



*“Zero Carbon City International Forum 2023”*

1 March 2023

# A TERRITORIAL APPROACH TO CLIMATE ACTION AND RESILIENCE

*Leading practices on multi-level climate action*

OECD Centre for Entrepreneurship, SMEs, Regions and Cities

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# Cities in the zero-carbon transition



# Cities are central to the net zero transition and solutions exist to leverage its potential

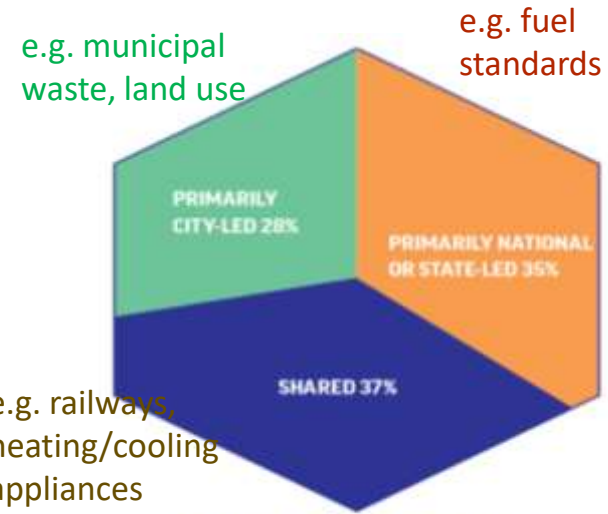
OECD Urban Studies  
Cities in the World  
A NEW PERSPECTIVE ON URBANISATION



Cities are home to **3.5 billion people**. This is projected to reach **5 billion in 2050**.

**90% of urban emissions** can be cut by 2050 (+ 87 million jobs in 2030 and 45 million jobs in 2050) but cities cannot do it alone

Proportion of urban mitigation potential over which different levels of government have main authority



EXCLUDING DECARBONISATION OF ELECTRICITY (7.7 GtCO<sub>2</sub>-e)

Source: (OECD, 2020) *Cities in the World: A New Perspective on Urbanisation* <https://www.oecd-ilibrary.org/sites/d0efcbda-en/index.html?itemId=/content/publication/d0efcbda-en>; (CUT, 2019) *Climate Emergency Urban Opportunity* <https://urbantransitions.global/en/publication/climate-emergency-urban-opportunity/>



# Urban transition is already underway



In 2019, OECD regions and cities accounted for **63% of climate significant** public expenditure and **69% of climate-significant public investment**

More than **500 cities** in the world have already committed to carbon neutrality, often **more ambitious than their national governments**

Source: (OECD, 2022) *Subnational government climate expenditure and revenue tracking in OECD and EU Countries* [https://www.oecd-ilibrary.org/urban-rural-and-regional-development/subnational-government-climate-expenditure-and-revenue-tracking-in-oecd-and-eu-countries\\_1e8016d4-en](https://www.oecd-ilibrary.org/urban-rural-and-regional-development/subnational-government-climate-expenditure-and-revenue-tracking-in-oecd-and-eu-countries_1e8016d4-en) ICLEI (2020) *ICLEI's Pioneers of Climate Ambition 2020* <https://talkofthecities.iclei.org/pioneersofambition/>



