LEVERAGING GEOSPATIAL DATA FOR SDGS:
MEASURING DIGITAL DIVIDES AND CLIMATE CHANGE IMPACTS ACROSS CITIES IN THE WORLD

UN-GGIM Europe webinar:
Geospatial information for territorial policy support in the context of SDGs
25 October, 2023

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OECD
BETTER POLICIES FOR BETTER LIVES

Outline

1. The OECD Territorial Approach to the SDGs programme:
   Objectives and Toolkit

2. Measuring distance to the SDGs in regions and cities:
   Where we are and work ahead

3. Leveraging geospatial data for SDGs across cities in the World
   Preliminary results

Key objectives of the programme

Learn
- SDGs as a means to **reshape policies** from the ground up
- SDGs can help manage **trade-offs**, prioritise **investment** & allocate **budget**
- SDGs to strengthen multi-level **governance** and coordination

Measure
- **Where cities & regions stand** with respect to the SDGs
- **How cities & regions compare against national averages and peers** (internationally comparable framework)

Share & guide
- Multi-stakeholder dialogue across **11 pilot regions and cities**
- **OECD Roundtable** on Cities and Regions for the SDGs
- **Checklist for public action** to localise the SDGs

OECD TOOLKIT for a TERRITORIAL APPROACH to the SDGs
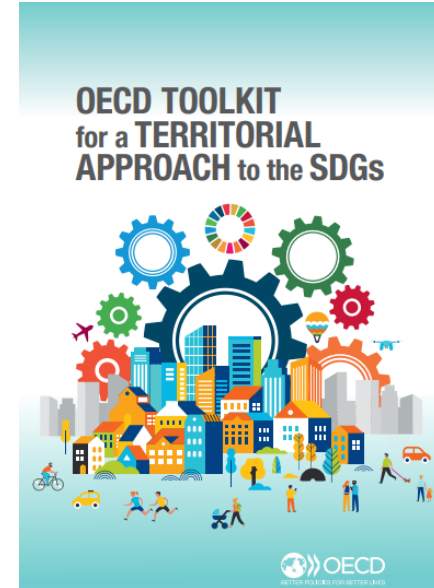
Measuring distance to the SDGs in regions and cities:
Where we are and work ahead

OECD localised indicator framework for SDGs

- **Localised:** Identifies relevant targets to be measured at the subnational scale in OECD and partner countries

- **Comparable units:** Common definitions of subnational regions and cities (FUAs)

- **Harmonised indicators:** 100+ indicators from official and unconventional sources

- **Consensual methodology:** Measures distance towards the SDGs
  - Suggested end values for 2030
  - Indexes by SDG – normalised from 0 to 100
  - Individual indicators by SDG

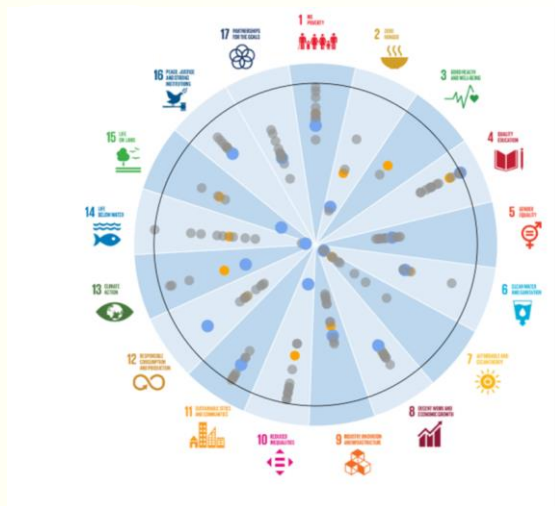# What is a city? Ensuring comparable lens for global monitoring of SDGs

