



COMMUNITY CARBON TRACKER

Greenhouse gas emissions for Átl'ka7tsem / Howe Sound
and Sunshine Coast communities

21st APRIL, 2023 | Tracey Saxby

2020 Path to Zero Carbon Municipalities

OCEAN WATCH | Áit'ga7lsem /Txwnéwu7ts / Howe Sound 2020 CLIMATE CHANGE AND OCEANOGRAPHY

The Path to Zero Carbon Municipalities

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What is happening?

We are facing a climate emergency

In October 2018, the Intergovernmental Panel on Climate Change (IPCC) warned that we must take significant action by 2030 in order to limit warming to 1.5° Celsius (C) to avoid worsening the long-lasting and irreversible impacts of climate change. A rapid, far-reaching culture shift is necessary to immediately reduce greenhouse gas (GHG) emissions and minimize impacts on ecosystems and human health.¹

The growing scientific evidence for climate change is finally having a global social response. In September 2019, more than 6 million people² participated in a global climate strike. Inspired by Greta Thunberg's "Skolstrejk för klimatet" (school strike for climate), strikes took place in more than 4,500 locations in 150 countries.³ Youth are drawing attention to issues of moral responsibility and social justice, highlighting that climate disruptions are



Over 100,000 people gathered in Vancouver R.C. for the global climate strike on 27 September 2019. (Credit: Dr. Timothy J. Raybould)

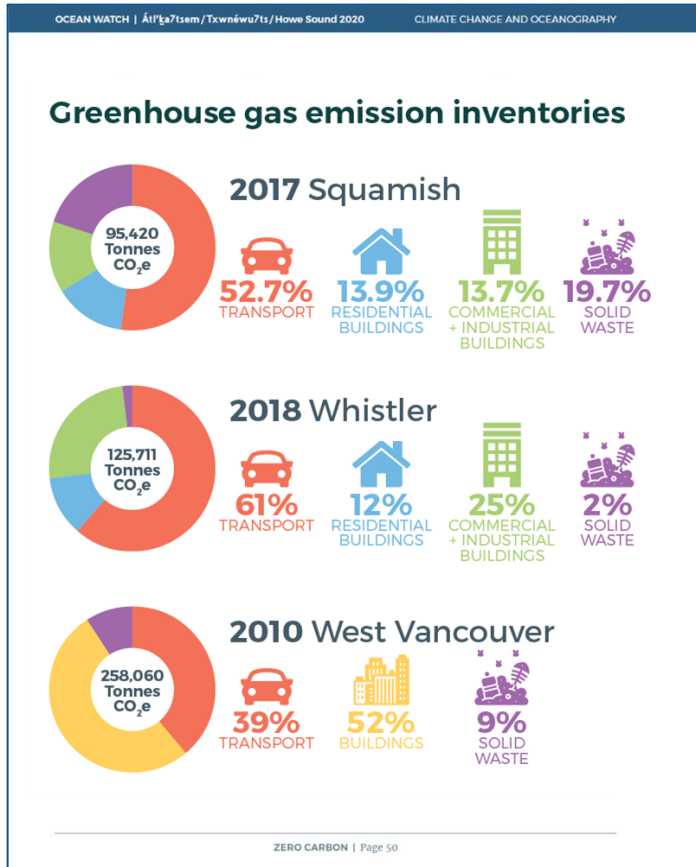
ZERO CARBON | Page 50

We are facing a climate emergency.

Communities have an opportunity to lead the transition to a zero carbon economy.

2020 Path to Zero Carbon Municipalities

Where are our emissions coming from?



Challenge: many smaller communities don't have the budget or capacity to track emissions every year.

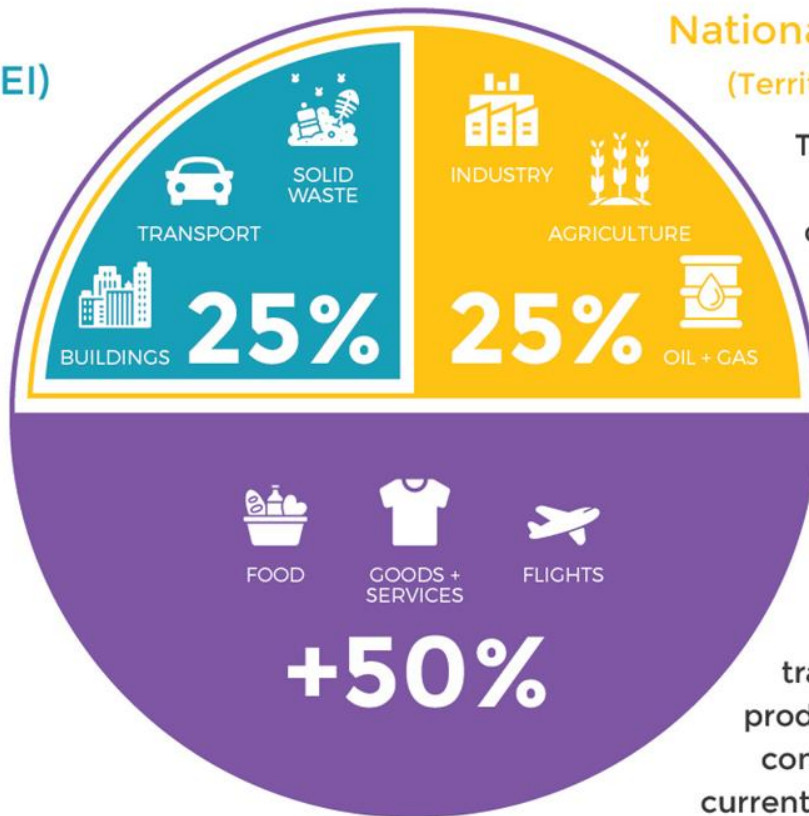
Community Carbon Tracker

Solution: develop a Community Carbon Tracker tool to build capacity for local governments to track and report community-wide emissions every year.