# Emission reduction potential vary across regions and cities within a same country

## Southland (New Zealand)



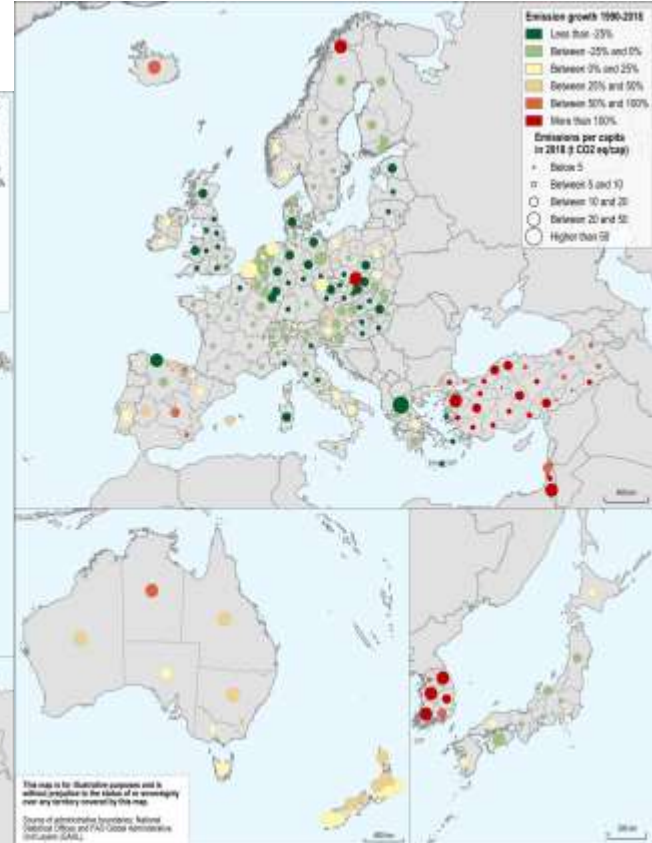
**83.2 t** CO<sub>2</sub>  
eq/cap

## Auckland (New Zealand)



**6.5 t** CO<sub>2</sub> eq/cap

**Indicator:** Total production-based greenhouse gas emissions per capita (t CO<sub>2</sub>-eq/capita), 2018; Emission growth (%) 1990-2018, OECD large regions (TL2)



Source: (OECD, 2022) *Regions and Cities at a Glance 2022* <https://doi.org/10.1787/14108660-en>



# Climate impacts differ not only across cities but also within cities

Difference in temperature between cities and their surrounding areas can reach almost 5°C, up to 7°C in some cases.

## Asahikawa (Japan)



**7.1°C** warmer than their surroundings

## Kurume (Japan)



**1.3°C** warmer than their surroundings

Urban heat island intensity index, 2021 (FUA)



Source: (OECD, 2022) *Regions and Cities at a Glance 2022* <https://doi.org/10.1787/14108660-en>



# Green space in urban centres also vary

Green areas (trees, grasslands and shrublands) as % of the total area in FUA's urban centres, 2022

## Puerto Montt (Chile)

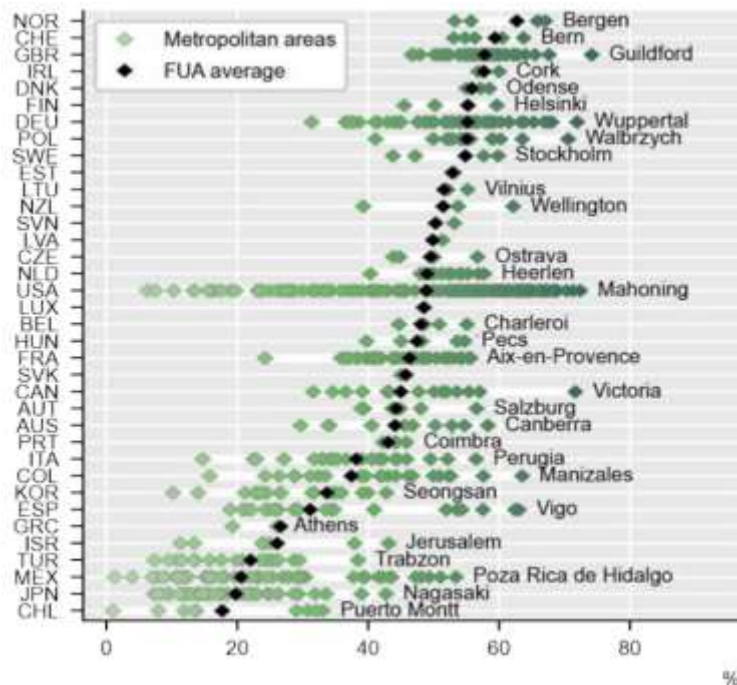


**33.1%** of the total area in FUA centre

## Antofagasta (Chile)



**0.97%** of the total area in FUA centre



Source: (OECD, 2022) *Regions and Cities at a Glance 2022*

<https://doi.org/10.1787/14108660-en>



**Three priorities to  
accelerate climate action in  
cities**





# Three priorities to accelerate zero-carbon action in cities



Upgrading infrastructure to promote green mobility and decarbonise buildings in cities



