability to meet their full potential for development, to make and act upon decisions that are fundamental to their lives and persons, and to enjoy equal opportunities to be involved and engaged in society's most important institutions.
- d. Children and youth face increasing risk and likelihood of catastrophic events due to Climate Change Impacts, which deny the plaintiffs and children and youth as a group the same benefits of a Stable Climate System, and the same protection of their lives, liberty and personal security interests, and their interests as beneficiaries of Public Trust Resources, as has been enjoyed by older persons.
- e. Indigenous youth are disproportionately impacted by climate change because of the risk of loss of cultural rights and practices, impacts on traditional knowledge, loss of enjoyment of and connection to the land and the threat of relocation.
- f. The defendants' assessments regarding the economic and other impacts of climate change utilize inappropriate discount rates which prejudice the rights of the plaintiffs and all children and youth.

233. This inequality perpetuates prejudice and exacerbates the pre-existing disadvantage suffered by the plaintiffs and all children and youth particularly in circumstances where the plaintiffs and other children and youth are unable to vote and have little political influence. The Impugned Conduct benefits the short-term economic interests of older persons and the fossil fuel industry at the expense of the plaintiffs and all children and youth and this reinforces the view that their lives and well-being are not as valuable as those of persons who are already adults.
234. Furthermore, this inequality perpetuates prejudice and exacerbates the pre-existing disadvantage suffered by the plaintiffs and all children and youth, present and future, who are Indigenous persons who rely on a stable climate to meaningfully exercise their traditional and culturally significant practices, and on whom Climate Change Impacts have disproportionately more serious effects than the general population.
235. The protection given to children by ss. 7 and 15 of the *Charter* in the context of climate change must not be less than required by the defendants' international law obligations, including the UN Convention on the Rights of the Child, the UN Declaration on the Rights of Indigenous Peoples and the International Covenant on Civil and Political Rights. These international treaties oblige the defendants to, *inter alia*, take positive steps to protect the plaintiffs' right to life, survival and development, including protecting them from harm associated with environmental degradation, whether caused by the state or private businesses. They also require the defendants to protect children's culture, and to protect them from discrimination.

**iii. The defendants' conduct is not justified under section 1 of the *Charter***

236. Section 1 of the *Charter* states as follows:

The *Canadian Charter of Rights and Freedoms* guarantees the rights and freedoms set out in it subject only to such reasonable limits

prescribed by law as can be demonstrably justified in a free and democratic society.

237. The said infringements of ss. 7 and 15 cannot be justified pursuant to the criteria of s. 1, the burden of proof of which lies on the Crown.

**iv. The defendants have breached their obligation to protect and preserve the integrity of resources subject to a public trust**

238. Some resources are, by their very nature, common or inherently public resources. Where these resources play a fundamental role in the lives of the public, the defendants are under an affirmative trust-like, *parens patriae*, or fiduciary obligation to preserve and protect their integrity so that the public is not deprived of the benefits they provide to all. This is both a common law obligation and an unwritten constitutional principle.

239. The duty imposed under this public trust doctrine is a dynamic one that is responsive to changing circumstances, and that reflects the multi-jural nature of the Canadian legal system including our common law, civil law and Indigenous legal traditions.

240. The defendants have an obligation to protect the following Public Trust Resources within federal jurisdiction for the benefit of all present and future generations:

- a. navigable waters, the foreshores and the territorial sea, including the lands submerged thereunder and the resources located therein;
- b. the air, including the atmosphere; and
- c. the permafrost.

241. The defendants' general obligations under the public trust with respect to Public Trust Resources include, *inter alia*:

- a. a duty to exercise continuous supervision and control over those Public Trust Resources;
  - b. a duty to protect the right of the public to access, use and enjoy such resources whenever feasible, including those rights that are fundamental to the ability of the public to enjoy the benefit of the resource as one held in common; and
  - c. a duty to safeguard Public Trust Resources in a manner that does not substantially impair the integrity of these resources or substantially impair the right of the public to access, use and enjoy such resources.
242. Flowing from these general obligations, the defendants have specific obligations under the public trust with respect to Public Trust Resources. The plaintiffs, as beneficiaries of the public trust, and on account of having public interest standing, have standing to enforce the public trust in circumstances in which the defendants have failed to discharge their obligations as trustee.