Administrative boundaries vs. Functional urban areas
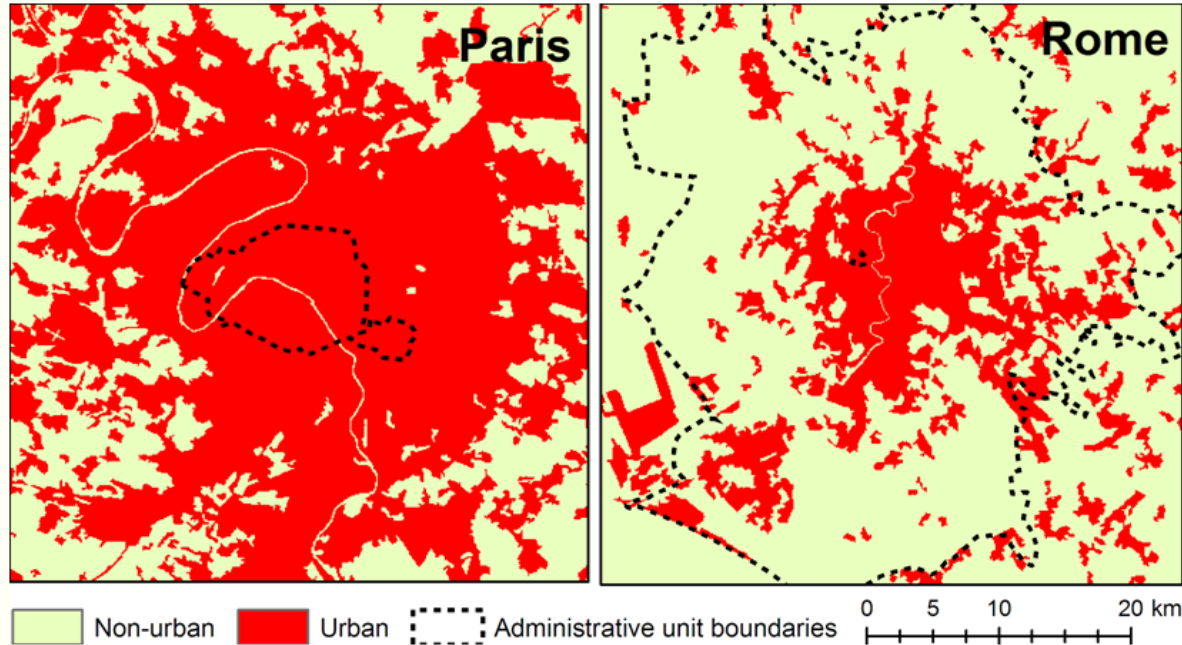
How do we get local SDG indicators?

Indicators come primarily from **official statistics**. In cases where the data are not available, the indicators are **modelled** using a variety of sources and techniques.

Official statistics
- Obtained from questionnaires filled by OECD delegates
- Open data from National Statistical Agencies

Modelling techniques
- Derived from official statistics
- Estimates based on unconventional sources and GIS techniques (e.g. geospatial data, satellite imagery, big data, administrative registers, etc.)

How are the localised framework and visualisation tool being used to support SDG implementation?
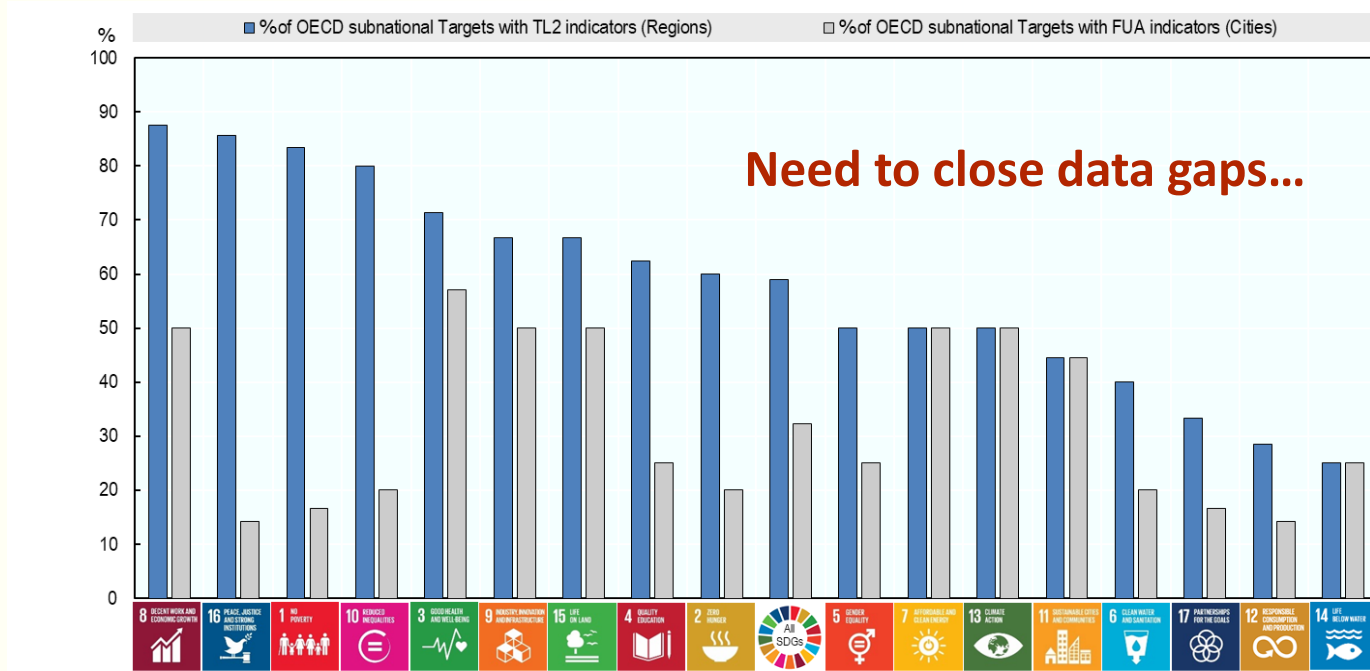
- OECD reports: Overview of SDG trends in OECD regions and cities
  - Territorial Approach to SDG synthesis report and Regions and Cities at a Glance series

