

A wide-angle photograph of the Paris skyline at sunset. The Eiffel Tower is the central focus, silhouetted against a warm, orange-hued sky. The foreground is filled with the dense, terracotta-roofed buildings of Paris. The overall mood is serene and majestic.

Building a climate safe world: Lessons from the world's megacities

C40 Cities: An international alliance of mayors



95+
Cities

650+
Million Citizens



1/4 of global economy

Cities feel the impact of climate change first



Mumbai Monsoon



Cape Town Drought



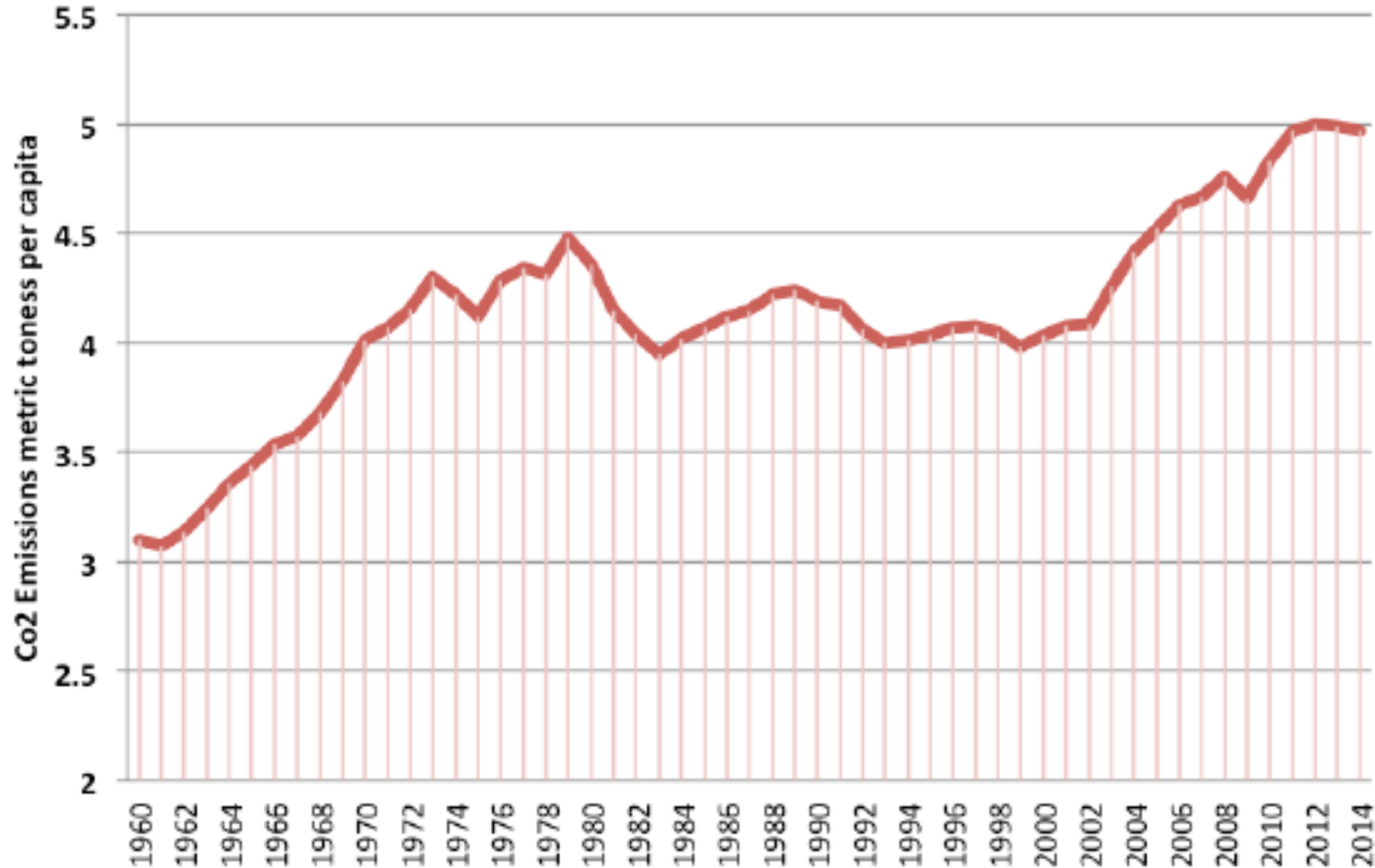
California fires



Houston floods

We are still losing the climate battle

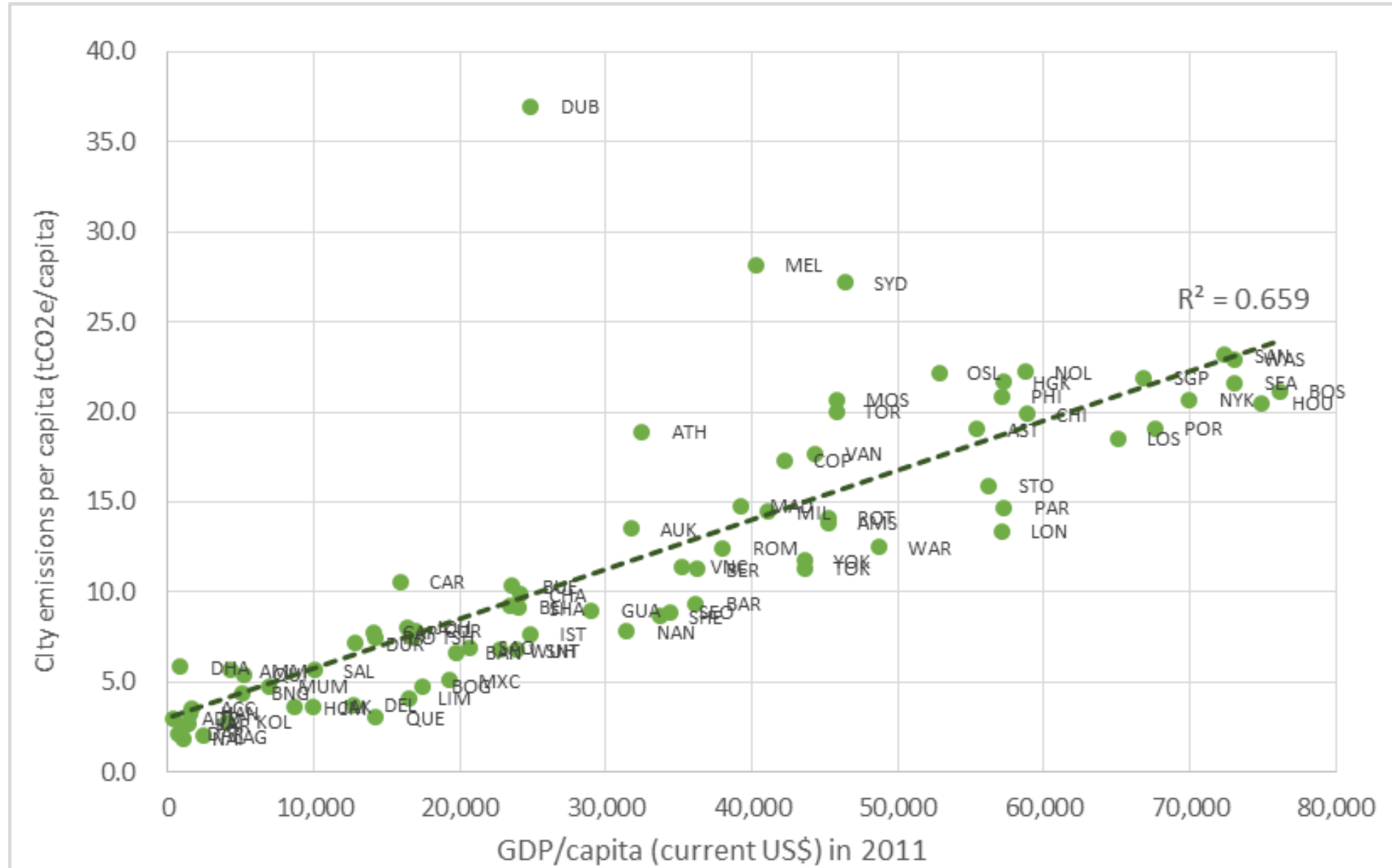
World - CO2 emissions per capita



