Türkiye

Regions and Cities at a Glance provides a comprehensive assessment of how regions and cities across the OECD are progressing in a number of aspects connected to economic development, health, well-being and the net zero-carbon transition. It presents indicators on individual regions and cities to assess disparities within countries and their evolution since the turn of the new millennium. Each indicator is illustrated by graphs and maps. The report covers all OECD countries and, where data is available, partner countries and economies.

ⓘ Territorial definitions

The data in this note reflect different sub-national geographic levels in OECD countries:

- **Regions** are classified on two territorial levels reflecting the administrative organisation of countries: large regions (TL2) and small regions (TL3). Small regions are classified according to their access to metropolitan areas (Fadic et al. 2019).

- **Functional urban areas** consist of cities – defined as densely populated local units with at least 50 000 inhabitants – and adjacent local units connected to the city (commuting zones) in terms of commuting flows (Dijkstra, Poelman, and Veneri 2019). Metropolitan areas refer to functional urban areas above 250 000 inhabitants.

In addition, some indicators use the degree of urbanisation classification (OECD et al. 2021), which defines three types of areas:

- **Cities** consist of contiguous grid cells that have a density of at least 1 500 inhabitants per km2 or are at least 50% built up, with a population of at least 50 000.

- **Towns and semi-dense areas** consist of contiguous grid cells with a density of at least 300 inhabitants per km2 and are at least 3% built up, with a total population of at least 5 000.

- **Rural areas** are cells that do not belong to a city or a town and semi-dense area. Most of these have a density below 300 inhabitants per km2.

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Regional economic trends

Employment and unemployment rates in regions

In Türkiye, regional disparities in unemployment rates are stark compared to other OECD countries. While in Southeastern Anatolia - East 30% of the working force was unemployed in 2021, the share was 6% in Western Black Sea - Middle and East.

