

Local Governments are leading global change

NSFM
Halifax, November 8



Don't lose what you have.

Build around transit, cycling and walking – not the car. Including regionally.

Social infrastructure (like affordable housing and jobs) matters as much as hard infrastructure

Make a plan. With the residents.



CHANGE IS IN THE AIR

TORONTO'S COMMITMENT TO AN ENVIRONMENTALLY SUSTAINABLE FUTURE

DK2020: C40 Program which supports Danish municipalities to develop 1.5 compliant climate action plans

97 Municipalities in Denmark are developing Paris compatible Climate Action Plans.

The pilot program has grown from originally 20 cities, to include nearly all of the country's municipalities.

The logo for DK2020 is displayed in a dark blue, stylized font. The letters 'DK' are on the left, and the numbers '2020' are on the right. The '2's have a unique shape with a horizontal bar at the bottom, and the '0's are circular with a horizontal bar at the bottom. The entire logo is centered within a light gray rectangular box.

DK2020

1049 cities and local governments have joined the Cities Race to Zero

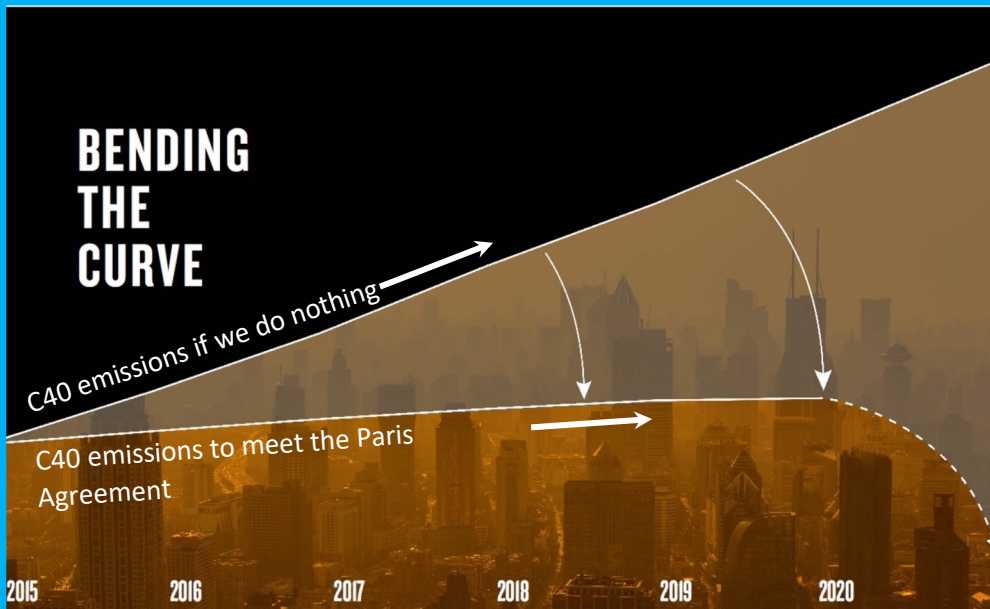


An unprecedented coalition of cities committed to **limiting global temperature rise to 1.5°C** and **implementing inclusive and resilient climate action.**

Deadline 2020: A pathway to 1.5°C

Deadline 2020 is the first pathway to achieve the goals of the Paris Agreement.

It determines that C40 cities need to peak emissions in 2020, halve emissions by 2030 and reach net zero by 2050.



IPCC most recent report: act now or it's too late

KEY FINDINGS

The choices and actions implemented in this decade will have impacts now and for thousands of years

The world must cut greenhouse gas emissions to 60% below 2019 levels by 2035.

The UN secretary general is calling for wealthy countries to bring forward their plans for net zero by a decade.

