



Introduction to Climate Change

Table of Contents

1. Earth's Systems	3
2. Basics of Climate Change	6
3. The Global community response	7
4. Greenhouse Gas Emissions	10
5. Climate Justice	14
6. Taking Action- Mobilizing for the Climate Emergency	18
7. Dive Deeper	20
References	22

1. Earth's Systems

Key Definitions

Weather	Local changes in atmospheric conditions over short periods of time (minutes, hours, days). Ex: Rain, snow, winds, thunderstorms in a specific region and day.
Climate	Regional or global average temperatures, humidity, and rainfall patterns over long periods of time (seasons, years, decades).
Fossil Fuels	A substance formed from the decomposition of ancient plants and animals over millions of years. Examples include oil, coal and natural gas. These have become society's most commonly used energy sources.
Greenhouse Gas Emissions.	Any gaseous compound that is present in the atmosphere, which is capable of absorbing infrared radiation. By absorbing infrared radiation, these gaseous compounds trap and hold heat in the atmosphere causing the warming of outside temperatures. Examples of GHG emissions are carbon dioxide (CO ₂) and methane (CH ₄).
Climate Change	Long-term changes in average weather patterns caused by human activity, specifically greenhouse gas emissions.
Global Warming	The gradual warming of the Earth's average temperature, due to human pollutants, which causes the climate to change.
Climate Justice	The concept that climate change negatively affects humans, as well as nature, and that those least responsible for climate change are often the ones most affected. It acknowledges how interconnected climate change is to other social justice issues such as racial justice, migrant justice, and Indigenous justice.
Climate Emergency	A term that emphasizes how climate change is a serious public health and security issue that must be addressed

aka Climate Crisis, Climate Catastrophe	with urgency and bold, systemic action. Understanding that globally we must place resources, time, and attention to save and prevent people and the planet from facing the worst of the issue.
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1.1 Planetary Boundaries

Background Knowledge

Earth has naturally undergone environmental changes for hundreds of thousands of years. For the last 10,000 years, known as the Holocene period, the Earth has been unusually stable. This stability has allowed humanity to survive and thrive. During the Holocene, the Earth's systems and natural processes, such as surface temperatures, freshwater availability and biogeochemical cycles, have stayed within a range of conditions that have made human development on Earth possible. Biogeochemical flows are the pathways by which essential elements like carbon, phosphorus, nitrogen, or compounds like water, flow between living organisms and the environment on Earth.

Why this is Important Now

However, the planet's stability is now under threat. Since the Industrial revolution in the mid-1700s, human activities have been rapidly altering the Earth's systems and its natural processes, due to growing reliance on damaging activities such as burning fossil fuels. This altering of the Earth's natural processes has led to a new period, known as the Anthropocene, in which human activities have become the primary driver of global environmental change. Human activities that alter Earth's systems and its natural processes could lead to catastrophic consequences, ending the stability of the Holocene period, which is otherwise expected to continue for at least several thousand years.

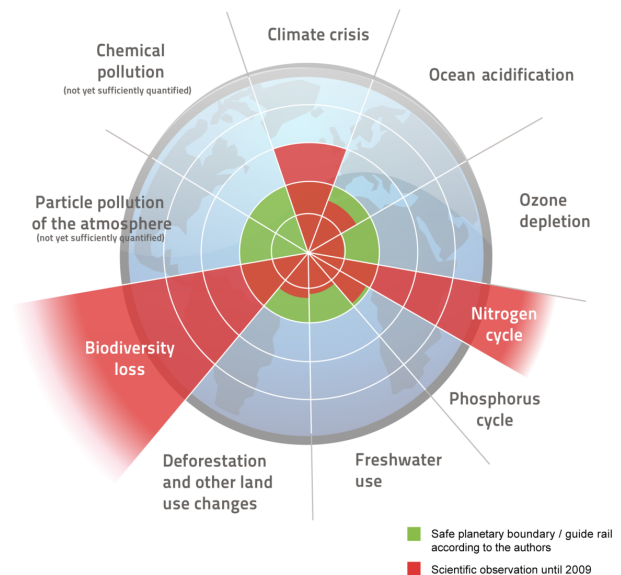
To maintain the favourable conditions of the Holocene period, scientists have made the case for staying within "planetary boundaries". **Planetary boundaries** are defined as the safe operating space for humans and other beings within the Earth's various systems and natural processes. Although some of the Earth's systems and natural processes respond smoothly to pressures caused by human activities, the vast majority of them *do not*.