What is (and isn't) being measured?

Community Energy and Emissions Inventory (CEEI)

The BC Provincial government tracks and reports greenhouse gas emissions produced by buildings, transport, and solid waste.



National Inventory Report (NIR) (Territorial or Sector-based Emissions)

The Federal government tracks and reports greenhouse gas emissions calculated by sector, e.g., industry, agriculture, oil + gas, buildings, transport, and solid waste.

Consumption-based Emissions Inventory (CBEI)

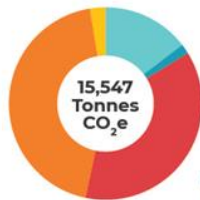
Greenhouse gas emissions associated with the production, transportation, use, and disposal of products and services consumed by a community. These emissions are not currently being tracked by the Provincial or Federal governments.

Why is it important to track emissions?

- *“If we don’t measure it, we can’t manage it.”*
- Supports evidence-based climate action planning
- Tracking and reporting annual emissions allows municipalities to:
 - Identify key emission sources so we can target policies / public outreach
 - Evaluate success and adjust policies / public outreach
 - Experiment and share success with neighbouring communities
 - Improve accountability and transparency
 - Inspire community engagement and behaviour change
 - Achieve climate action targets and work towards zero emissions

Community Carbon Tracker





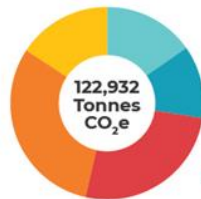
2020 Bowen Island



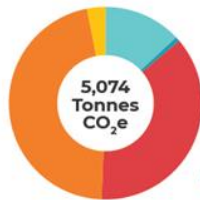
2020 Sechelt



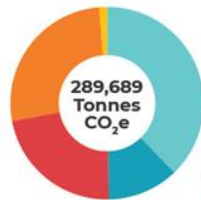
2020 Gibsons



2020 Squamish



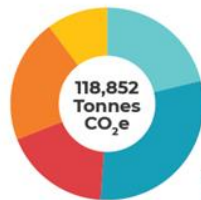
2020 Lions Bay



2020 West Vancouver



2020 Pemberton

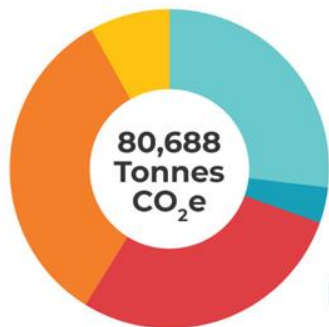


2020 Whistler





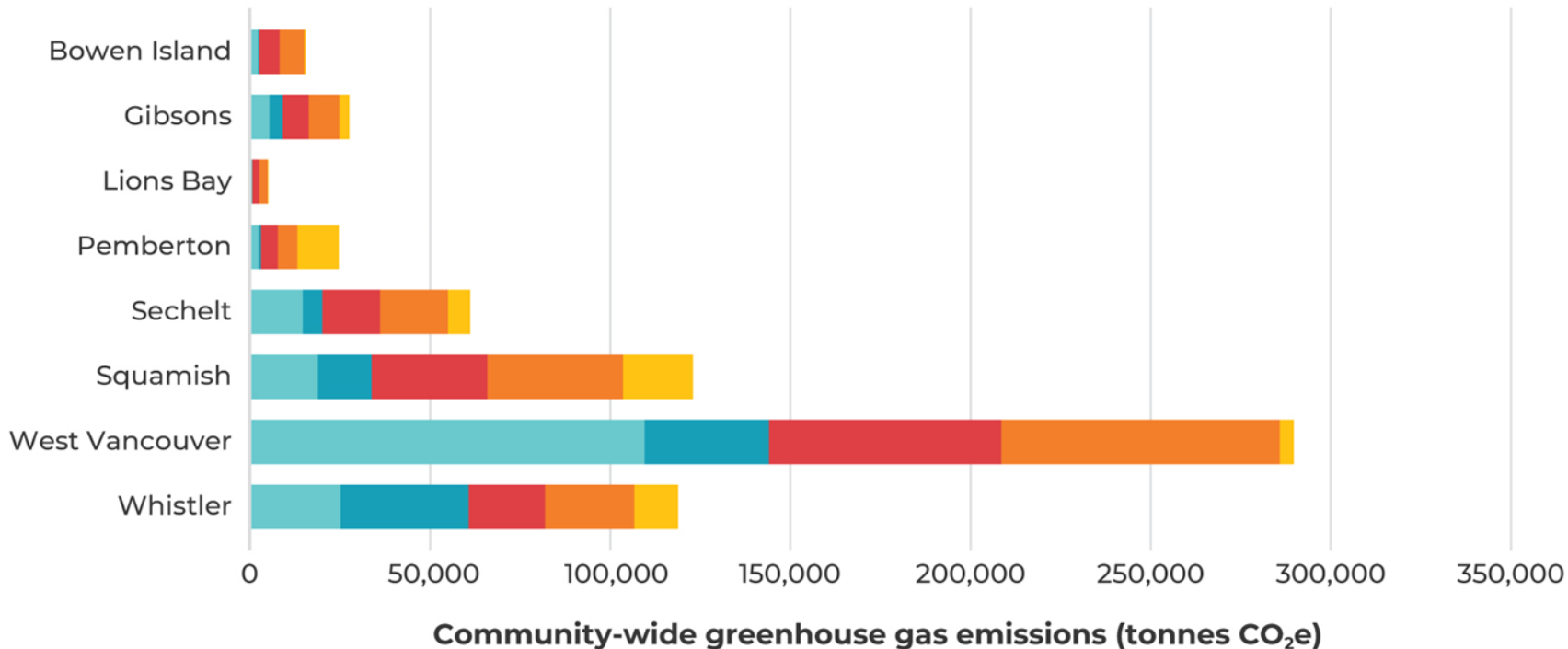
2020 Squamish Lillooet Regional District