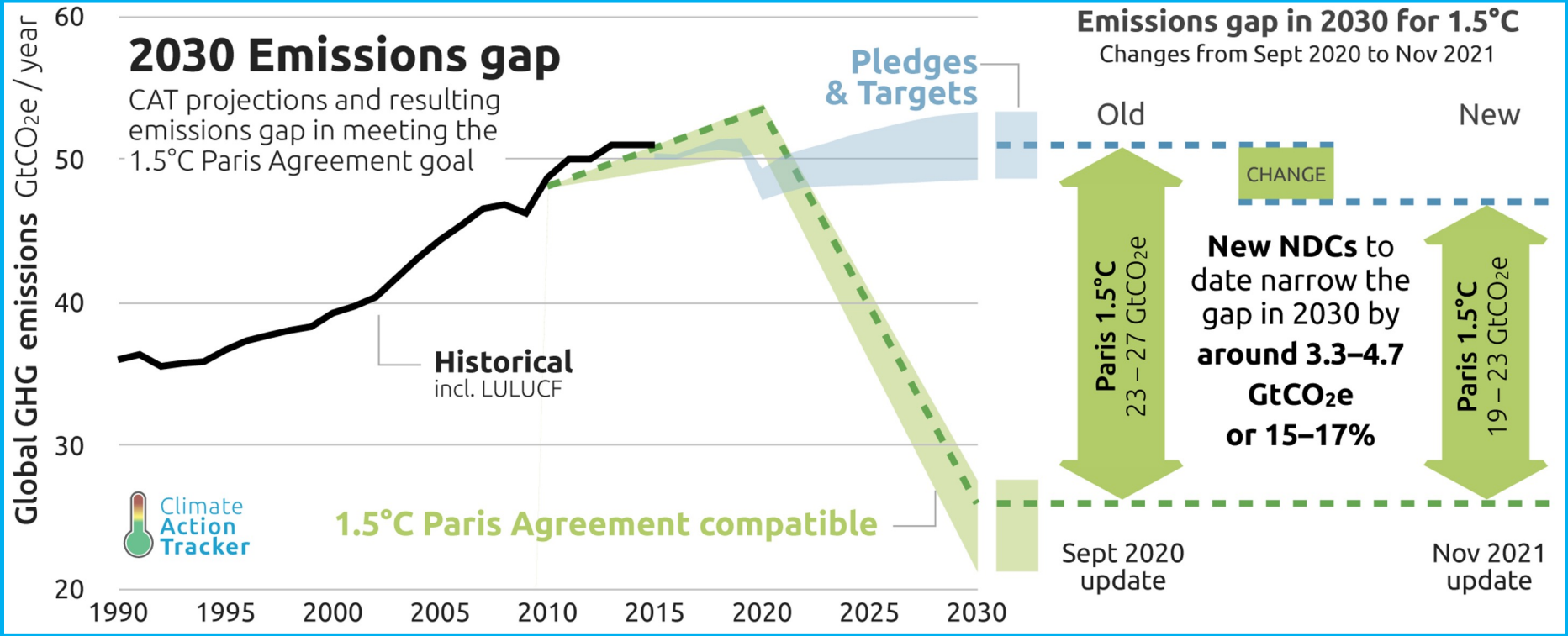
Projected CO2 emissions from existing fossil fuel infrastructure without additional abatement would exceed the remaining carbon budget for 1.5C.

The 10% of households with the highest per capita emissions contribute 34-45% of global consumption-based emissions, while the bottom 50% contribute 13-15%.



PHOTO SOURCE: NEW YORK TIMES

Current commitments = higher emissions in 2030



National government inaction



Cities: Global and Powerful

55%

Global
population



80%

Global GDP
generated in cities



70%

Global CO2
emissions



2/3

Global energy
consumed



90%

Urban expansion in
developing countries
near hazard-prone areas



Transformative City Actions



Transforming our streets, cleaning the air and creating space for people instead of cars

ACTION: All cities need to introduce ambitious vehicle restrictions to reduce air pollution, improve health and wellbeing for city dwellers and create space for people instead of cars



WHY?

1/3

of C40 cities' emissions come from transport

Major

sources of urban air pollution

1.35m

people die on the world's roads. 54% of those are the least protected road users (people walking, cycling or riding motorcycles)



Shenzhen has a fully electrified bus fleet

Shenzhen, a city of more than 20m residents and with one of the lowest air pollution rates of larger cities in China, started procuring zero emission buses in 2009 as part of a national Chinese programme calling for 10 cities to deploy at least 1,000 electric vehicles. By 2017, the city's entire fleet was fully electrified, totalling 16,000 electric buses and 22,000 electric taxis.

Research shows that Shenzhen's electric bus fleet **reduces carbon emissions by 194,000 tonnes annually**, when compared with conventional diesel buses and causes less air pollution.

The programme was successful due to strong government support, innovation and learnings from pilot projects in China. Utilising a financial leasing model, Shenzhen's state-run clean mobility transition company was able to overcome the high upfront financial costs required.