Key Detail: When faced with pressures from human activities, many of the Earth's systems react in abrupt and unpredictable ways that often lead to adverse and disastrous consequences for humans and other beings. Due to rising temperatures caused by the climate emergency, for example, the Earth's [hurricane systems are becoming more unpredictable](#) and their scale of damage is more catastrophic.

How Earth's systems and natural processes react to human pressures is determined by thresholds of key variables which are highly sensitive to changes. One key variable is greenhouse gas emissions in the atmosphere, which directly impacts the Earth's climate systems. Staying within these thresholds means that the Earth's systems and natural processes keep functioning in a stable manner that is conducive for human survival. If these thresholds are crossed, however, these systems and natural processes could shift into a new, dangerous state that is detrimental for humans and other beings.

The planetary boundaries model identifies nine key Earth systems and natural processes that, if crossed, could lead to disastrous environmental changes. These nine systems and processes are:

1. Climate change;
2. Rate of biodiversity loss (terrestrial and marine);
3. Interference with the nitrogen and phosphorus cycles;
4. Stratospheric ozone depletion;
5. Ocean acidification;
6. Global freshwater use;
7. Deforestation and change in land use;
8. Chemical pollution; and,
9. Atmospheric aerosol loading.



Key Detail: The human impacts on these planetary boundaries are all interconnected. For example, the same greenhouse gas emissions cause both ocean acidification and the climate crisis, and many of the manufacturing processes that create these greenhouse gas emissions also result in freshwater use and deforestation, which contribute to biodiversity loss.

1.2 Climate Change as a Planetary Boundary

While all natural systems are interdependent, here we will focus on the planetary boundary for climate change. The climate system boundary is based on two critical parameters: atmospheric concentration of greenhouse gas (GHG) emissions and radiative forcing.

Radiative forcing is defined as the “the rate of energy change per unit area of the globe as measured at the top of the atmosphere” (Rockstrom et al., 2009). Said another way, radiative forcing is the difference between sunlight radiation being absorbed by the Earth’s atmosphere and the amount of radiation projected back into space. As polluting human activities continue, the amount of radiation absorbed by the atmosphere rises, which is measured in watts.

Many organizations such as 350.org and scientists, including Rockstrom et al. (2009), suggest that human activities should not exceed atmospheric CO₂ concentrations of 350 parts per million (ppm) by volume, and that radiative forcing should not exceed 1 watt per square metre above pre-industrial levels. Moving beyond these thresholds for the climate system boundary will increase the risk of irreversible impacts of climate change, including loss of major ice sheets and glaciers, accelerated sea-level rise, and large-scale changes in forest and agricultural systems.

1.3 Going Deeper

Below are a series of questions, and associated videos and readings that will get more familiar with climate change and why it is an important crisis that humanity needs to address.

Watch IdeasLabs 2012 - Planetary Boundaries - Johan Rockstrom: [video 1](#) (4:01)

Watch Let the environment guide our development - Johan Rockstrom: [video 2](#) (18:42)

Read the Full original paper, ‘A safe operating space for humanity’ by Rockstrom et al. (2009): [link 1](#)

2. Basics of Climate Change

Want to learn more? These links and videos provide an excellent introduction to the science behind climate change!

2.1 How Does It Work?

Watch an Introduction to Climate Change: [video 3](#) (2:23)

Read the Science Behind Climate Change: [link 2](#)

Read the NASA's Causes of Climate Change: [link 3](#)

Read NASA's Climate Change: How Do We Know?: [link 4](#)

Watch the Science Behind Climate Change (Documentary): [video 4](#) (13:45)

2.2 What are the Effects?

Watch Causes and Effects of Climate Change: [video 5](#) (3:05)

Read NASA's the Effects of Climate Change: [link 5](#)

Read Union for Concerned Scientists' Climate Impacts: [link 6](#)

2.3 What are the Social Effects?

Watch The Hidden Impacts of Climate Change: [video 6](#) (5:22)

Read 5 Reasons Why Climate Change Is a Social Issue, Not Just an Environmental One: [link 7](#)

Watch Climate Crisis Is a Fight for Social Justice, Says Jainey K. Bavishi: [video 7](#) (2:55)

2.4 What are Feedback Loops?

Read How feedback loops are making the climate crisis worse: [link 8](#)

Watch The Basics of Climate Feedback Loops: [video 8](#) (1:27)

3. The Global Community Response

3.1 Scientific Consensus and the IPCC

Key Detail: There is overwhelming evidence that climate change is real. Overall, 97% of scientists across sciences related to climate change have concluded that climate change is in fact happening and action is needed to stop adverse, and possibly catastrophic, consequences.