2020 Sunshine Coast Regional District



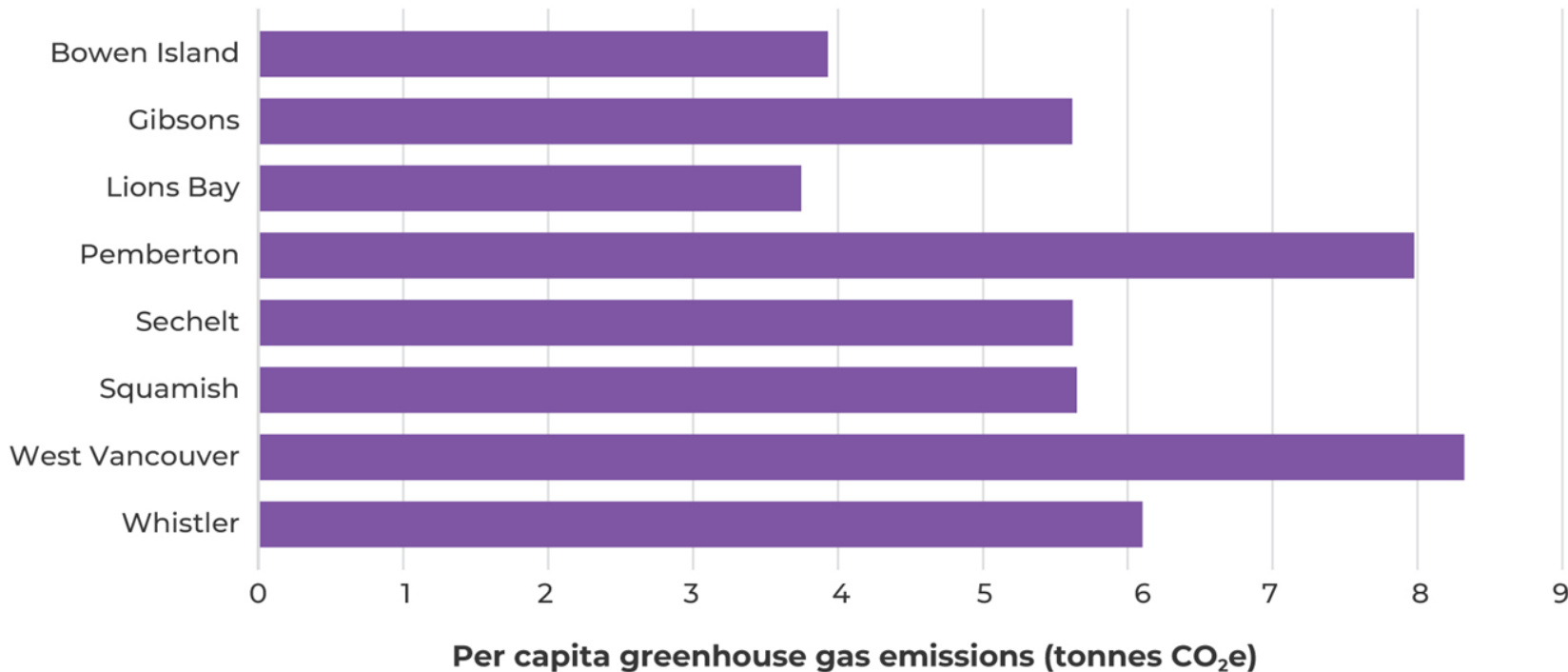
Total greenhouse gas emissions for Átl'ka7tsem / Howe Sound communities