- OECD territorial dialogues on SDGs: Analysis of strengths, challenges and opportunities towards the SDGs
  - Key for concrete action plans and OECD recommendations

Province of Córdoba | Argentina

Region of Flanders | Belgium

State of Paraná | Brazil

Region of Southern Denmark | Denmark

City of Kitakyushu | Japan

City of Bonn | Germany

Rhine-Neckar Metropolitan Region | Germany

Municipality of Kópavogur |Iceland

Autonomous Province of Bolzano/Bolzen | Italy

County of Viken | Norway

Basque Country | Spain

However, our 100+ indicators allow monitoring only 60% relevant targets and for one point in time

Need to close data gaps...

% of subnational Targets with at least one available indicator, by Goal and scale

Ongoing and future work

Update
- The framework and tool were launched in 2020 with data of 2019:
  - Update to get 2022 or most recent data available

Track progress
- The first version measured distance to the SDGs in the most recent point in time:
  - Include time series and measure progress over time
  - Disseminate in OECD visualisation tools: Local SDGs, and Atlas of regions and cities

Expand coverage
- Some SDG targets have important data gaps, and data only for OECD cities:
  - Include more indicators in the building on new OECD work
  - **Expand coverage to all regions and cities of the World when possible**

Leveraging geospatial data for SDGs across cities in the World: Preliminary results