Mexico City has stepped up efforts in active travel to face air quality and public health challenges

Poor air quality and public health are challenges in Mexico City. Nearly three-quarters of the city's adults are considered overweight and levels of air pollution can be up to two times higher than levels recommended by the WHO.

Mexico City has confronted these challenges by stepping up efforts to enable active travel. The city created its first Bicycle Mobility Plan in 2008 and has grown the cycle network from 186 km of cycle lanes in 2017 to 322 km by 2021. The goal is to grow the network to 600 km of cycle lanes by 2024.

Cycling has also become more accessible. The public bike sharing system Ecobici was launched in 2010, accommodating 300,000 cyclists per day by 2017. A total of 3.3 million people used the system in 2011; growing to 38.8 million people in 2016 and 73.6 million by 2021.

These efforts have also helped to **double the number of trips undertaken by bike in Mexico City over the last decade.** In 2010, 100,000 bike journeys were undertaken in Mexico City, increasing to 145,000 by 2012 and 252,000 in 2017. **In 2018 bike trips represented 1.2% of overall transport journeys. The city's goal is for bicycles to represent 3% of all trips by 2024.**

Active travel has contributed to increased wellbeing. A 2017 perception survey found that 36% of Ecobici riders had increased their levels of physical activity, with 8 out of 10 people felt improvements in their quality of life, feeling happier and saving money compared to other options.

Transforming the way we plan, design and build our cities to create greener and people-oriented cities

WHY?

25%

of urban emissions could be cut with more compact, mixed-use and resource-efficient cities

68%

of the global population is expected to live in cities by 2050 (compare to 55% today)

The Global building floor area is expected to

double by 2060

Portland fights both urban sprawl & housing crisis by densifying single-family residential neighbourhoods

Portland's Residential Infill Project Re-legalizing "middle housing" citywide



* Maximum building sizes based on floor area ratio allowed on a typical 50' x 100' lot in the R-5 zone.

Infill policies encourage the development of vacant land and redevelopment of underutilized land within a city to discourage urban sprawl. In addition to meeting affordable housing demand, infill development also reduces urban sprawl and associated carbon emissions.

Portland adopted changes to the city's zoning code in August 2020 which resulted in the legalisation of various infill housing types within low-density single family neighbourhoods. **Through these changes, the city has developed an additional 1,200 homes per year since August 2021 increasing the city's annual housing production by roughly 20 percent and reducing median rent by 12 percent.**

A recent study of 700 communities in California by the CoolClimate Network at Berkeley University, [found](#) that **"infill housing" is probably the single most effective measure that Californian cities can take to reduce their emissions.** Seattle, Auckland, and Chicago have/are implementing similar policies.



Curitiba creates a densified, livable city and reduces its emissions by integrating land use and transport planning

Curitiba's urban master plan incorporates a guiding principle of planning new areas and densifying existing neighborhoods around public transport points - **Transit-oriented development (TOD)**. The plan, introduced in 1966 and revised every 10 years, has restricted sprawling urban growth and directed development along dedicated bus lane routes, also known as busways or bus rapid transit (BRT) corridors, with better capacity, accessibility and quicker journey times. **As a result, 85% of Curitiba's population use BRT, carrying 2 million passengers per day, reducing the city's need for fossil fuel by 35% since 2016.**

High-density, mixed-use developments have been encouraged around BRT corridors. The city's urban master plan has also focused on creating public green spaces, improving pedestrian corridors, incentivising the preservation of historical sites, and placing a limit on development in environmentally significant areas.



Johannesburg addresses social inequalities through a mandatory 30% inclusionary housing policy

In February 2019, the City of Johannesburg adopted an ***Inclusionary Housing policy as the first city in Africa*** with the aim of creating sustainable and socially-inclusive neighborhoods. The city achieved this goal by increasing the supply of smaller units in well-located parts of the city, helping to address the housing backlog, bringing down prices of housing over time, and reducing travel times, costs and emissions.

The policy requires private developers intending to develop 20 dwelling units or more to set aside 30% of the units for inclusionary housing, which must be located on the same site or within the same township as the market-rate units.