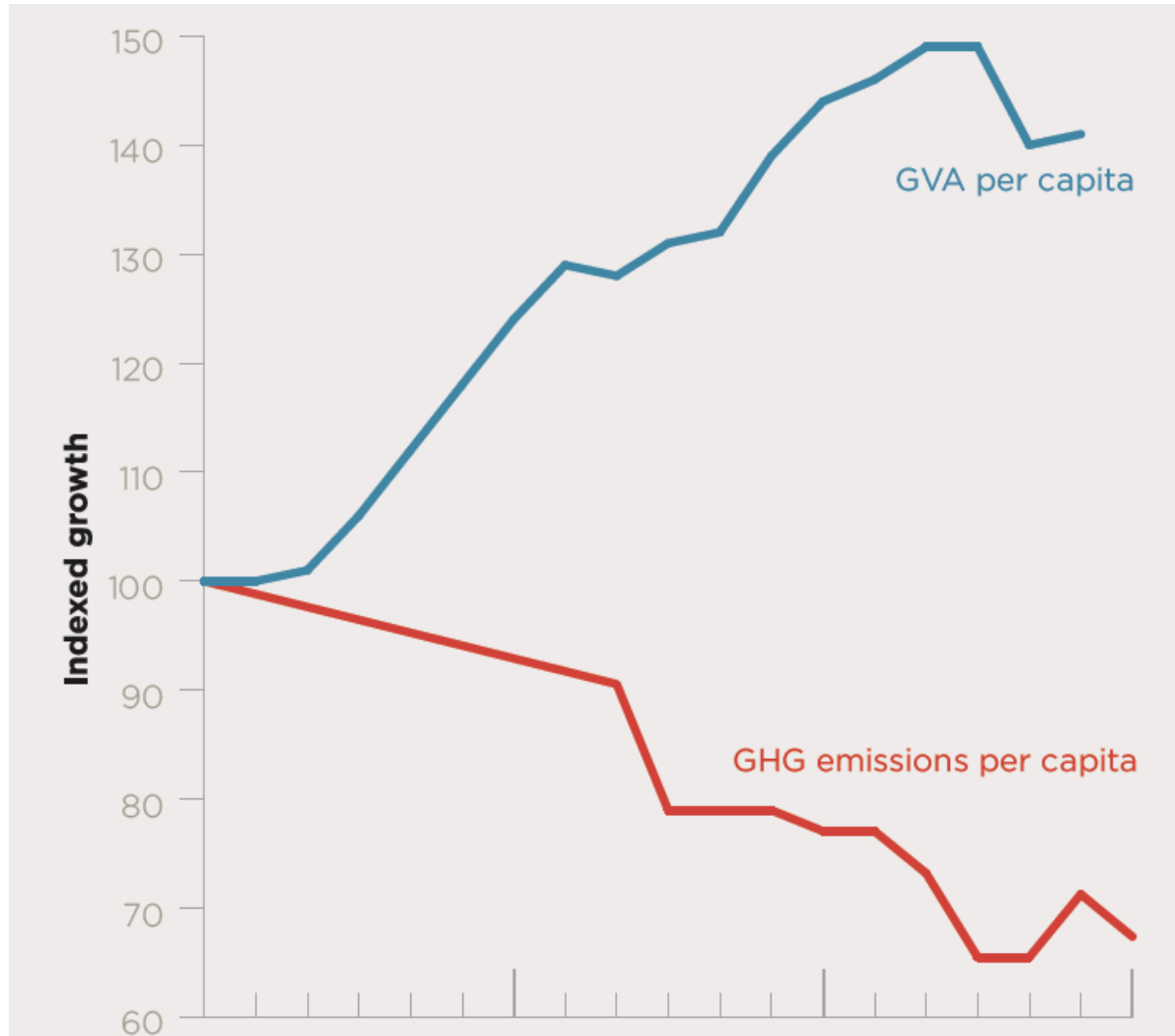
www.economicshelp.org | Source: World Bank - EN.ATM.CO2E.PC

- Global emissions have risen 60% since the Kyoto Protocol

We haven't decoupled emissions from GDP



But a few cities have shown that it is possible



Stockholm decoupled economic growth (+41 %) and emissions (-35%) between 1993 and 2010