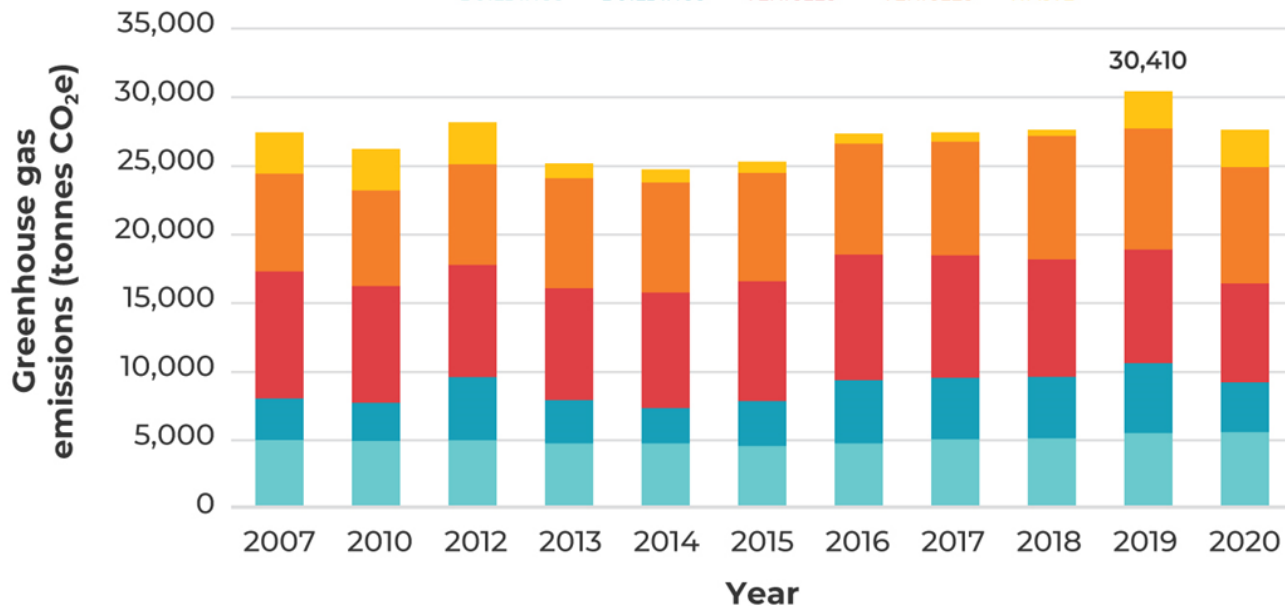
Per capita greenhouse gas emissions for Átl'ka7tsem / Howe Sound communities



PER CAPITA EMISSIONS



Greenhouse gas emissions for Gibsons

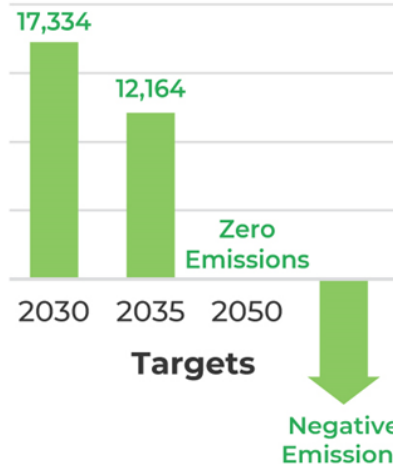


Targets



43% BELOW 2019 LEVELS BY 2030

60% BELOW 2019 LEVELS BY 2035



Benefits to local governments

PHASE 1:

- Builds capacity to track and report community-wide emissions every year.
- Community Energy + Emissions Inventory that will be conducted by Community Energy Association (Value = \$1,000).
- Supports evidence-based climate action planning.
- Increase public awareness and build support for climate action.
- Enables local governments to advocate for support from other levels of government.

PHASE 2 (FUTURE):

- Consumption-Based Emissions Inventory by BCIT (Value = \$16,500).
- Support from BCIT students to help collect and enter data.

Next steps

Spring

Finalize the data

Draft mockups of the Community Carbon Tracker

Solicit feedback from local government staff

Summer

Finalize Community Carbon Tracker

Soft launch of Community Carbon Tracker

Workshop with non-profits and local governments

Fall

Add in 2021 GHG data and re-release

Delegations to local governments

Community outreach and engagement



CRASH

CRASH LOBBY

LIVE LOVE CRASH

ACT NOW OR SWIM LATER

SKILLS TRAINING FOR CLIMATE

THERE IS NO PLANET B

THE TIME IS NOW

The Climate is Changing. What about us?