Geospatial sources to bridge SDG data gaps

Examples of modelled indicators for the 9000+ cities in the World

- **Global Burden of Disease (GBD):**

  -Exposure to air pollution, PM2.5

- **Global Human Settlement Layer (GHSL):**

  -Built-up area growth relative to population growth, Built-up area per capita

- **Moderate Resolution Imaging Spectroradiometer (MODIS):**

  -Urban heat islands effects

- **Climate Change Initiative Land Cover (CCI-LC):**

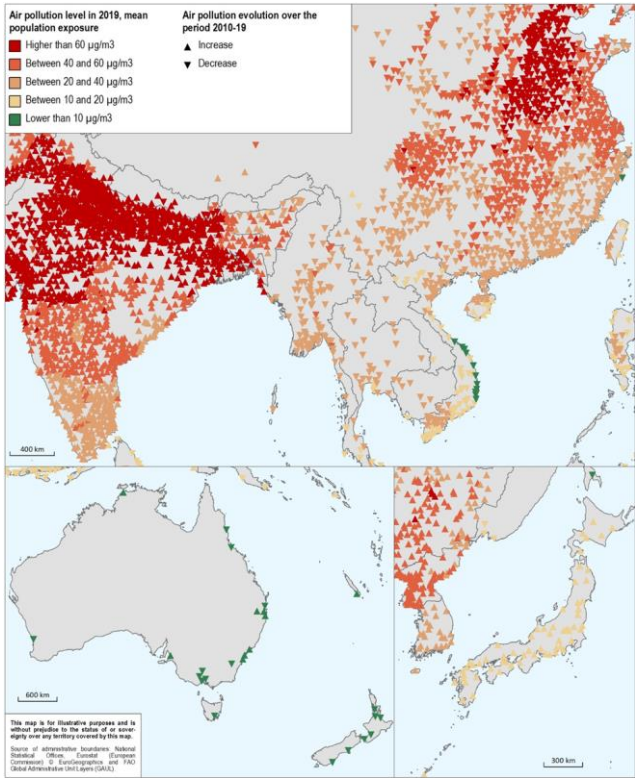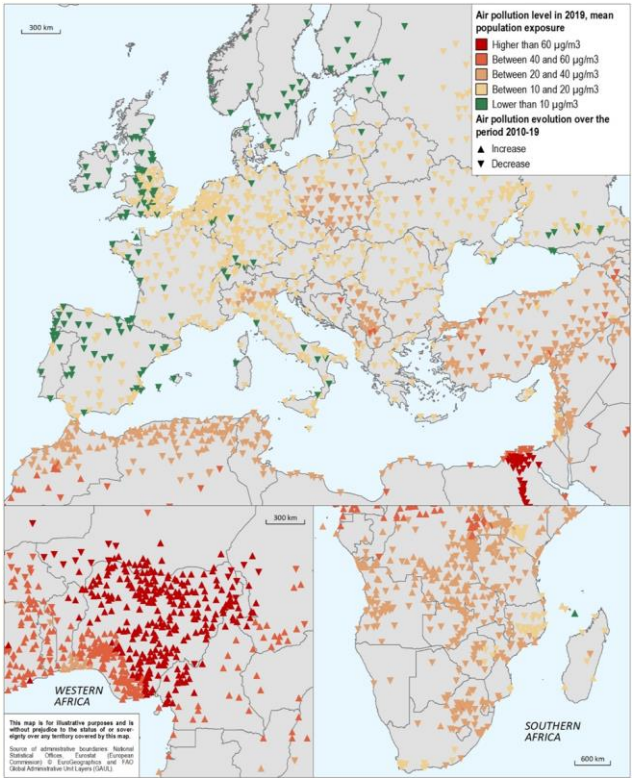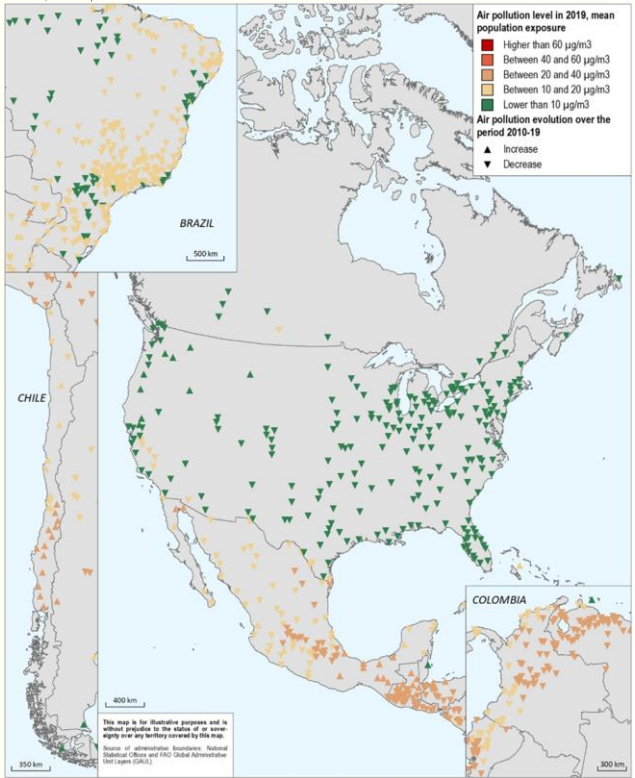 -Forest cover, Croplands, Wetlands, etc.