The *Intergovernmental Panel on Climate Change* (IPCC) is the recognized United Nations body designated for assessing the research and science related to climate change. The IPCC's reports consist of the synthesis and assessment of thousands of global scientists' research related to climate change. Based on assessing all this research, the IPCC has come to the conclusion (or consensus) that climate change is happening.

3.2 Dive Deeper:

Watch 97% of Climate Scientists Really Do Agree: [video 9](#) (6:54)

Watch Assessing the Scientific Consensus on Climate Change: [video 10](#) (7:38)

Watch What is the IPCC? : [video 11](#) (2:05)

Read about the IPCC: [link 9](#)

Watch IPCC's Fifth Assessment Report 2014 Synthesis Report: [video 10](#) (14:40)

(Note: this video provides a synthesized report of a 1000+ page document on the state of Earth's climate system, based on the research of thousands of scientists across the globe. Also, this video is based on the Fifth Assessment Report 2014, there is an updated version known as the Sixth Assessment Report 2022. The Sixth Assessment Report does not have a video, but it does have a [synthesized report](#) for its key findings.)

Watch Why the IPCC Report is so Scary: [video 11](#)

3.3 The Importance of 1.5 Degrees Celsius

Key Detail: Scientists have urged that we must limit the warming of Earth's average temperature to 1.5 degrees Celsius below its pre-industrial levels in order to prevent the worst of climate change related disasters

Here are links and videos that explain in detail why this is important. .

Read *We have 12 years to limit climate change catastrophe, warns UN*: [link 10](#)

Read *Summary for Policymakers of IPCC Special Report on Global Warming of 1.5°C approved by governments*: [link 11](#)

Watch *Earth at 2° hotter will be horrific. Here's what 4° will look like*. [video 12](#) (7:02)

Watch *What a 1.5 degree rise in global temperatures will mean for the world's poor*: [video 13](#) (3:28)

3.4 The UN and its Failures

Our world leaders have often failed to act with urgency and agency to face climate change. Explore in detail their negotiations and shortcomings.

Watch *A history of climate change negotiations*: [video 14](#) (1:36)

Read *History of UN Climate Talks*: [link 12](#)

Watch *The Paris climate negotiations, explained*: [video 15](#) (4:21)

Watch *The Paris Agreement for Climate Change*: [video 16](#) (2:07)

Read *Climate Negotiations Fail to Keep Pace with Science*: [link 13](#)

Read *Don't bet on the UN to fix climate change – it's failed for 30 years*: [link 14](#)

Delve deeper read *Climate Change Negotiations Explained*: [link 15](#)

4. Greenhouse Gas Emissions

4.1 Where Do They Come From?

Watch Greenhouse Gas Sources: [video 17](#) (6:29)

Watch Which Greenhouse Gas is Actually the WORST?: [video 18](#) (5:18)

Read Canada's Greenhouse gas emissions: [link 16](#)

4.2 Vancouver's Emissions

Key Detail: City greenhouse gas emissions (GHGs) are broken down into two segments: **corporate** and **community**.

Corporate emissions are those created by the cities' buildings, facilities and their city employees. Some examples include the maintenance trucks the city staff drive, the pool and gym facility heating systems, and the lighting for all city owned buildings. Cities often focus on these emissions because they are easy for them to make simple changes on, such as purchasing electric vehicles for their city employees. In most of the cities in the Lower Mainland, corporate emissions account for less than 1% of the total emissions produced by a given municipality, and in most previous climate action plans, accounted for the majority of their spending budget.

Community emissions represent everything else within the city's boundaries outside of city operations. Community emissions are further broken down into three segments: buildings, transportation and waste management. [In Vancouver, nearly 60% of greenhouse gas emissions comes from burning natural gas for heat and hot water in buildings, and nearly 40% comes from burning gasoline and diesel in vehicles \(specifically all vehicles driven within the cities borders\).](#) Building and transportation emissions do not account for embodied emissions, but instead the emissions being produced by the building or vehicle while it is in use (read more about the distinction below). Waste and water management accounts for under 5%.