These inclusionary housing units are set-aside for low-income families earning at least R7,000 a month, with a rent cap of R2,100, **ensuring that households spend no more than 30% of income on rent.**

The 15-minute City



A polycentric city made of multiple 'complete neighbourhoods'



A city made of inclusive and cohesive communities



A city with people-centred streets



A city where each neighbourhood is connected



A city that harnesses nature



A flexible concept that municipalities have tailored to their city's culture and to respond to specific local needs



Transforming the buildings where we live, learn and work to make livable cities, tackle hidden emissions and create green jobs



WHY?

over 70%

of jobs created under a green and just recovery scenario come from the buildings sector

35%

of C40 cities' total emissions comes from buildings and **23%** of global emissions come from the construction industry

2/3

of buildings standing today will still exist in 2050 yet global rate of energy retrofit is currently less than 1%

Transforming our plates towards healthy and sustainable food



1/3

of global emissions are food systems related

830M

people suffer from hunger in 2022

FAO, 2022 State of Food Security and Nutrition

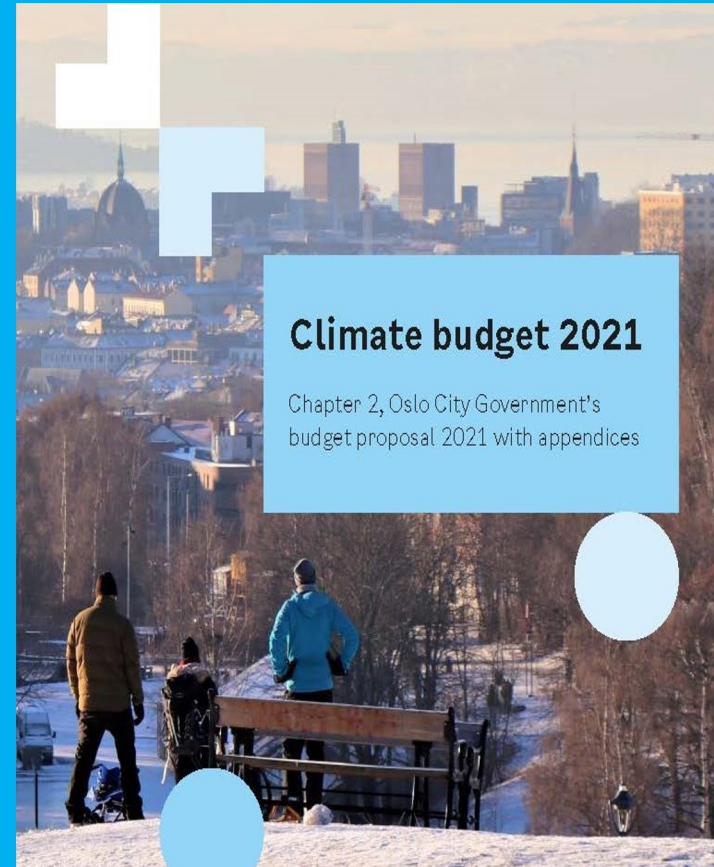
70% of food is consumed in cities and

1/3 of all food grown is wasted

Climate budgeting: embedding climate considerations into all aspects of city decision-making

A *climate budget* is a systematic approach or governance system that ensures the carbon budget, or long-term emissions reduction target, is integrated into a city's daily operations and policies.

Solving the climate crisis requires change across our entire political, economic and social systems. This means that a 'whole of government' approach is needed.







Trust

Rebuilding trust with residents of Toronto post scandal was critical to overcome cynicism and build a sense of common purpose.

A wide-angle photograph of the Toronto skyline as seen from the water. The CN Tower is the most prominent feature on the left side of the frame. The rest of the skyline is composed of various high-rise buildings of different architectural styles. The water in the foreground is dark blue, and there are some small boats and a red buoy visible. The sky is a pale blue with some light, wispy clouds. The overall scene is bright and clear.