- **Speedtest by Ookla Global Fixed and Mobile Network Performance Map Tiles:**
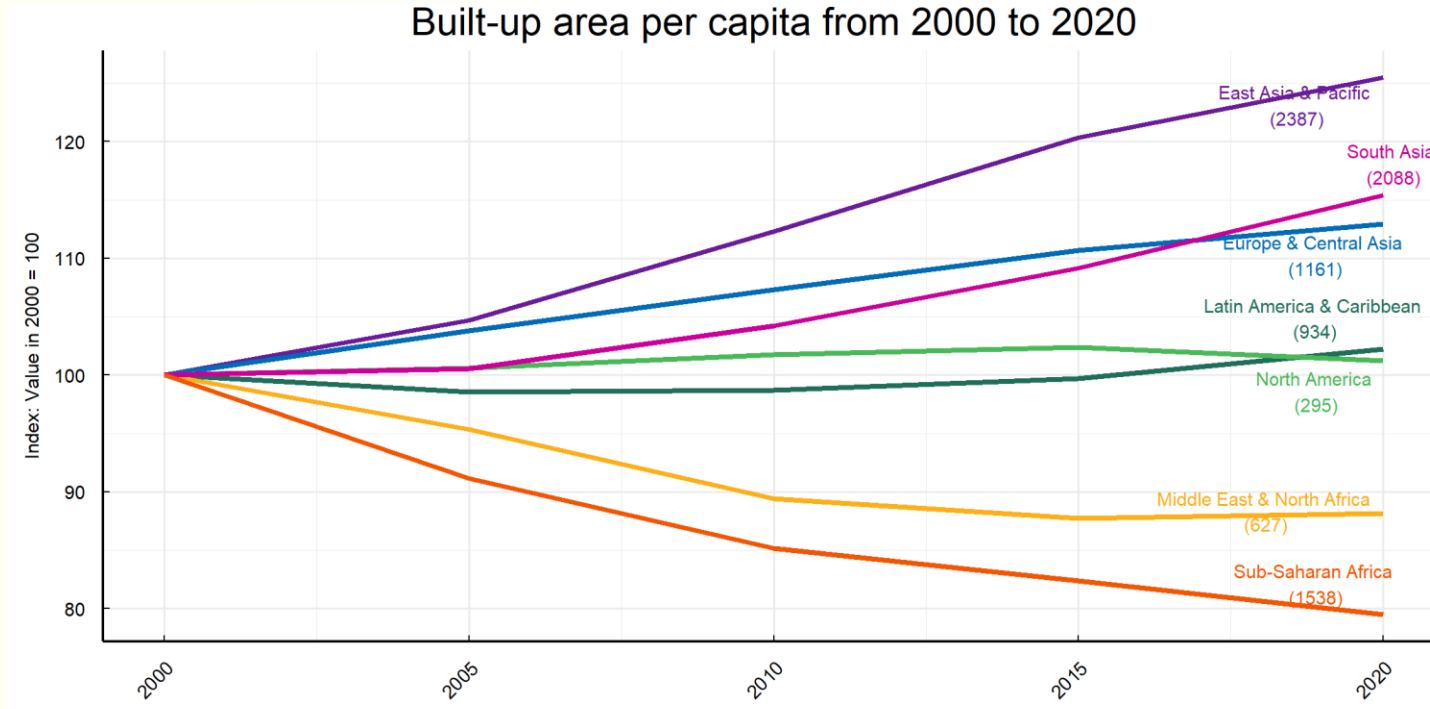
  -Internet speed

In the last 20 years, air pollution has decreased in 85% of cities in the World, particularly in North America and South Asia

Land consumption per capita increased the most in South Asia and East Asia & Pacific

Built-up area per capita from 2000 to 2020

In the past 5 years, temperatures have increased in 60% of cities in the World

- This has reinforced urban heat islands effects, which in 2022 were of around 1°C