Boosting skills to create green jobs

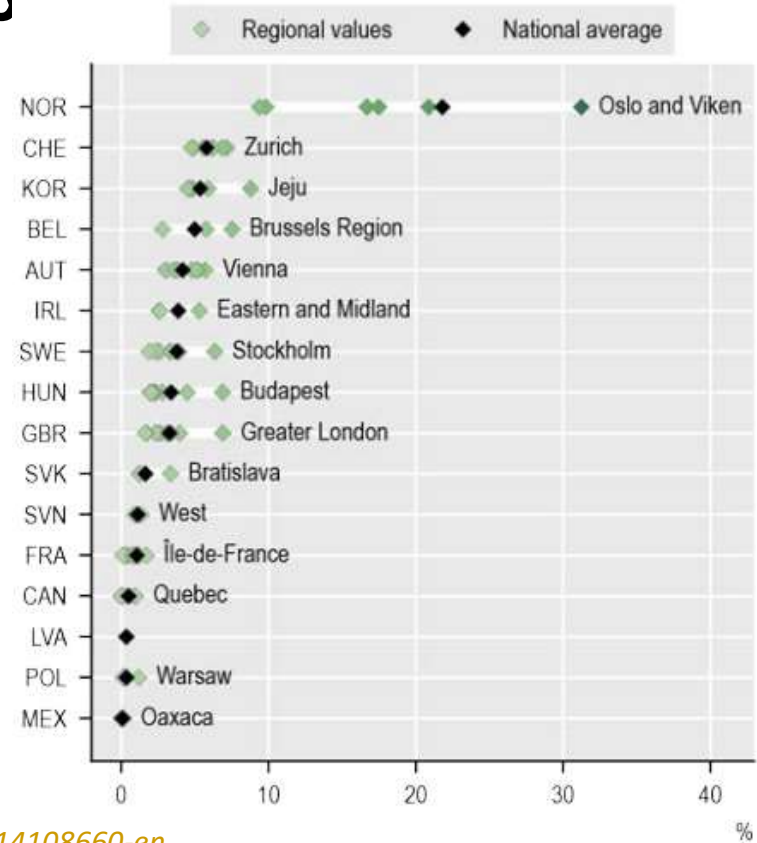


Building partnerships to support local governments



# Promoting green mobility

In Oslo and Viken in Norway, **almost 30% of private vehicles are either electric or hybrid**, an increase of 20 percentage points in only 4 years



Source: (OECD, 2022) *Regions and Cities at a Glance 2022* <https://doi.org/10.1787/14108660-en>



# Decarbonising buildings

Since 2000, **building emissions per capita fell in three-quarters of OECD regions**, with Swedish regions leading the way, cutting per capita emissions by more than 75%



Source: (OECD, 2022) *Regions and Cities at a Glance 2022* <https://doi.org/10.1787/14108660-en>



# Boosting skills to create green jobs



Since the start of the pandemic, growth in the demand **for green-task jobs** has outpaced overall **labour market demand by 20%**

Source: (OECD, 2022) *Regions and Cities at a Glance 2022* <https://doi.org/10.1787/14108660-en>



# Building national-local partnerships to support local governments

## Visions and strategies

- National urban policies
- Mainstreaming cities in national climate strategies (e.g. NDCs, NAPs/NAS)

## Sharing knowledge

- Multi-level forums, roundtables
- Partnerships
- Policy databases, data and statistics

## Financing

- Earmarked grants and funds
- Joint programmes
- Pilot projects

## Technical support

- Guidelines
- Capacity building seminars and workshops
- Sending expert teams to cities

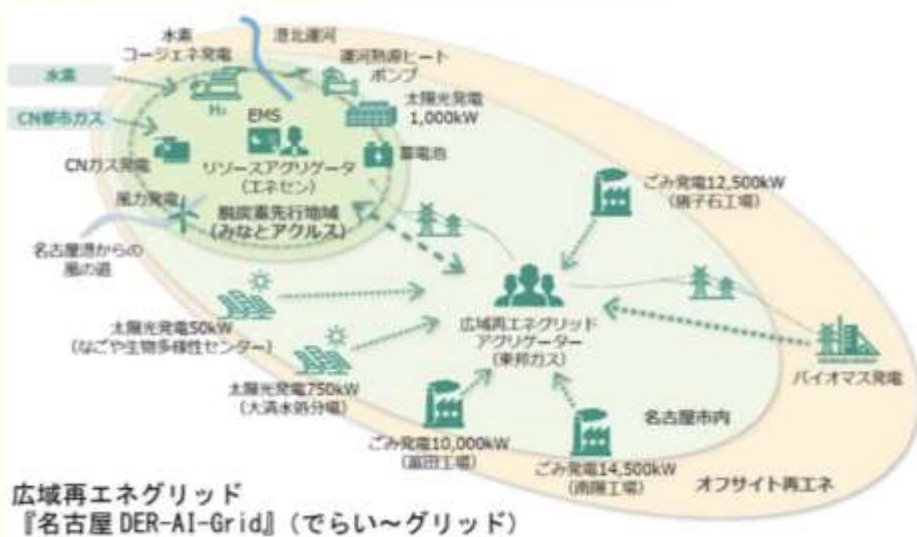


# Leading practices of national governments to accelerate multi-level climate action



# Council for National and Local Decarbonisation and Regional Decarbonisation Roadmap of Japan

- A total of **100 regions** will be assigned as “carbon-neutral leading areas” by the government between 2021 – 2030.
- **Close collaboration** between national and regional governments, built on the “Council for National and Local Decarbonisation.”
- The programme not only provides grants to the designated regions but also **technical training, capacity-building and data.**
- Learnings and practices of the 100 regions are expected to spread nationwide, helping Japan realise its carbon-neutral targets even before 2050.