Meanwhile, the difference in employment rate between the regions with the highest (Thrace) and lowest (Southeastern Anatolia - East) employment rates reached 26 percentage points in 2021. This places Türkiye among the top 5 OECD countries in terms of regional disparities in employment.
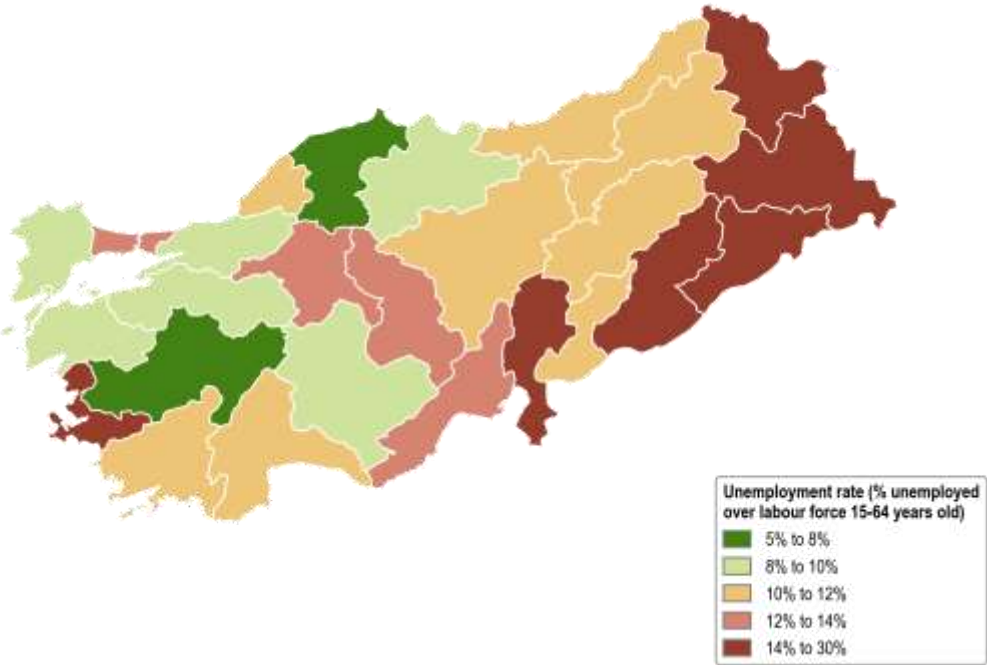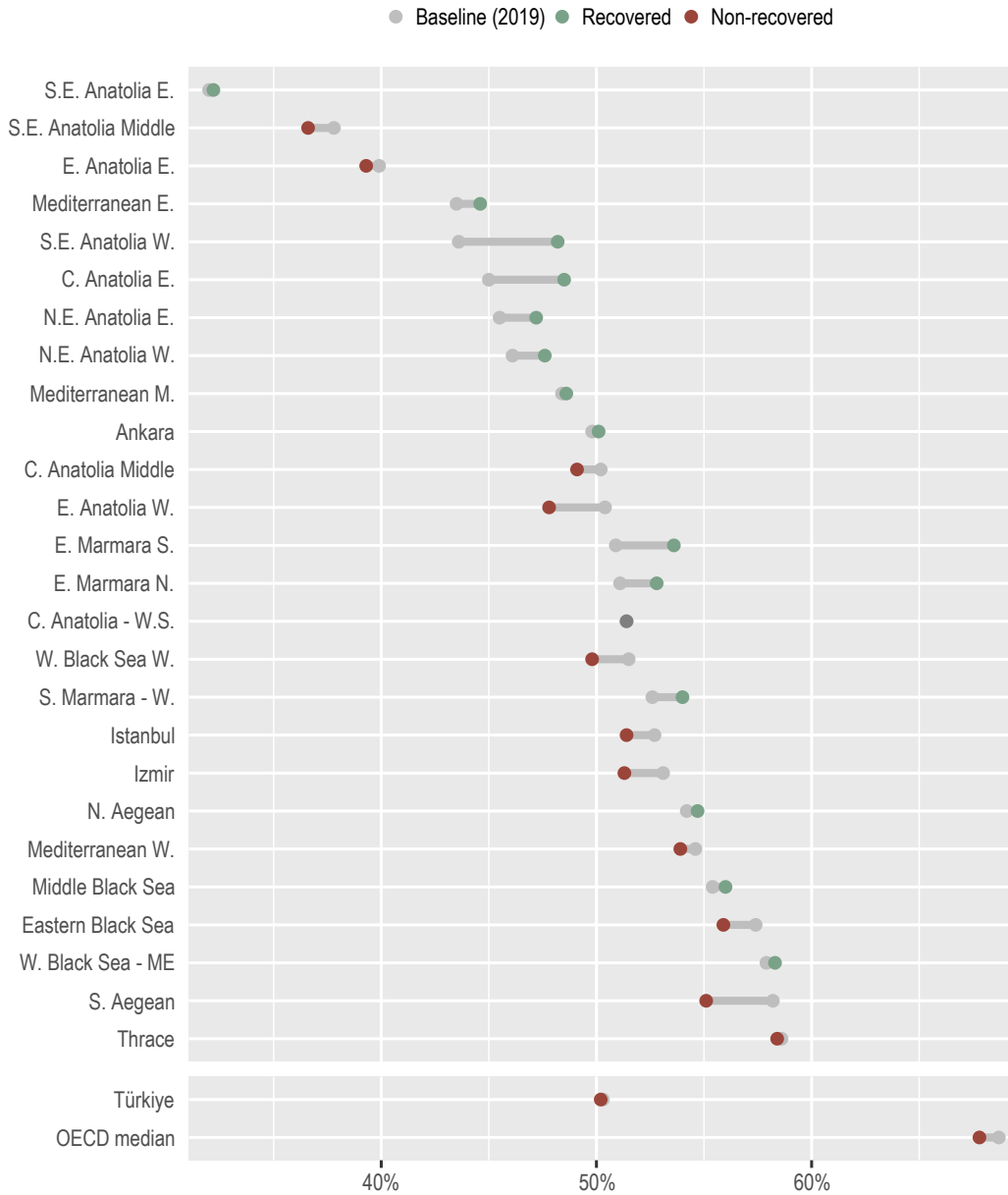