Source: LSE Cities

Global emissions need to peak by 2020

DEADLINE

2020

How cities will get the job done

C40
CITIES
CLIMATE LEADERSHIP GROUP

ARUP



5

TONS
PER PERSON



5

TONS
PER PERSON



3

TONS
PER PERSON

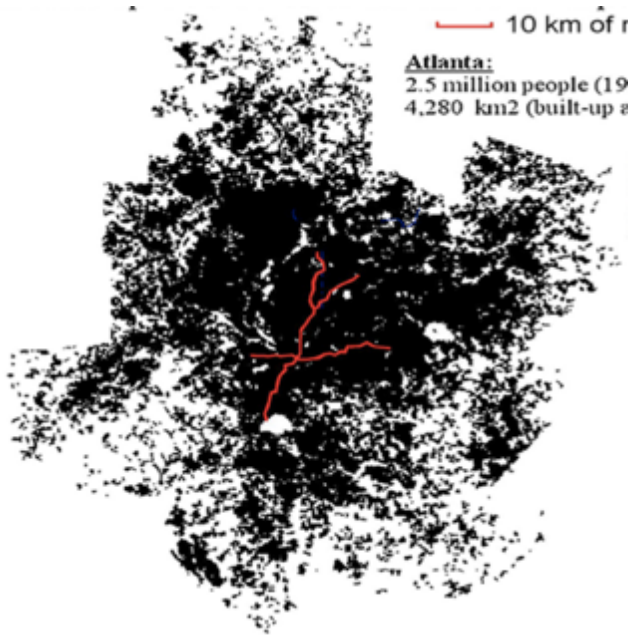
Cities are turning the Paris Agreement into action



- All C40 Cities will committed to 1.5 degree compliant plans by 2020
- If all cities follow – achieve over a third of the Paris goal

Sustainable cities will be compact and dense

ATLANTA



Population: **2.5 million**
Rapid Transit: **74 km**
Urban area: **4,280 km²**
Per capita transport CO₂: **7.5 t**

BARCELONA



Population: **2.8 million**
Rapid Transit: **153 km**
Urban area: **162 km²**
Per capita transport CO₂: **0.7 t**