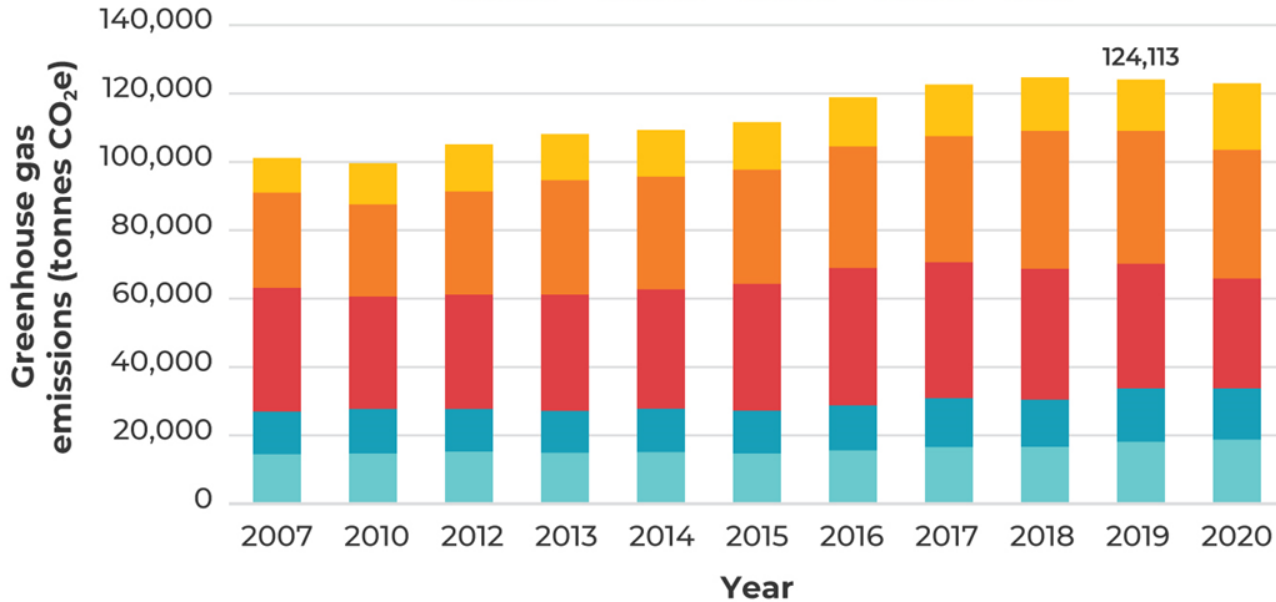
CLIMATE ACTION NOW

WE LOVE THE EARTH

LIFE GUARDIAN

100%

Greenhouse gas emissions for Squamish

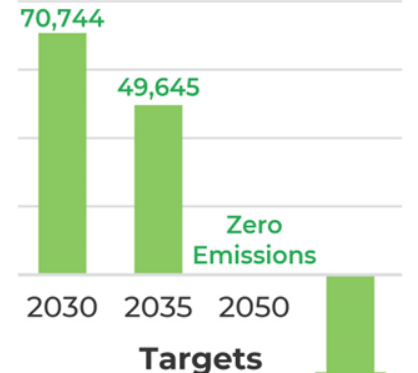


Targets



43% BELOW 2019 LEVELS BY 2030

60% BELOW 2019 LEVELS BY 2035



Community outreach and engagement

Challenge: individuals want climate action, but don't understand how they can be part of the solution.

Community outreach and engagement

Solution: community outreach and engagement to catalyze individual and collective climate action.

How we will do this:

PHASE 1:

- Research project with Professor Jiaying Zhao from UBC to test climate action messaging for different audiences, and evaluate current understanding of effective climate action.
- Host Climate Action Cafés in Átl'ka7tsem / Howe Sound communities.
- Regional workshop with non-profits and local government staff working on climate action to identify who is doing what, foster collaboration, and increase effectiveness.

PHASE 2:

- Synthesize existing knowledge and information that is already available.
- Make it simple and engaging for individuals and businesses to identify the most impactful actions they can take to reduce emissions, and generate a ten-year climate action plan.
- Amplify existing climate action initiatives and programs through story-telling.



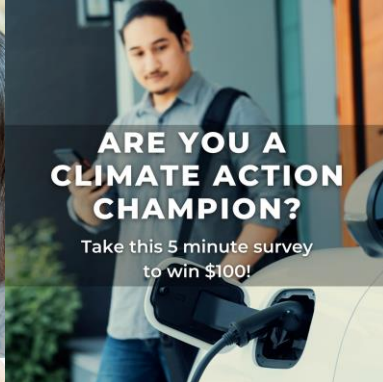
**ARE YOU A
CLIMATE ACTION
CHAMPION?**

Take this 5 minute survey
to win \$100!



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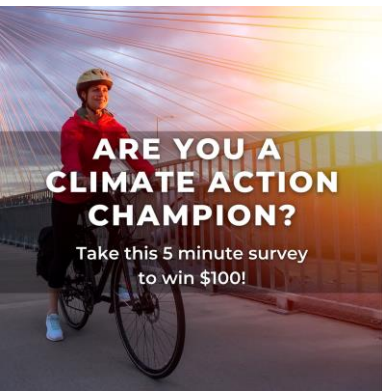
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Climate Action research project with UBC



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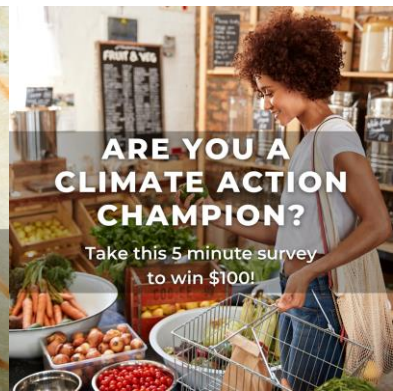
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#ZeroCarbonChallenge



YOUR
VEHICLE



YOUR
HOME



YOUR
FOOD



YOUR
GARBAGE



YOUR
FLIGHTS



13,828.5 + 2,190.3 + 736.7 + 978.1 + 1,214.8

Your total carbon pollution is:

18,948.4

kg of carbon pollution per year

Download your ten-year Climate Action Plan now.

ZERO CARBON CHALLENGE



YOUR
VEHICLE

- Buy an electric vehicle in the next 2 years.
- Ride my bike more.
- Carpool more.

Save up to 13,756.1 kg of carbon pollution per year.



YOUR
HOME

- Upgrade my natural gas furnace to a heat pump.
- Sign up for a home energy audit in the next year.
- Turn down the thermostat to 19°C.
- Sign up for renewable natural gas.
- Invest in LED lights.

Save up to 2,071.6 kg of carbon pollution per year.



YOUR
FOOD

- Eat less meat and reduce the size of meat portions.
- Support local agriculture and food producers.