Figure 1: Unemployment rates in large regions, 2021

Figure 2: Change in employment rates in large regions, 2019-2021

The first year of COVID-19 on GDP per capita

The first year of COVID-19 resulted in a increase in GDP per capita in most Turkish regions. Mediterranean region - West, a region with a GDP per capita -17% below the national average (23 738 vs. 28 491 USD PPP), experienced the largest decrease in GDP among Turkish regions, of approximately -22%.
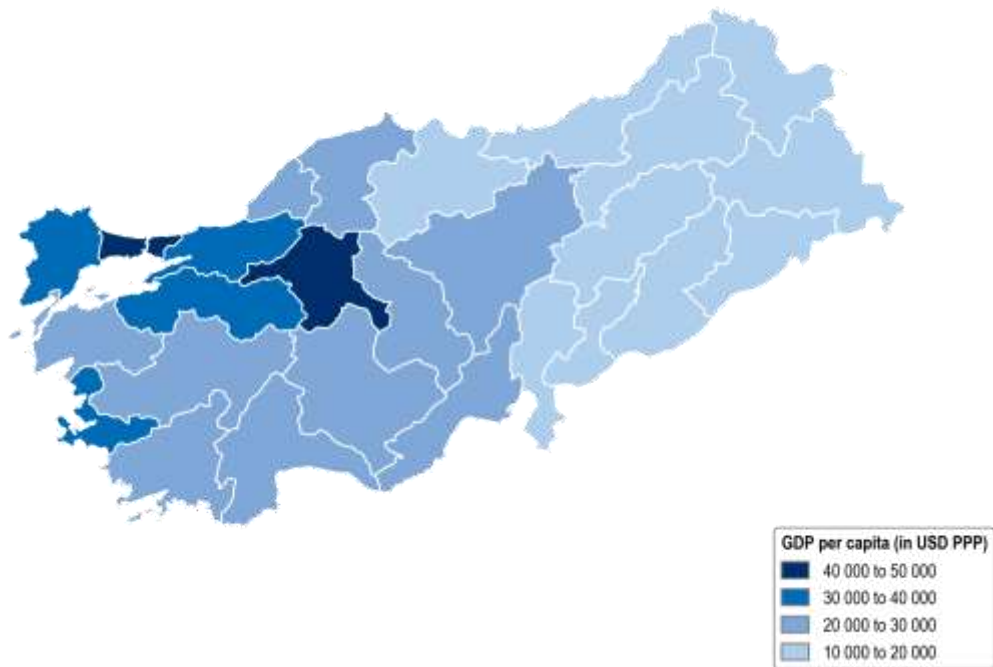
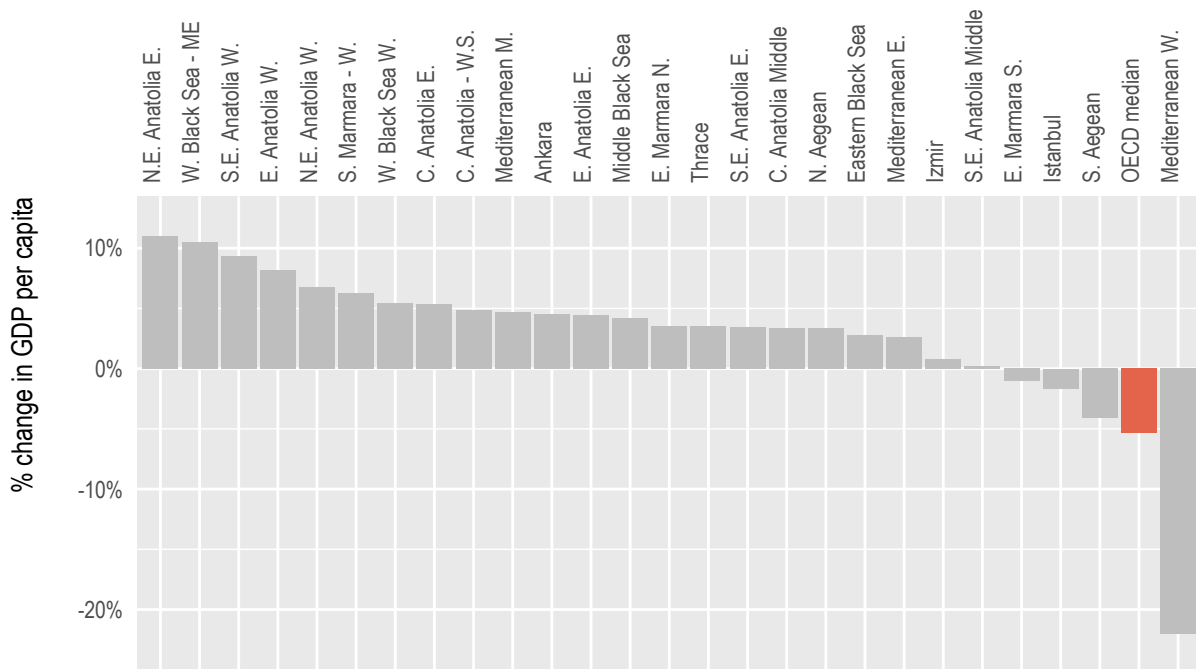**Figure 3: GDP per capita in large regions, 2020**