4.3 Community Emission Solutions

Community emissions have a broad range of solutions, and require a unique approach for each city. Community emissions solutions are arranged into five categories listed below:

1. **Complete communities:** communities where all humans' needs are accessible, without needing to drive into another city, such as walkable grocery stores, doctors offices, and green spaces.
2. **Multi-modal transportation:** having multiple ways of getting around accessible to all, as in buses, trains, bike lanes, and walkable and stroller accessible areas.
3. **Green jobs:** creating jobs where people don't have to commute and jobs in environmental sectors, such as solar panel installation.
4. **Renewable energy:** energy that comes from renewable sources such as wind, solar and hydro, rather than non-renewable sources such as oil, natural gas and coal.
5. **Circular economy:** an economic system aimed at creating a continual use of resources, which reduces our consumption of new resources extracted and harvested from the Earth and environment (e.g., minerals, metals, trees). This system is focused on repurposing and harvesting resources from existing goods, products and waste (e.g., extracting metals from broken or old cell phones), instead of consuming new resources.

All of these solutions can be put into policy and implemented by city councils to help foster growth and behavioral changes in the community for the people that live in their city currently and in the future.

4.4 Dive Deeper into Vancouver's Emergency Action Climate Plan

Read Metro Vancouver's Greenhouse Gas Emissions (for Lower Mainland): [link 17](#)

Read Metro Vancouver's Emission Inventories & Forecasts: [link 18](#)

Watch Where Vancouver's emissions come from: [link 19](#) (4:55)

Read Vancouver's actions for the Climate Emergency: [link 20](#)

Read New Westminster's actions for the Climate Emergency: [link 21](#)

Read *The importance of measuring the reporting of community greenhouse gas emissions*: [link 22](#) (Page 8 - 11)

4.5 Embodied Emissions

Key Detail: Embodied greenhouse gas emissions are used to define and account for the amount of greenhouse gases released throughout all stages of a material's or a good's manufacturing process. Embodied emissions account for all the extraction, transport, processing and constructing of a material or good, and the distributing of the final product to a consumer (Circular Ecology, n.d.; OECD, 2016).

If you look at the building you are currently in, what was used to build it? Where did those materials come from? The wood used for the framing most likely was chopped down in BC, shipped around the world to be turned into lumber, then shipped back and used for building materials. You can take any example of objects in your life and think about the process for how it came to be in your possession. Thinking in this way gives a broader understanding of how many emissions are in the goods we use in our daily lives.

4.6 Consumption-based Carbon

Key Detail: Usually, when calculating and discussing carbon emissions, the focus is on emissions produced and released within a city, region, or nation (e.g., carbon emissions released from private vehicles, heating and cooling systems). However, calculating carbon emissions within these fails to reflect the embodied carbon emissions from materials and goods that are produced beyond the borders of the city, region or nation.

This substitution of local or domestic suppliers for foreign suppliers of materials and goods results in the city's, region's or nation's carbon emissions appearing lower due to the 'exporting' of their carbon emissions. In this situation, the city, region or nation no longer has direct carbon emissions produced or released from a material or good because they have now moved these activities to another city, region or nation. Nonetheless, these carbon emissions are embodied in the materials or goods and should be calculated accordingly.

To illustrate this phenomena, consider the following example scenario. Say Canada produces and uses a type of refrigerator (in this situation Canada produces the associated carbon emissions from producing and using this good). Then, Canada

decides to no longer produce this type of refrigerator, and instead decides to import and use this type of refrigerator from another nation such as the U.S. or China. Now, the U.S. and China are responsible for producing this type of refrigerator, including the carbon emissions from these goods, even though they are not using these goods.

Key Detail: To account for origins of the emissions embodied in the final consumption of materials and goods, a consumption-based or demand-based model is used to estimate embodied emissions from global goods and materials trade. This model is often used in conjunction with traditional-production models that calculate emissions produced and released within a city, region, or nation.

Key Detail: Using a consumption-based carbon emission model ensures that the city, region or nation that consumes a material or good is responsible for its emissions, and not the city, region, or nation that produces the material or good but doesn't consume them.

4.7 Dive Deeper

Watch *How to understand the state of carbon consumption*: [video 19](#) (2:38)

Read *How do CO2 emissions compare when we adjust for trade?*: [link 23](#)

Read *OECD CO2 emissions embodied in consumption*: [link 24](#)

(**NOTE:** this link uses exclusively nations that are part of the Organisation for Economic Co-operation and Development (OECD) to explain what are CO2 emissions embodied in consumption.)