Save up to 657.2 kg of carbon pollution per year.



YOUR
GARBAGE

- Set up a bokashi composter in my apartment.
- Work towards Zero Waste.

Save up to 773.8 kg of carbon pollution per year.



YOUR
FLIGHTS

- Staycation in Beautiful British Columbia.
- Use online web conferencing tools.

Save up to 1,214.8 kg of carbon pollution per year.

I pledge to:

Benefits to local governments

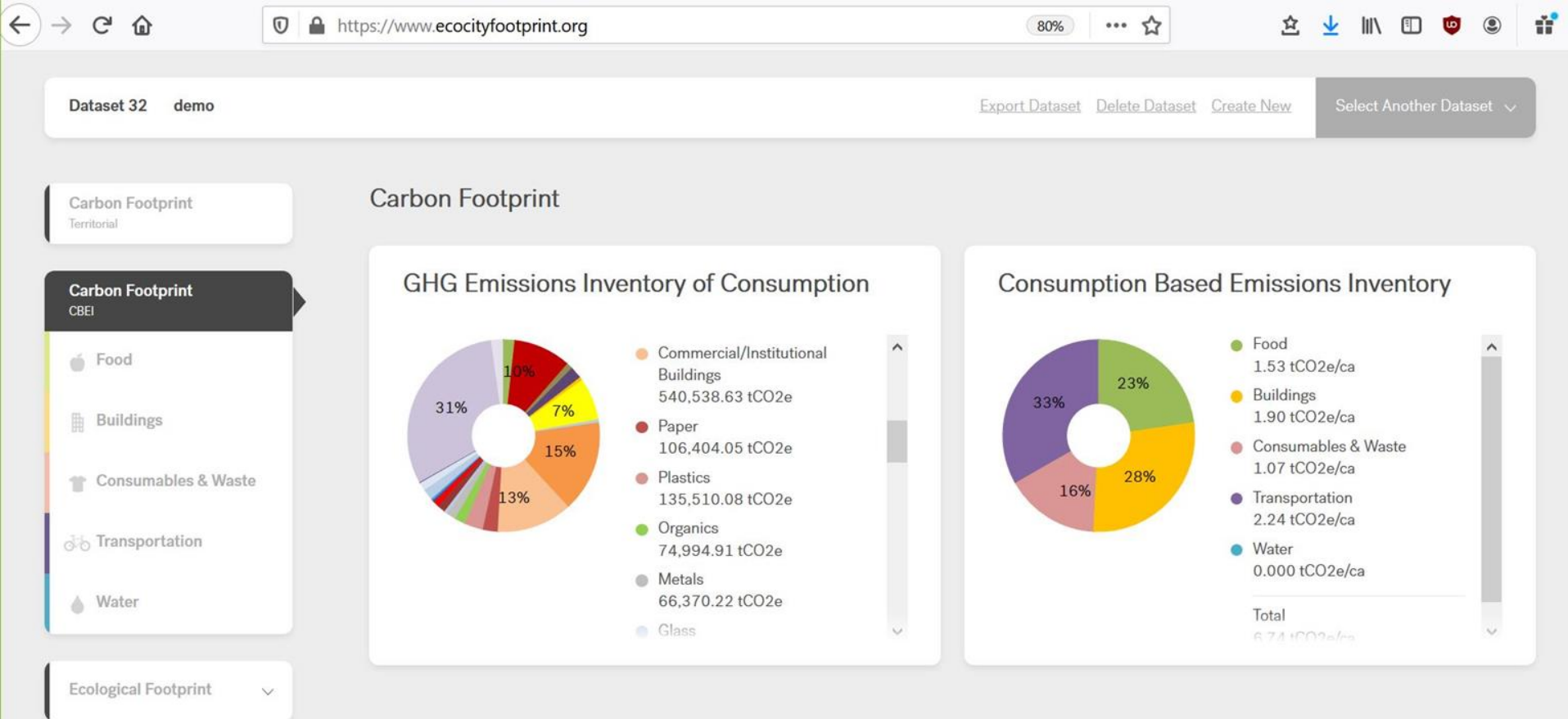
- Provide resources and tips to help individuals implement their climate action plan.
- Identify barriers to taking action (e.g., cost, lack of knowledge, perceived risk), and quantify challenges to inform local/provincial/federal policies and public engagement plans.
- Track the number of participants in each community, capture key data on current behaviour, and track behaviour change over time.
- Enable local governments to regularly update participants with resources and tips.

Benefits to non-profit organizations

Organizations that sign on as partners for the **#ZeroCarbonChallenge**

- Amplify your organization's climate action initiatives;
- Reach a broader audience and increase the effectiveness of your campaigns;
- Share information with participants once a month, to highlight events, climate action campaigns, tips + tricks;
- Donation-sharing model, with a percentage of donations raised through your supporters going back to support your climate action initiatives.

Building on BCIT's ecocityfootprint tool



Why local governments?

- On the ground, doing the work.
- On the frontlines of climate change and incurring the costs of climate change.
- Have influence over 50-80% of greenhouse gas emissions.
- Decisions on land use, buildings, local transport, and waste are controlled at the local level.
- Local government is agile, and can adopt and test new policies quickly.
- More collaboration at the municipal level to catalyze climate action.
- Can more easily inspire transformational change with their constituents.