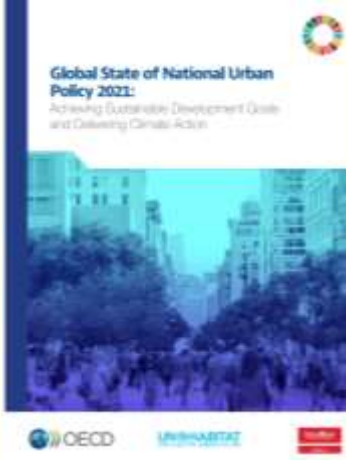


Decarbonisation Plan – renewable energy grid of Nagoya City

<https://www.cas.go.jp/jp/seisaku/datsutanso/index.html>



# National strategies should integrate urban climate action towards carbon neutrality



- **81%** of responding countries report that their **National Urban Policies (NUP)** address climate change
- **69%** of **NUPs** contribute extensively or moderately to **SDG13 (climate change)**

## Examples:



**Colombia's** Law 1391 to establish guidelines for the management of climate change.



**Costa Rica's** National Urban Development Policy 2018–2030 and corresponding Action Plan 2018–2022.

Source: (OECD, 2022). *Global State of National Urban Policy*  
<https://doi.org/10.1787/96eee083-en>





# Providing technical and non-financial support “EcoQuartier in France”



- More than **500 EcoQuartier (eco-districts)** have been developed between 2013-2022
- **Close collaboration** between local authorities and Ministry of Ecological Transition providing training for local authorities.
- The programme is evolving into a **guide for all urban developments**
- Updated in 2022 to **respond to the new public policies** including the Climate Resilience Law, Net-zero artificialization of soils and RE2020.

EcoQuartier Clichy-Batignolles (Paris, France)

<http://www.ecoquartiers.logement.gouv.fr/>



# Engaging local communities to scale-up action: Netherlands' Natural gas-free pilot neighbourhoods

**90%**

Natural gas accounts for 90% of energy use for space heating in residential buildings (highest share in Europe)

**PAW**

The national government launched pilot projects called “natural gas-free neighbourhood projects” (in Dutch: *Programma Aardgasvrije Wijken*, hereafter the PAW)

Pilot subsidy  
Capacity building  
Knowledge sharing platform



**66 PAW pilot projects and 66 stories**

The PAW was established in 2018 with an aim to test and learn how neighbourhoods can phase out natural gas effectively and scale up the measures



By examining what bottlenecks municipalities encounter and which solutions are effective, in-house knowledge can be gained and ultimately help municipalities accelerate the heat transition

<https://aardgasvrijewijken.nl/default.aspx>



# National fiscal instruments to support subnational climate action

Earmarked grants and funds are by far the most common type of climate-related funding instruments available to subnational governments for their climate action:

- **France:** the Green Fund (2023)
- **Germany:** the National Climate Initiative
- **Canada:** Green Municipal Fund



GREEN  
MUNICIPAL  
FUND

FONDS  
MUNICIPAL  
VERT



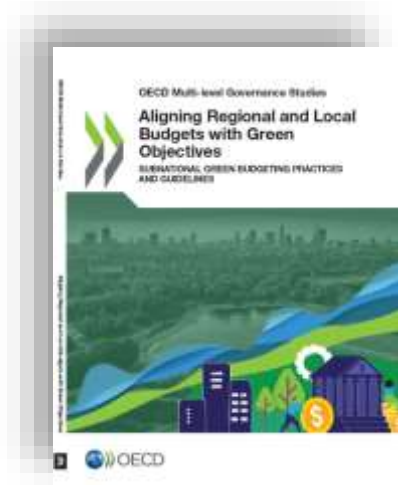
[Compendium of Financial Instruments that Support Subnational Government Climate Action](#)



# National governments can promote and support subnational green budgeting

## 6 OECD guidelines to support subnational green budgeting

- 1 **Conduct a diagnostic of local environmental and climate challenges** as a pre-requisite to launching a green budgeting practice
- 2 **Ensure strong, high-level involvement and support** from both the administrative and elected sides of government
- 3 **Ensure the practice relies on a robust, shared scientific basis** to facilitate public trust and ensure the practice can adapt to changing scientific evidence
- 4 **Adopt a step-wise approach to implementing green budgeting** in order to learn from previous steps and reinforce the alignment of the practice with local strategic priorities
- 5 **Integrate the green budgeting practice into existing public financial management procedures and tools** to help ensure the practice endures
- 6 **Include revenues within the scope of the green budgeting practice** to ensure the entire budget aligns with green objectives



A **growing number** of subnational green budgeting **practices** in France (50 cities and regions), Norway (Oslo, Bergen, etc), Austria (Vienna), Italy, Sweden, Spain, the UK, etc.