Read *Mapped: The world's largest CO2 importers and exporters*: [link 25](#)

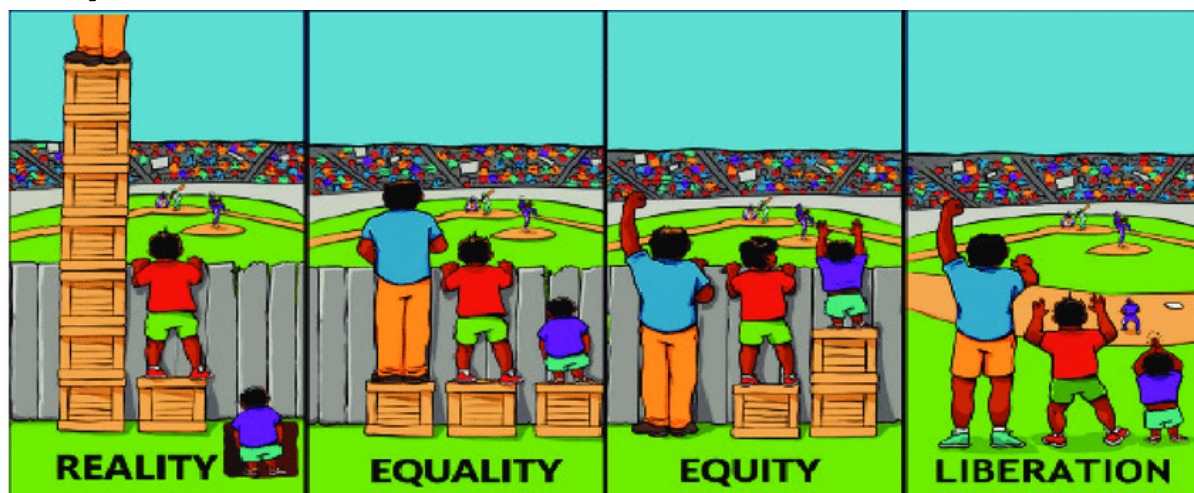
5. Climate Justice

Key Detail: It is important to remember that beyond an environmental problem, climate change is a crisis for people. Climate change is interconnected to and cannot be separated from all other social justice and humanitarian issues.

Many scientists, activists, and researchers have urged countries to treat this issue as a true emergency, and many cities like Vancouver have declared a state of climate emergency.

5.1 Understanding the Difference Between Equality and Equity

Equality and equity are important terms to understand when talking about climate change and its impacts on people. Here is a diagram to help you understand these concepts.



Equality is providing people with equal opportunities and/or treating them equally.

Equity is recognizing how particular groups have been disadvantaged and may require further help to reach an equal playing field; therefore, providing people with more resources and/or aid according to their situation and context.

Key Detail: Understanding these differences helps us realize that our governments need to take equitable action on climate change because it does not impact people equally.

5.2 Climate Change and Carbon Inequity

Key Detail: Carbon inequity describes how the richest populations in the world, who release much more carbon and greenhouse gas emissions into the atmosphere, are causing poor and racialized populations to bear the brunt of the harmful impacts.

“The poorest half of the global population are responsible for only around 10% of global emissions yet live overwhelmingly in the countries most vulnerable to climate change – while the richest 10% of people in the world are responsible for around 50% of global emissions.” Read more at [Extreme Carbon Inequity, Oxfam Media Briefing](#)

Read Emissions inequality: there is a gulf between global rich and poor: [link 26](#)

Read Extreme Carbon Inequality: Why the Paris climate deal must put the poorest, lowest emitting and most vulnerable people first: [link 27](#)

The concept of environmental racism can help us understand how Black, Indigenous and communities of Colour (BIPOC) in Canada tend to face the worst environmental-related harm. “Coined in the 1980s, environmental racism ‘refers to the way in which minority group neighborhoods (populated primarily by people of color and members of low socioeconomic groups) are burdened with a disproportionate number of hazards, including toxic waste facilities, garbage dumps, and other sources of environmental pollution and foul odors that lower the quality of life’” (Fornado, 2020).