Legislative framework for climate action: Provincial

- Local Government Act
- Community Charter (except Vancouver)
- BC Climate Action Charter (optional)
- CARIP
- CleanBC
- BC Energy Step Code
- BC Building Code
- Building Act
- Motor Vehicle Act
- Motor Carrier Act
- Environmental Management Act
- Declaration on the Rights of Indigenous Peoples Act
- Hydro and Power Authority Act
- Utilities Commission Act

Legislative framework for climate action: Federal

- National Building Code (incorporated by reference in part by BC Building Code)
- Pan-Canadian Framework on Clean Growth and Climate Change
- Clean Water and Wastewater Fund
- Impact Assessment Act
- Oil Tanker Moratorium Act
- Species at Risk Act

Challenge: accountability

- No accountability mechanisms and legislated targets to reduce emissions at the municipal level.
- Climate Action Charter is non-binding. Many municipalities are not publicly reporting community-wide emissions.

“Charter is not intended to be legally binding or impose legal obligations on any Party and will have no legal effect.” (excerpt from Climate Action Charter)

Ask

- Legislate municipal greenhouse gas reduction targets to align with BC Legislated targets.
- Develop a milestone-based incentive program to help municipalities achieve climate targets.
- Make the Climate Action Charter binding and require the Province to calculate and report community-wide emissions using improved, comprehensive, and local data every year.

Challenge: methodology

- Existing CEEI methodology is based on limited and poor quality data.
- Currently only emissions from buildings and waste are being measured by the Province.
- Significant time lag to access existing data and it's not available online.
- Some communities are conducting independent community-wide emissions inventories but there is no standardized methodology and data is limited or hard to access.

Ask

- Improve CEEI methodology to accurately track community-wide greenhouse gas emissions and provide that data to the municipalities and the public online every year.
- Begin the process of conducting CBEI at the municipal level to capture emissions that are not currently measured (e.g., embodied emissions from food, goods + services, flights)

Challenge: data

- No access to the data we need to track emissions (CEEI or CBEI).
- Lack of data or poor data quality.
 - Difficult to establish a baseline
 - Lack of comparability between communities
 - No way to track success

Ask

- Convene experts (include municipalities) to identify what data we need to collect to track emissions (CEEI and CBEI).
- Lobby the Province to collect and provide access to critical data.
 - For example, require ICBC to collect odometer readings.

Challenge: jurisdiction

- Municipalities don't have jurisdiction to create legislation which enables them to achieve climate targets.

Ask

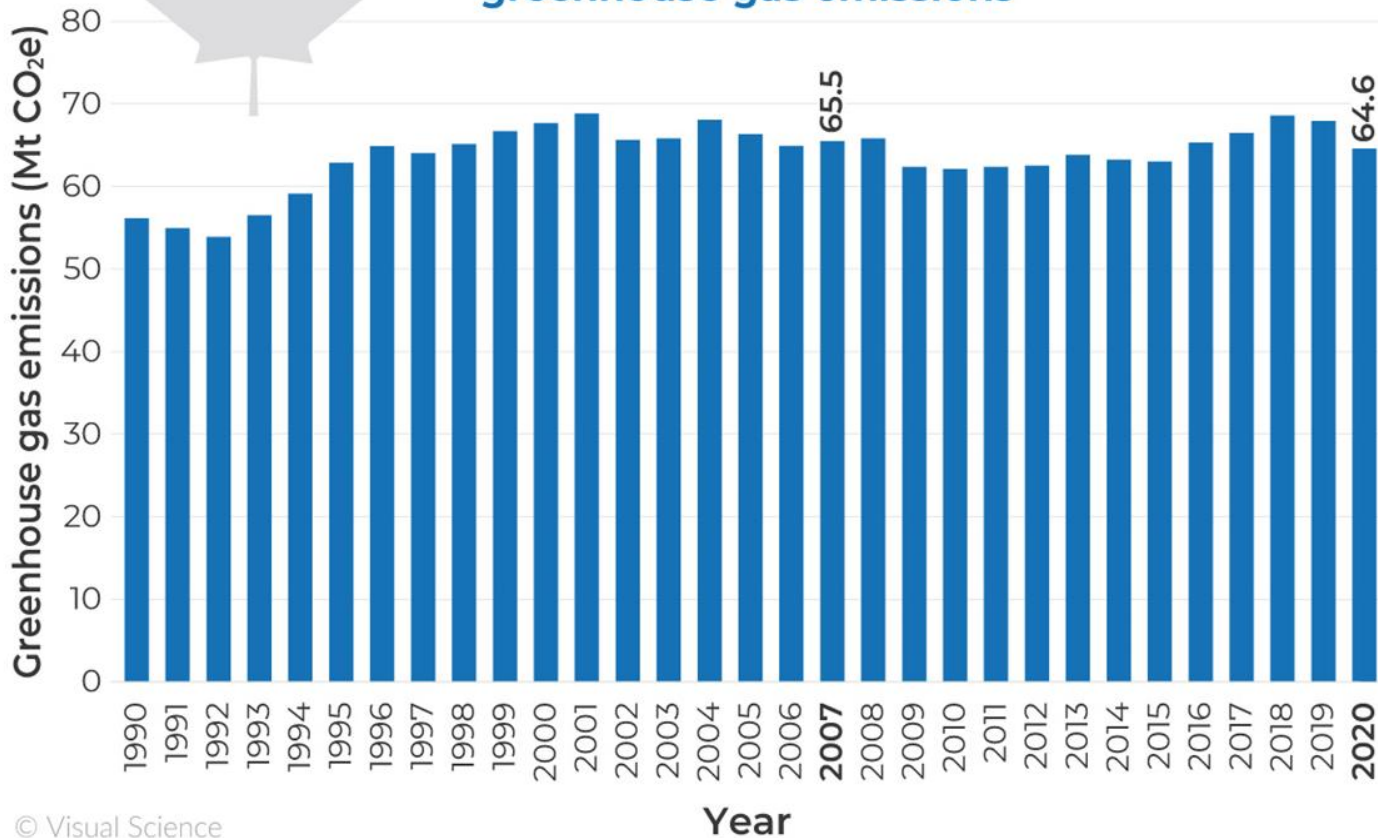
- Support Local Government Act and/or Community Charter amendments which empower municipalities to achieve local climate targets.