- UHI increases with city size, which exacerbates cooling needs in large cities

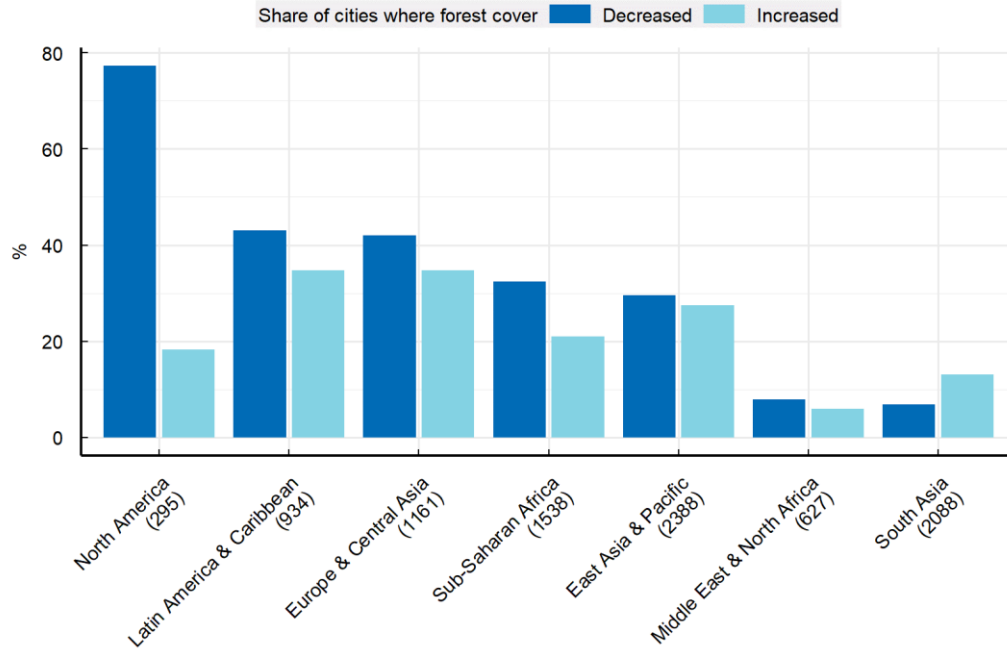- Cooling needs for buildings have increased in 70% of cities in the World, and particularly in South Asia (≈90%)

Urban heat island intensity in 2022
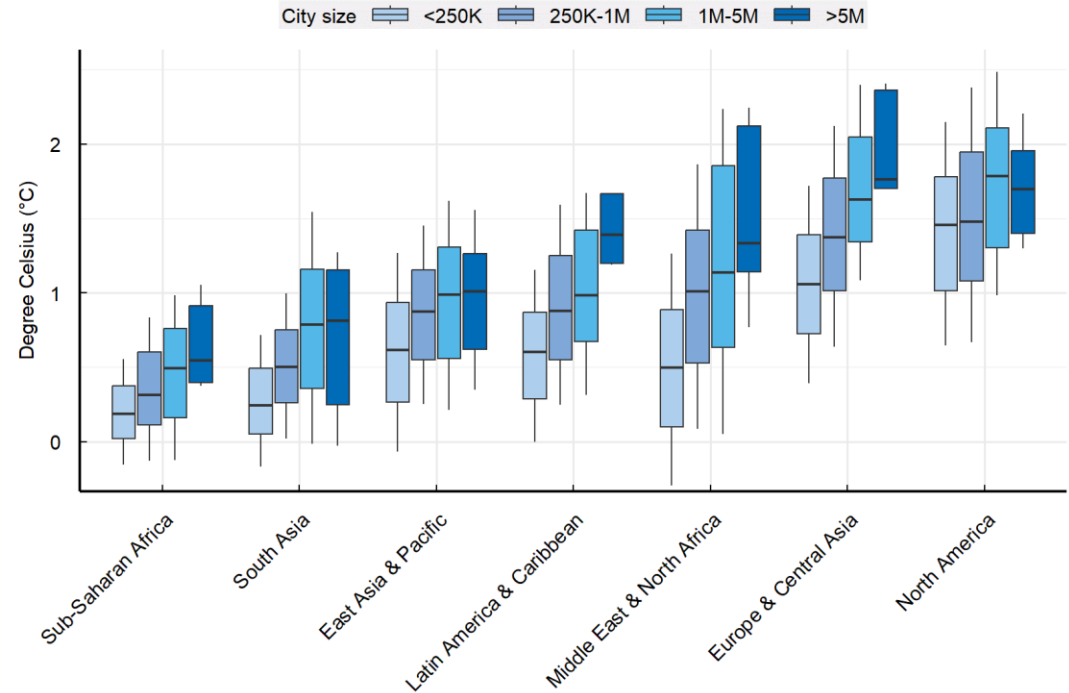
Only one in every five cities has increased its forest cover area in the past 20 years