Not only are BIPOC more exposed to hazards, they lack political and monetary power to fight back against the injustices that their communities are facing. For example, Africville, NS, a largely Black community that existed from the 1800s to the 1960s, was the location of several hazards including a fertilizer plant, slaughterhouse, tar factory, stone and coal crushing plant, cotton factory, prison, railway tracks, and an open dump. The residents fought back with little to no success until the community was demolished and the citizens were forcibly relocated (Waldron, 2021).

For more information watch: [Africville: The Black community bulldozed by the city of Halifax](#)

There’s Something in the Water goes through current instances of environmental racism in Nova Scotia, the impact it’s having on communities and individuals and

the long history of resistance and mobilization of BIPOC communities (Waldron, 2021).

For more information watch: [There's Something in the Water Official Trailer](#).

As the climate crisis worsens, environmental racism is becoming more severe. It is already a significant cause of mortality for minority communities. “Air pollution and extreme heat are killing inner-city residents at a higher rate than almost all other causes, according to experts. And as average temperatures continue to rise—contributing to what scientists call the ‘urban heat island effect’—death and illness from the effects of climate change are expected to rise further” (Cusick, 2020).

Read here to learn more about [environmental racism](#).

5.3 Health and Economic Impacts

According to the World Health Organization in 2010, “climatic changes already are estimated to cause over 150,000 deaths annually” (World Health Organization, 2010).

More recent estimates suggest that “more than 8 million people died in 2018 from fossil fuel pollution, significantly higher than previous research suggested... Researchers estimated that exposure to particulate matter from fossil fuel emissions accounted for 18 percent of total global deaths in 2018 — a little less than 1 out of 5” (Burrows, 2021).

BC examples:

In 2021, wildfires and heat waves linked to global warming posed grave health impacts to all and placed lower-income, rural and Indigenous communities disproportionately at risk.

Note: the following examples may be overwhelming. Feel free to take a walk outside to process and make sure to root yourself in the hope that things can get better with a collective call for government action.

Example 1 - The Town of Lytton with a High Indigenous Population Burns Down

In late June 2021, the town of Lytton broke the country's all-time heat record with a high of 49.6 C. Days later, 90% of the town burned down due to a wildfire facilitated and exacerbated by global warming.

“Lytton itself is a village of just 250 inhabitants, but over 1,000 people live in the surrounding Indigenous reserves, and the population is largely made up of Indigenous Nlaka'pamux people...Despite having managed their homes and surroundings sustainably for over 10,000 years, Indigenous communities have long been victims of climate change and exploitation at the hands of colonizers. Forest fires are increasingly regular occurrences as temperatures rise, and water and traditional food sources like salmon are consequently more difficult to come by.

And while the Indigenous community has had almost nothing to do with climate change's root cause, the Nlaka'pamux nation says they have been hardest hit, with their very way of life threatened” (Ravindran, 2021).

Example 2 - Deaths Caused by 2021 Pacific Northwest Heat Wave Linked to Global Warming.

The same heat that was mentioned above, affected the entire Pacific Northwest. From June 25 to July 1 of 2021, 570 of the 815 sudden deaths recorded over the heat wave (70%) have now been deemed heat-related (Weichel, 2021).

“Simon Donner, a professor of climatology at the University of British Columbia says ‘this is not the new normal... there's going to continue being new normals until we stop emitting greenhouse gases because the baseline, or what we think of as normal, is constantly moving upwards now” (Midgal, 2021).

In addition, “Donner said people need to push their politicians for stronger action, such as regulations around electric vehicles and energy-efficient homes and buildings” (Midgal, 2021).

Concerned BC resident [Evan Jolicoeur tweeted](#): “In BC, approx. 100 people a month have died from COVID & we reacted with emergency measures. 719 [now reported over 800] people died in a 4-day heatwave. Why do we not react with emergency measures to the global warming crisis? Why do we continue old-growth logging, massive subsidies to the oil industry?”

The BC heatwaves made it clear that we must take steps to protect people from worsening extreme weather events and natural disasters caused by climate change.

Example 3 - Seafood and Agriculture Sectors Are Harmed From Heat Waves.

Read the below articles to learn more.

- [Heat waves: Farmers say high temperatures, drought show agriculture sector needs support](#)
- [West Coast heat wave burned BC's shellfish sector | Canada's National Observer: News & Analysis](#)

6. Taking Action: Mobilizing for the Climate Emergency

6.1 We're Doing This Together!

Indigenous land and water defenders have been responsibly taking care of the land for millennia. When exploitative and extractive practices were used by colonial governments after colonization, Indigenous defenders, organizers, and leaders led the resistance.