Achieving a zero carbon city requires huge & rapid change

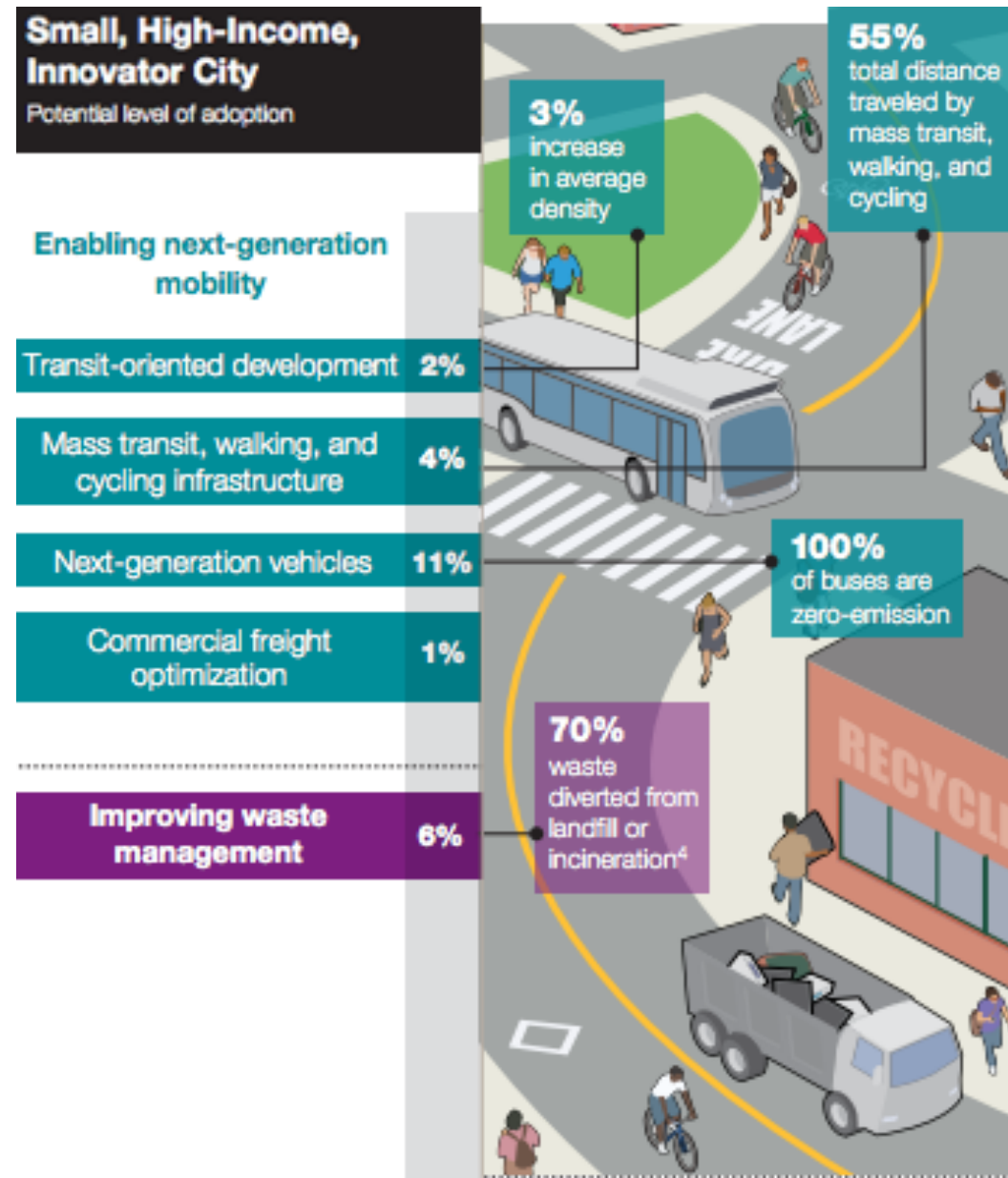
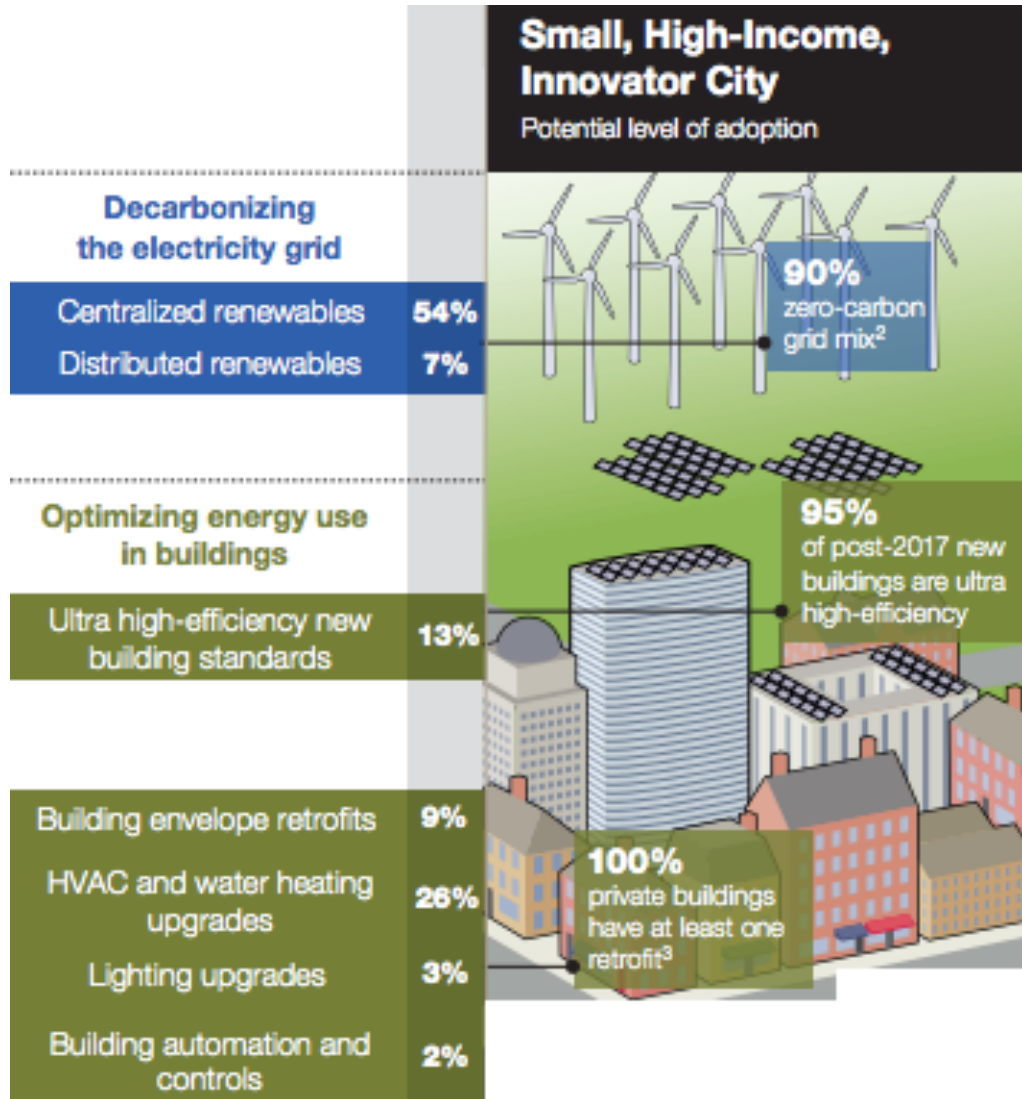
As opposed to working simultaneously on hundreds of potential actions, cities can achieve 90-100% of required emissions reductions by focusing on 12 opportunities in these four action areas:

- (1) Decarbonizing the grid (massive expansion of large-scale renewable power generation);
- (2) Optimizing energy efficiency in buildings;
- (3) Enabling next-generation mobility; and
- (4) Improving waste management

- <https://www.c40.org/researches/mckinsey-center-for-business-and-environment>



Achieving a zero carbon city requires huge & rapid change



The majority of trips will be by foot, bike or shared transportation



- 2030 TARGET: 57% travelled by mass transit, walking & cycling
- London – first major city to achieve shift from car to public transport
- Oslo banning cars from city centre by 2019

All buses will be zero carbon by 2030 (and cop cars too?)



- TARGET: 100% electric buses by 2030
- 16,000 EV buses in Shenzhen already
- LAPD procured 100 electric police cars last year

Leading cities are committed to Fossil Fuel Free Streets



- Procure only zero-emission buses from 2025 and ensure that major areas of their city are zero emission by 2030
- 14 cities, including London, Paris, LA, Vancouver
- Other cities invited to join

• <http://www.c40.org/other/fossil-fuel-free-streets-declaration>

Zero carbon buildings will be the norm



- TARGET: 95% new buildings to be ultra high efficiency.
- Stockholm: All new buildings built on city-owned land required to consume less than 55 kWh/m² – almost half national requirements.
- Vancouver: net zero carbon standards for all new municipal buildings.

Complete overhaul of existing building stock



- TARGET: 100% private buildings have at least 1 retrofit
- NYC: Mandatory retrofit of 14,500 least efficient buildings that cause 24% of city's emissions.
- Paris is retrofitting 600 schools to cut emissions 30% by 2020

On the path to zero waste to landfill & incineration



- TARGET: 71% of waste should be diverted from landfill & incineration.
- For every 1kg of waste we discard, 70kgs of waste is generated in the manufacture, packaging and transport
- San Francisco: a zero waste city by 2020. Today 80% of its waste diverted away from landfills with 650 tons of organic waste collected every day