Source: OECD (2022) *Aligning Regional and Local Budgets with Green Objectives: Subnational Green Budgeting Practices and Guidelines* <https://doi.org/10.1787/93b4036f-en>



# Key policy messages for national and local leaders and G7 ministers

- Recognise the pivotal role of cities to drive the net-zero transition (while also recognising that cities cannot do it alone)
- Promote a territorial / place-based approach to climate action and resilience, by:
  - **Integrating local climate action** into national policies and strategies, in particular NDCs, NAPs/NAS and national urban policies (NUPs)
  - **Developing data and statistics** to monitor subnational climate action
  - **Sharing knowledge** and expertise on multi-level climate action
  - **Engaging wide-range of stakeholders** in climate policy design and implementation
  - Developing **green budgeting** exercises



# OECD programmes to support decarbonising cities



# OECD Programme on A Territorial Approach to Climate Action and Resilience (TACAR)



## Pillar 1. Localised indicator framework

- **Localised benchmark on climate action and resilience**



## Pillar 2. Checklist for action

- Checklist for action
- Country-specific case studies
- **Paper on applying a territorial approach to climate adaptation**



## Pillar 3. Innovative climate policies

- Compendium of leading examples of a territorial approach
- Country-specific case studies
- **Paper on applying a territorial approach to climate adaptation**



## Pillar 4. Subnational climate finance

- Database of climate-related expenditure and investment
- Compendium of fiscal instruments to support climate action
- Guidelines and self-assessment tool to introduce subnational green budgeting

TACAR Website:

<https://www.oecd.org/cfe/cities/tacar.htm>



# Localised indicator framework

(being developed under the TACAR programme)

TL2 and TL3 regions  
Functional Urban Areas (FUA)



## Pressure indicators (drivers of emissions)

- (Cooling and heating degree days, levels and % change)
- Land use: built-up area growth; built-up area per capita, and difference between built-up area growth and population growth
- GHG emissions per capita, level and % change
- GHG emissions by sector: share of total emissions, level, per capita and % change



## State indicators (impacts and risks)

- Population exposure to heat stress
- Urban Heat Island Intensity
- Population exposure to coastal flooding
- Population exposure to fires



## Response indicators (actions and opportunities)

- Green areas in cities
- Patent applications in climate mitigation technologies as % of total technologies
- Citizens' satisfaction with efforts to preserve the environment

**32 comparable** indicators

- **25** indicators at **regional level** (TL2, TL3)
- **7** indicators available at **city level** (FUA)



# OECD Programme on Decarbonising Buildings in Cities and Regions

**Cities** can drive the transition because they are...



Familiar with local building stock

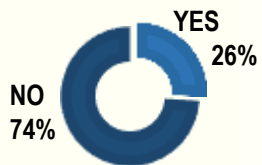


Close to citizens & local businesses



Responsive to place-based needs

**Multi-level governance** is key



74% of cities and regions think they don't receive enough support from national governments (n=19)



OECD Publication  
“Decarbonising Buildings in Cities and Regions” (2022)

A Checklist for both national and subnational governments

**Decarbonising Buildings in Cities and Regions**  
Check list for public action (March 2022)



Source: (OECD,2022) Decarbonising Buildings in Cities and Regions: <https://www.oecd.org/cfe/cities/energy-efficiency-cities.htm>



# OECD Hub on Subnational government climate finance

## Climate Expenditure Tracking



- Online Subnational Government Climate Finance **Database** (spending and investment)

## Climate Revenue Tracking



- Online **Compendium** of Fiscal Instruments that Support Subnational Climate Action



## Subnational Government Climate Finance Hub

<https://www.oecd.org/regional/sngclimatefinancehub.htm>

## Subnational Green Budgeting



- Subnational Green Budgeting **Guidelines**
- **Case study reports:** Region of Brittany & City of Venice
- **Self-assessment Tool**
- **Publication:** *Aligning Regional and Local Budgets with Green Objectives*

# Thank you!



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