E.g.: “For Kanahus Manuel, the fight to stop the Trans Mountain pipeline runs deeper than one project. It’s about standing up for the rights of Indigenous people.

‘This movement is reclaiming our lands, our cultures, our language,’ said Manuel, a member of the Secwepemc Nation, which includes 17 First Nations in B.C.’s southern interior. ‘Our language and culture flows from our land, you can’t have one without the other’” (Issawi & Cruickshank, 2019).

E.g.: The Braided Warriors are “Indigenous youth in səłilwətaʔl, skwxwú7mesh, and xʷməθkʷəyəm territories defending the land and the people from capitalist colonial violence.”

Climate activists, researchers, and scientists are actively calling on all levels of the Canadian government to take bolder action on climate change to stay under 1.5 degrees Celsius compared to pre-industrial levels to avoid the most severe effects of climate change.

6.2 Advice for Community Action

You can take action on climate change in your community by:

1. **Making climate justice a priority in your values.** Our values help shape our actions and perspectives! What would it mean for you to commit to the value of climate justice in your life?
2. **Continuing to educate yourself and your community** on the importance of climate justice, solidarity with Indigenous movements, and the need for government action and accountability.
3. **Respecting and following the lead of local Indigenous land and water defenders.** As Indigenous nations have been responsible stewards of this land

for millennia, consider Indigenous solutions as climate solutions. Make sure to truly appreciate, amplify and center Indigenous voices and avoid tokenizing them or asking for too much of their time or labour.

4. **Take collective action.** Join a local youth climate group (e.g., a climate striking or organizing group, a racial justice group-- remember these issues are interconnected etc.).
5. **Root yourself in joy, hope, and collective care.** Collective care means seeing the emotional and mental health of the group as a shared responsibility that everyone can work towards. The goal of collective care is everyone -- the whole group -- feeling empowered. Although there are many ways to root yourself and your group in joy, these are some examples: celebrate victories both your own and others, make space to talk about your struggles and to support team members, take a break and spend time on yourself doing something you love, and take a break from social media and negative news stories. Fear, anxiety, and negative emotions are not sustainable motivators for action. It is crucial to care for yourself while you advocate for justice because you are not disposable. Find mentors and a community that will keep you accountable and help you continue to evolve. Use this resource [10. Resiliency 2: Self-Love, Compassion and Longevity \(EXTERNAL\)](#) to help practice self-love and joy.
6. **Take a trauma-informed approach to organizing.** A trauma-informed approach recognizes the negative impact of the climate emergency on the team or community member's lives, well-being and mental health. It is rooted in the understanding that facing a crisis on this scale must be done through an approach that promotes community healing, care, and joy. For example, one important trauma-informed practice is the active processing of climate grief, anxiety, loss and eco-emotions in a team or community. A trauma-informed approach to organizing prioritizes protecting individuals from burnout and feeling isolated.
7. **Seek out intergenerational knowledge and resources.** You don't have to do this alone, and it's not all children against adults. There are wonderful ways to collaborate with people of all ages for climate justice! Remember, this fight has started long before us and it will continue after our generation as well. We are a moment in a larger, growing, beautiful movement. This crisis is urgent, but it's not all on our shoulders even if it feels like it is. We can use our voices as youth to call on adults to take the action we need.

Learn more about [culture that helps movements thrive here](#).

6.3 But Do My Actions Count and Make a Difference?

Learning how you fit into the climate movement can be daunting. But the truth is that *everyone is needed in this fight* for a better future, and *your voice counts*.

You can use your passions, job, studies, and any other parts of your life for climate justice. **There is no one right way to do it, but there may be more sustainable and fulfilling ways that you can explore.** For example, you can use art, poetry, computer science, design, dance, and more for climate justice awareness, expression, and more.

Take initiative and imagine what this can look like for you. This should feel exciting and hope-giving (though, it's okay if you are also a bit overwhelmed)!

6.4 How Does Change Happen?

Change often seems like it happens over terribly long periods of time or all at once, so let's consider an analogy to understand it better. Similar to an earthquake, change happens when pressure builds. With many tiny tremors that you cannot feel or see happening underground, these small shifts eventually build into huge earthquakes.