Tackling wasteful consumption



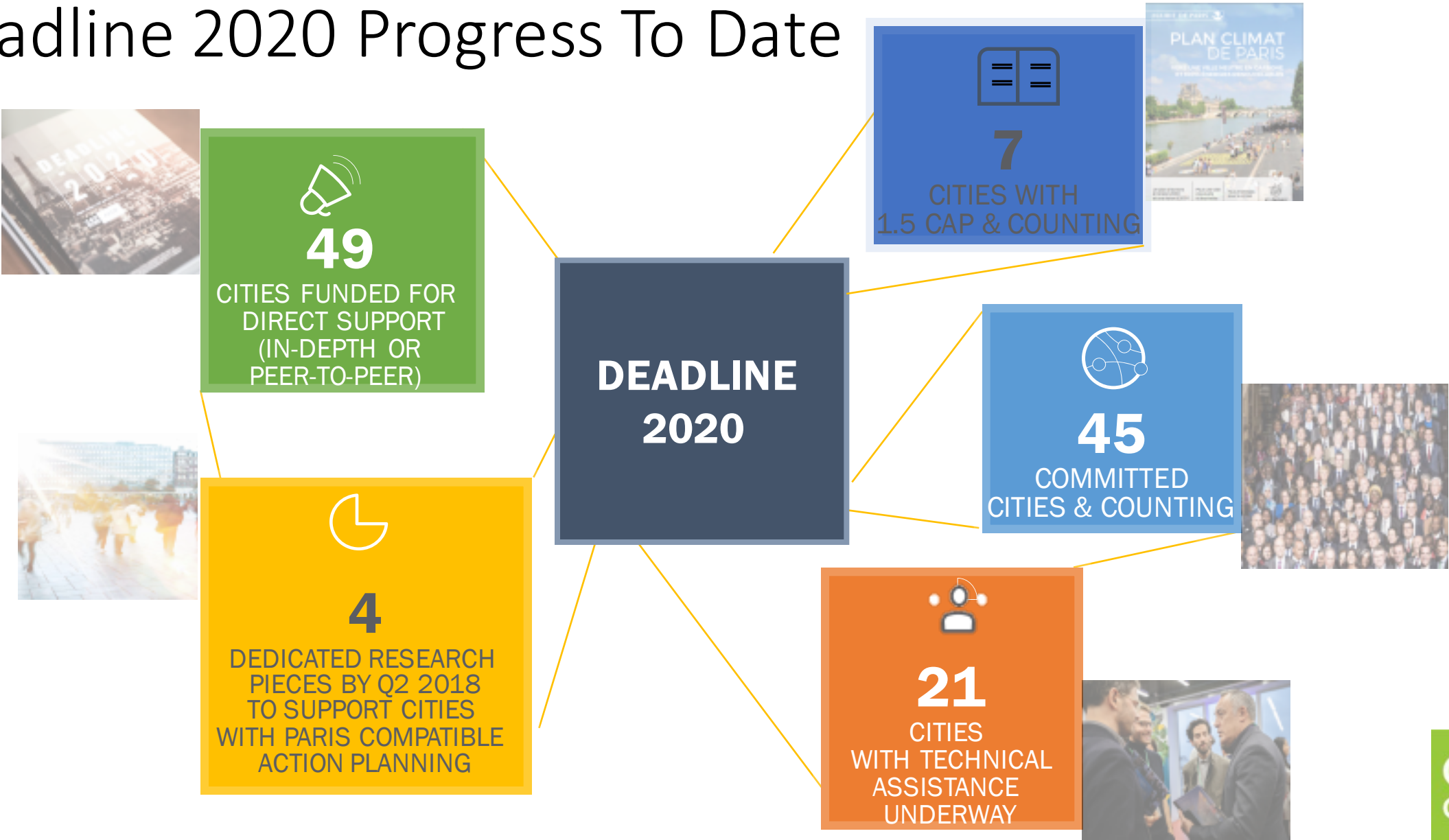
- 33% of all food is wasted, and food production accounts for up to 20% of emissions.
- Copenhagen: 88% of food in schools, nurseries and hospitals is organic.
- During Milan Expo, 15 tonnes of leftover food used to feed homeless people instead of going in the bin.