**(1) Navigable Waters, Foreshores, and Territorial Sea**

243. The defendants' specific public trust obligations associated with the navigable waters, the foreshores and the territorial sea include:
- a. a duty to protect the right of the public to access, use and enjoy these resources for navigation and fishing;
  - b. a duty to manage and protect the territorial sea in a manner that does not substantially impair the ability of ocean resources to perform their critical role in regulating climate and weather systems; and
  - c. a duty to protect coastal land from encroachment by the sea.
244. The defendants have breached their public trust duties by causing, contributing to, and allowing the Climate Change Impacts, which substantially impair the right of the plaintiffs, all children and youth present and future, and other

members of the public to access, use and enjoy navigable waters, the foreshores and the territorial sea in the following ways:

- a. by altering weather patterns, Climate Change Impacts substantially impair the public's right to navigate on, over and through navigable waters and the foreshores;
- b. by adversely affecting aquatic/marine ecosystems that threatens fish populations, Climate Change Impacts substantially impair the public's right to fish in navigable waters, the foreshores and the territorial sea;
- c. by threatening the integrity of the foreshores, Climate Change Impacts substantially impair the public's right to use the foreshores and the public's right to access navigable waters and the territorial sea through the foreshores; and
- d. by substantially increasing the temperature and acidification of the ocean, Climate Change Impacts substantially impair the integrity of the territorial sea, including by substantially impairing the ability of the oceans to effectively regulate the climate.

**(2) Air, Including the Atmosphere**

245. The defendants' specific public trust obligations associated with the air, including the atmosphere, include:

- a. a duty to protect the right of the public to use and enjoy the air without substantially impairing human health; and
- b. a duty to protect the integrity of the atmosphere and to manage the carrying capacity of the atmosphere to hold CO<sub>2</sub> and other GHGs in a manner that does not substantially impair the ability of the atmosphere to sustain a Stable Climate System.



246. The defendants have breached their public trust duties by causing, contributing to and allowing GHG emissions and the resulting Climate Change Impacts which substantially impair the right of the plaintiffs, all children and youth present and future, and other members of the public to access, use and enjoy the air, including the atmosphere:
- a. by impairing the quality of the air so significantly that it causes adverse health impacts; and
  - b. by rendering the atmosphere unable to effectively regulate the climate in a manner consistent with sustaining human life and liberties.

**(3) Permafrost**

247. The defendants' specific public trust obligations associated with the permafrost include:
- a. a duty to protect the right of the public to access, use and enjoy the permafrost as a foundation for other human activity; and
  - b. a duty to protect the integrity of the permafrost so they can perform their globally significant function of sequestering carbon.
248. The defendants have breached their public trust duties by causing, contributing to and allowing the Climate Change Impacts which substantially impair the integrity of the permafrost, thereby affecting the rights of the plaintiffs, all children and youth present and future, and other members of the public. The particulars of these impacts include:
- a. by thawing the permafrost, Climate Change Impacts substantially impairs the public's right to navigate on and over the permafrost itself;
  - b. by thawing the permafrost and threatening the integrity of highways constructed over the permafrost, Climate Change Impacts substantially impairs the public's right to navigate on and over such highways;

- c. by thawing the permafrost, Climate Change Impairs the ability to use the permafrost as a foundation for human activities; and
- d. by thawing the permafrost, Climate Change Impacts render the permafrost unsuitable for sequestering carbon, which is then released, causing additional global warming and further Climate Change Impacts.

**v. Statutory Provisions Relied Upon**

249. To the extent necessary the plaintiffs plead and rely on s. 18.4(2) of the *Federal Courts Act*.

250. The plaintiffs rely on s. 24 of the *Charter of Rights and Freedoms*, s. 52 of the *Constitution Act, 1982*, s. 17 of the *Federal Courts Act*, s. 22(1) of the *Crown Liability and Proceedings Act*, this Court's plenary jurisdiction and such other statutory provisions and material that counsel will advise and this Honorable Court permits.

**vi. Costs**

251. The plaintiffs seek special costs on a full indemnify basis on the basis that this is public interest litigation of exceptional importance.

The plaintiffs propose that this action be tried at Vancouver, British Columbia.

October 25, 2019



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Signature of solicitor for the plaintiffs

**Joseph J. Arvay, O.C., Q.C.**  
**and Catherine Boies Parker, Q.C.**

**Arvay Finlay LLP**  
1512 – 808 Nelson Street  
Box 12149, Nelson Square  
Vancouver BC V6Z 2H2  
Tel: 604.696.9828 / Fax: 1.888.575.3281

-and-

**Chris Tollefson and Anthony Ho**  
**Tollefson Law Corporation**  
700 – 1175 Douglas Street  
Victoria BC V8W 2E1  
Tel: 250.888.6074