Read [this article](#) about *Emergent Strategy: Shaping Change, Changing Worlds* by Adrienne Maree Brown to learn more about how social and environmental change really happens.

7. Dive Deeper

Y4CA resources:

- Ecological footprint guidebook
- View our workshops
 - [Climate Science and Climate Justice -Slides](#)
 - [Anti-Oppression and Climate Justice -Slides](#)
 - [Collective Liberation -Slides](#)

More resources:

- **Climate Resources and [Trainings](#)** from 350.org.
- [Find movie, book and resources recommendations from Sustainabiliteens!](#)
- Having climate conversations [How and why to have climate change conversations](#)
- Here is an instagram guidebook on [how to take climate action!](#)

- [Learn more about taking local climate action in your municipality here.](#)
- Youtube channel: [Our Changing Climate](#)
- [How COVID-19 changes climate communications | Greenbiz](#)
- **Green New Deal**
 - [A Message From the Future with Alexandria Ocasio-Cortez](#) by The Intercept
 - [What is A Green New Deal](#) by The Leap

8. References

Burrows, L. (2021, February 09). Deaths from fossil fuel emissions higher than previously thought. Retrieved from <https://www.seas.harvard.edu/news/2021/02/deaths-fossil-fuel-emissions-higher-previously-thought>

Circular Ecology. (n.d.). "Environmental Glossary of Terms and Definitions." Circular Ecology. Retrieved from: <https://circularecology.com/glossary-of-terms-and-definitions.html#.X1AbFy0ZNE8>

Climate change. (2010, December 07). Retrieved from <https://www.who.int/heli/risks/climate/climatechange/en/>

Cusick. (2020, January 21). Past Racist "Redlining" Practices Increased Climate Burden on Minority Neighborhoods. Retrieved from <https://www.scientificamerican.com/article/past-racist-redlining-practices-increased-climate-burden-on-minority-neighborhoods/>

EXTREME CARBON INEQUALITY Why the Paris climate deal must put the poorest, lowest emitting and most vulnerable people first. (2015). *Human Rights Documents Online*. doi:10.1163/2210-7975_hrd-9824-2015053

Fornaro, A. (2020, August 13). What is Environmental Racism? And How Does it Undermine World Peace? Retrieved from <https://www.wpausa.org/news/what-is-environmental-racism-and-how-do-we-fight-it>

Ingrid R.G. Waldron, (2021, April 16). Environmental Racism in Canada. Retrieved from <https://www.thecanadianencyclopedia.ca/en/article/environmental-racism-in-canada>

Issawi, H., & Cruickshank, A. (2019, August 15). Faces of the resistance: Six pipeline opponents on why they oppose the Trans Mountain expansion and what they're prepared to do about it. Retrieved from <https://www.thestar.com/vancouver/2019/08/15/faces-of-the-resistance-six-pipeline-opponents-on-why-they-oppose-the-trans-mountain-expansion-and-what-theyre-prepared-to-do-about-it>

[eline-protesters-on-why-they-oppose-the-trans-mountain-expansion-and-what-theyre-prepared-to-do-about-it.html](#)

Majority of sudden deaths during B.C. heat wave were due to extreme temperatures, coroner confirms | CBC News. (2021, July 29). Retrieved from <https://www.cbc.ca/news/canada/british-columbia/bc-heat-dome-sudden-deaths-570-1.6122316>

Midgal, A. (2021, June 30). Western Canada's heat wave is 'unprecedented.' Scientists say it will become more common with climate change | CBC News. Retrieved from <https://www.cbc.ca/news/canada/british-columbia/bc-heat-wave-climate-change-1.6085275>

Organisation for Economic Co-operation and Development (OECD). (2016). "OECD CO2 emissions embodied in consumption." OECD. Retrieved from: https://www.oecd.org/sti/ind/EmbodiedCO2_Flyer.pdf

Planetary Health Alliance. (n.d.). "Changing Biogeochemical Flows." Planetary Health Alliance. Retrieved from: <https://www.planetaryhealthalliance.org/changing-biogeochemical-flows>

Ravindran, J. (2021, July 14). A wildfire has destroyed 90% of this town. Indigenous communities have been hit the hardest. Retrieved from <https://www.cnn.com/2021/07/08/americas/canada-lytton-wildfire-climate-change-indigenous-intl-cmd/index.html>

Rockström, J., Steffen, W., Noone, K. et al. (2009). "A safe operating space for humanity." *Nature* 461, 472–475.