Electricity needs to be more or less decarbonized by 2030

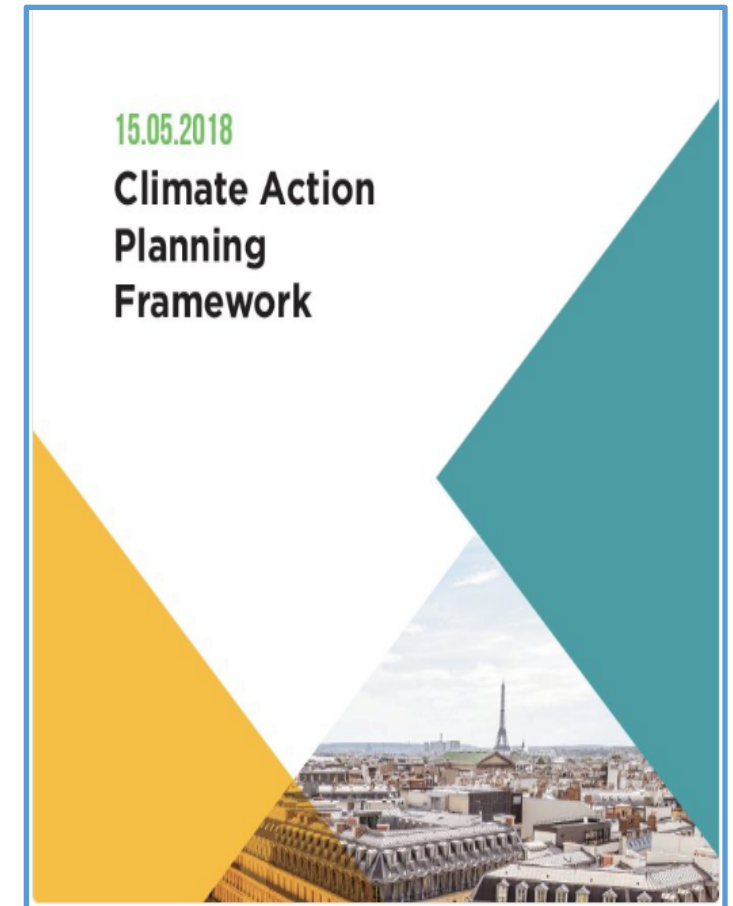
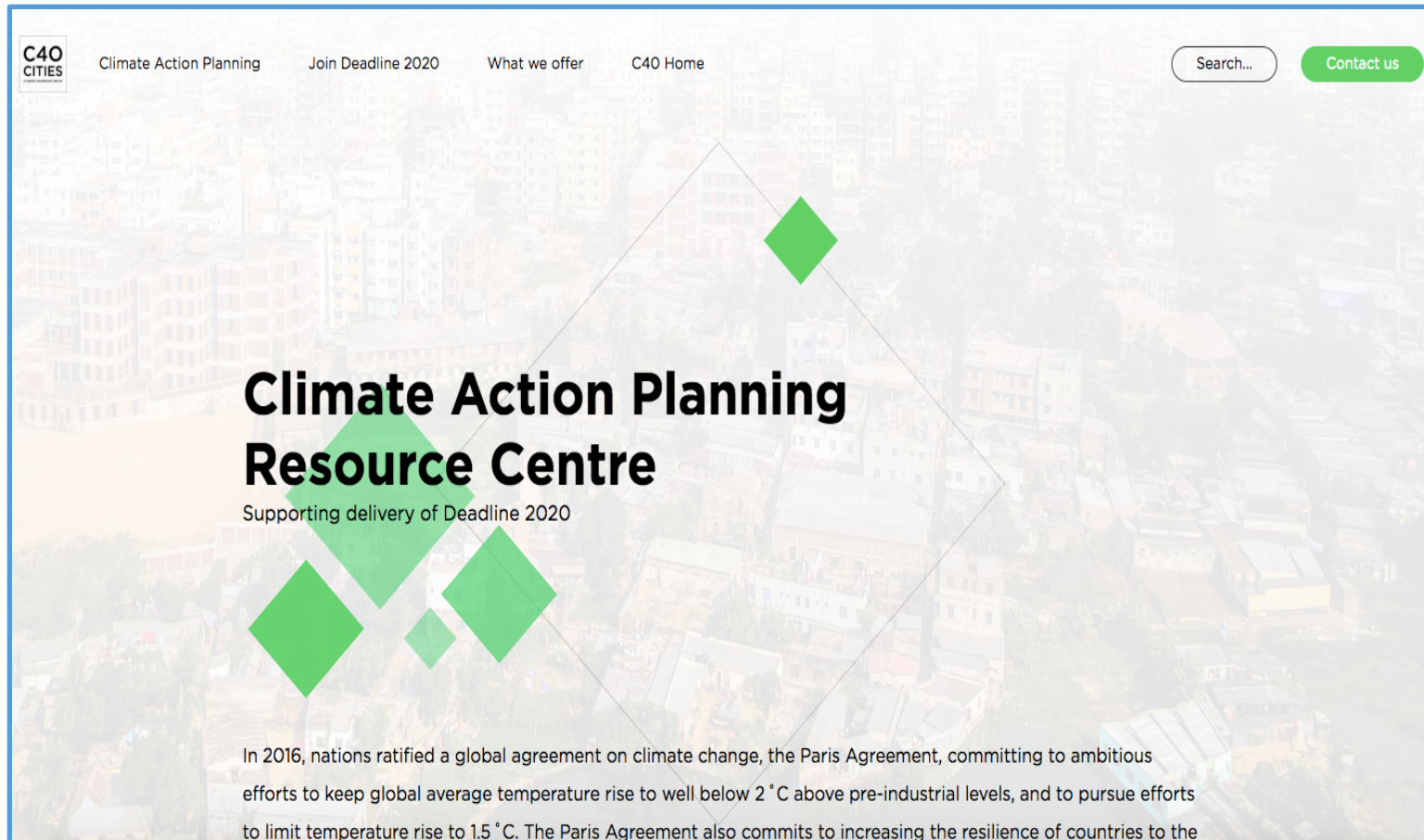


- TARGET: 90% renewable energy.
- Vancouver: committed to 100% renewable energy (power, heat and transport by 2050)
- Melbourne renewable energy project – Joint tender with banks, universities, post office & Melbourne zoo

Deadline 2020 Progress To Date



C40 Climate Action Planning Framework & Resource Centre launched!



- <https://resourcecentre.c40.org/>

Collaboration works



- The Paris Agreement goals are incredibly challenging
- Requires unprecedented collaboration and urgent action
- But cities are showing what is possible and now starting to collaborate with states, businesses, investors and civil society.

Thank you!