CHANGE IS IN THE AIR

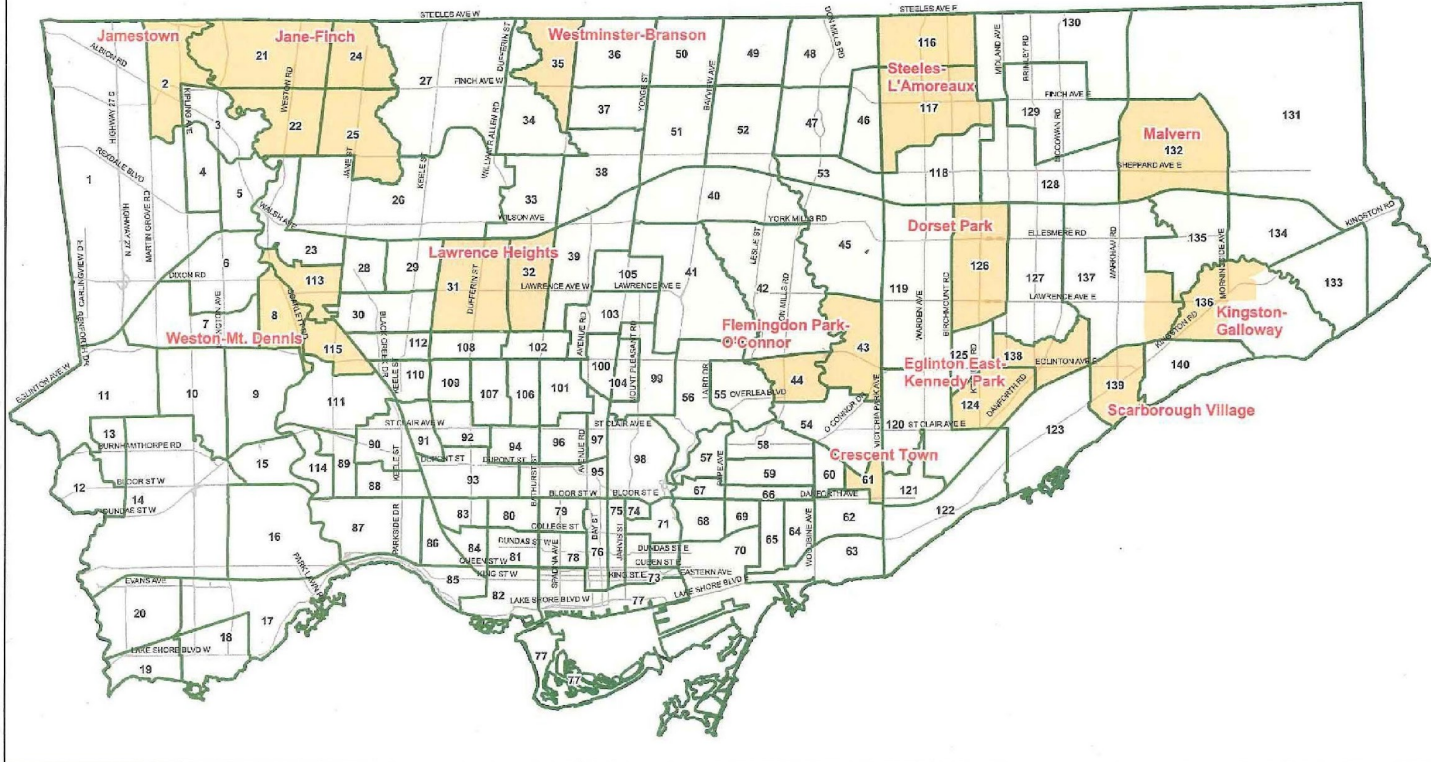
TORONTO'S COMMITMENT TO AN ENVIRONMENTALLY SUSTAINABLE FUTURE



TRANSIT CITY LIGHT RAIL PLAN



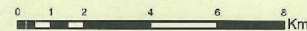
City of Toronto Priority Investment Neighbourhoods



Legend

- Neighbourhood (neighbourhood #)
- Priority Investment Neighbourhood
- Major Arterial Street

Notes: The PINs are composed of neighbourhoods, neighbourhood areas (two or more joined neighbourhoods) and one special area (Kingston-Galloway) which is built out of Statistics Canada Dissemination Areas (DAs). For information on all the City's 140 neighbourhoods, please visit <http://www.toronto.ca/demographics/neighbourhoods.htm>



Source: City of Toronto
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- **Rapid Transit (Existing and Proposed)**
- **Confluence of Existing High-Density and Rapid Transit**

Regent Park - Public Housing Rejuvenated



Don't lose what you have.

Build around transit, cycling and walking – not the car. Including regionally.

Social infrastructure (like affordable housing and jobs) matters as much as hard infrastructure

A large, abstract watercolor splash in various shades of blue and teal, centered on a white background. The splash has irregular, feathered edges and contains some darker spots and textures.

Solved

HOW THE WORLD'S
GREAT CITIES
ARE FIXING
THE CLIMATE CRISIS

David Miller

FOREWORD BY BILL MCKIBBEN