Canada is not on track to achieve our greenhouse gas reduction targets.

Trends in BC's greenhouse gas emissions



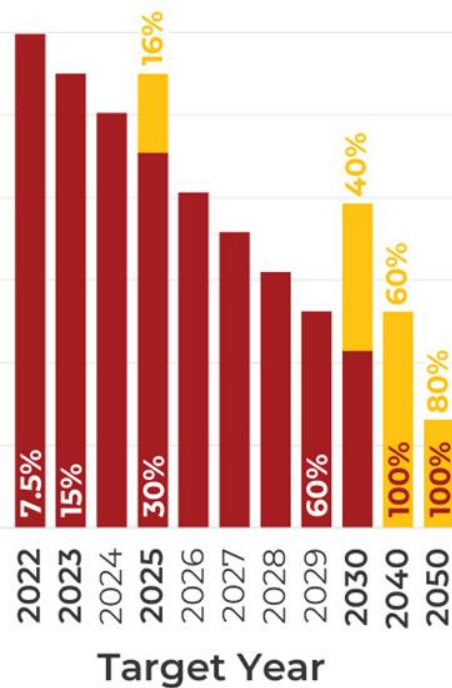
BC's past greenhouse gas emissions



What emissions need to be

versus BC's current targets

% reduction below 2007 levels





Sixth Assessment Report

Synthesis Report

20 March 2023

The warning

Pace and scale of climate action are insufficient to tackle climate change

The hope

Mainstreaming effective and equitable climate action now will reduce losses and damages **for nature and people.**

Climate action provides co-benefits.

Multiple, feasible and effective options are available **to reduce GHG emissions and adapt to human-caused climate change.**



HELP
STOP GLOBAL
WARMING!

2020

- Published the Path to Zero Carbon municipalities in the OceanWatch report.
- Developed the vision for the Community Carbon Tracker with support from Climate Caucus, BCIT, Community Energy Association and BC Climate Action Secretariat.
- Worked with UBCM Climate Action Committee to include recommendations to the Province to support evidence-based climate action by tracking local greenhouse gas emissions. BC Climate Action Secretariat is investing in better data and visualizations.

2021

- Established partnership with Sunshine Coast Conservation Association to implement the Climate Action Project in Átl'ka7tsem / Howe Sound and Sunshine Coast.
- Received initial funding to develop and test the Community Carbon Tracker tool.

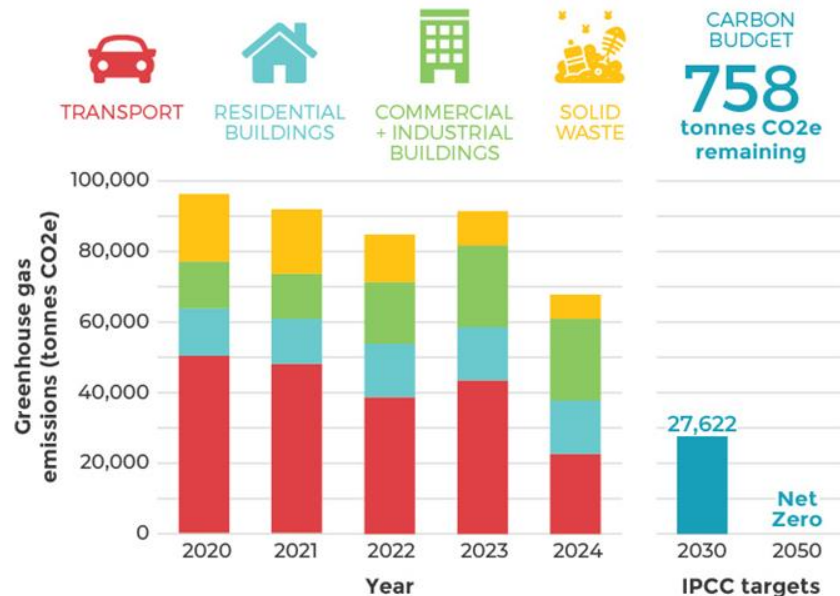
2022

- Developed outreach and engagement plan.
- Started initial outreach and engagement with local governments.
- Started climate action research project with Professor Jiaying Zhao at UBC.
- Worked with Community Energy Association to develop a standard methodology to calculate emissions inventories for each community.

2020 Developed the vision



Squamish's greenhouse gas emissions



IPCC target for Squamish is: 27,622 by 2030 and net zero by 2050.

Here's how you can help: take the [#ZeroCarbonChallenge](#) now.