Forest cover in cities, from 2000 to 2020

Share of cities where forest cover ■ Decreased ■ Increased
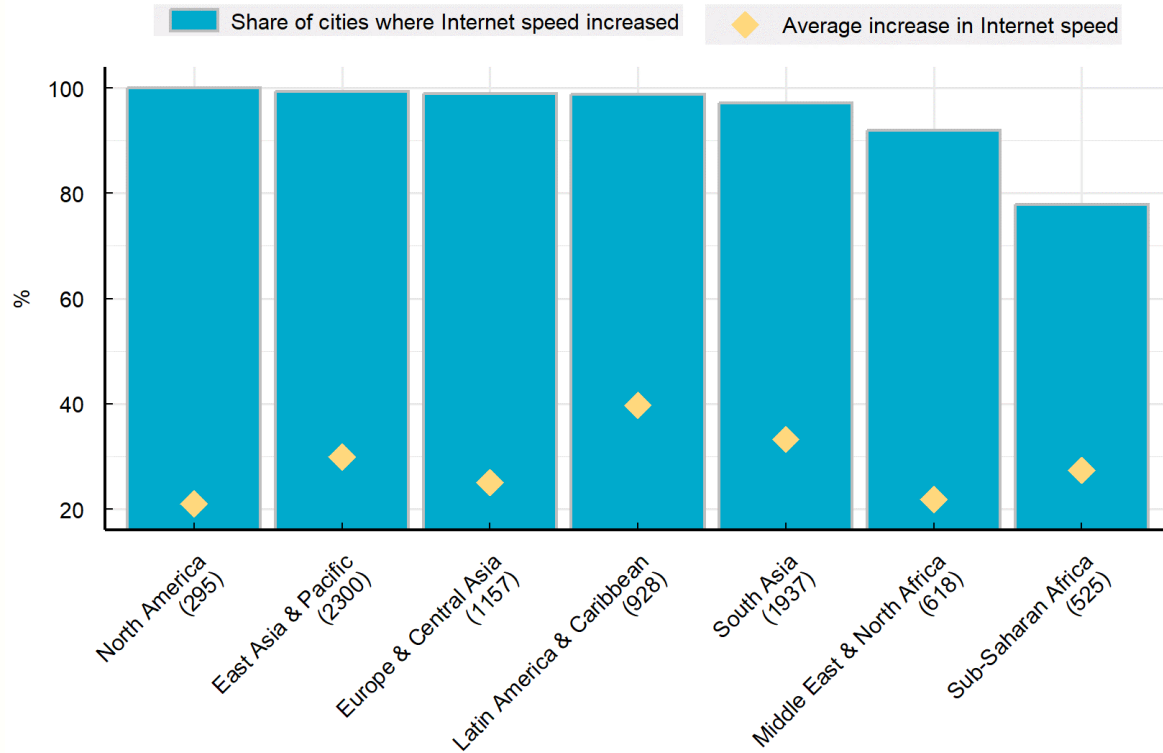

- Forest cover has decreased or remained stable in most cities

- North American has the largest proportion of cities (≈80%) experiencing forest loss

- South Asia is the only macro-region where more cities increased its forest cover (compared to cities that had forest loss)

Internet speed increased in most cities

- Internet speed increased by 30%, on average, across the cities of the World

- In one-fourth of the cities of Sub-Saharan Africa, Internet speed didn't increase in the period

Internet speed in cities, from 2019 to 2023 Q1

Legend: Share of cities where Internet speed increased (bar), Average increase in Internet speed (diamond)

X-axis categories:
- North America (295)
- East Asia & Pacific (2300)
- Europe & Central Asia (1157)
- Latin America & Caribbean (928)
- South Asia (1937)
- Middle East & North Africa (618)
- Sub-Saharan Africa (525)

Thank you!

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Website: www.oecd.org/cfe

OECD

OECD visualisation tool to measure the distance to the SDGs in regions and cities

Overview of Greater London

How to read this graph ⓘ

- Region value
- Country average
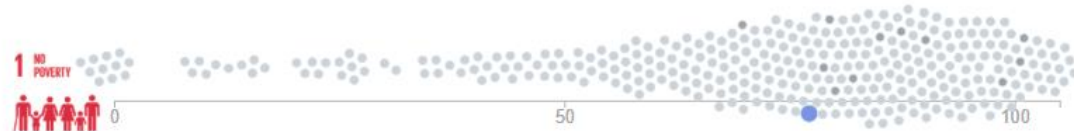- Regions in country
- End value for 2030

Visualise the index by goal

Click on the logo to see the index, click on learn more to see the indicators

All Indicators

Access the OECD Cities in the World data

- Through the OECD Regions and Cities Atlas