Figure 4: % change in GDP per capita in large regions, 2019-2020

Note: GDP per capita is measured in constant prices and constant PPPs, reference year 2015. Constant prices are calculated using national deflators. The OECD median corresponds to the median decline in GDP per capita observed across OECD large regions over the period.
Source: OECD (2022), "Regional economy", *OECD Regional Statistics* (database)

Trends in regional economic disparities in the last decade

Differences between Turkish regions in terms of GDP per capita have remained relatively stable over the past nine years, with the richest 20% of regions reporting a GDP per capita 3.2 times higher than the poorest 20% of regions.
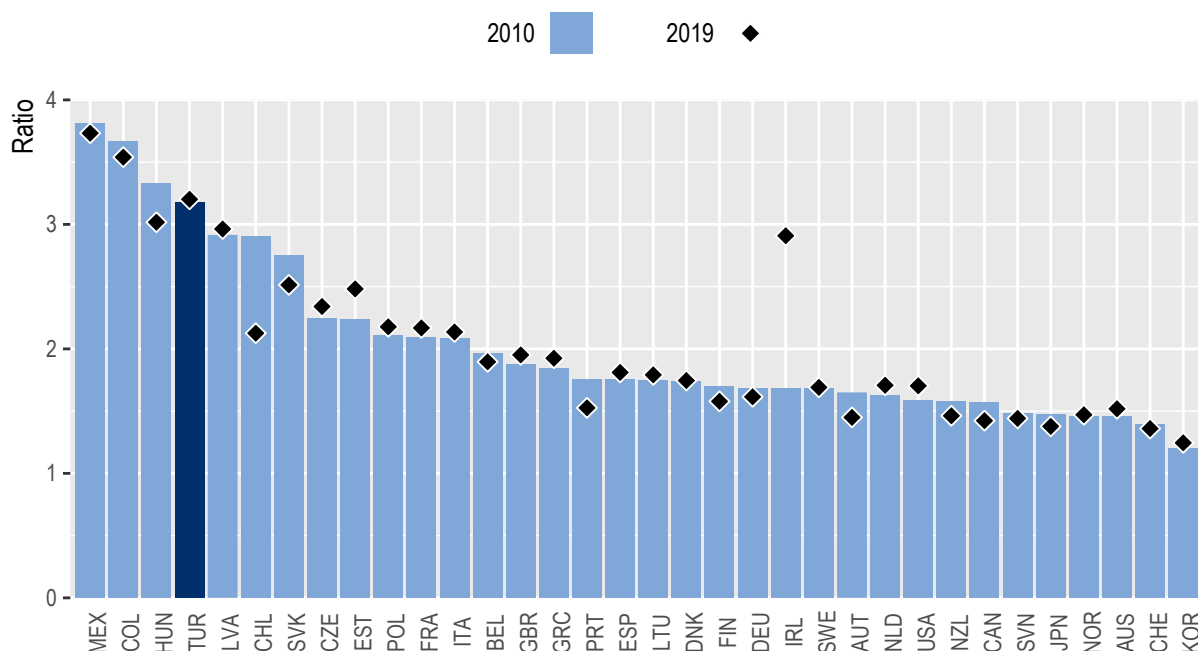
2010 ■   2019 ◆

Figure 5: Index of regional disparities in GDP per capita (richest 20% relative to poorest 20% of regions)

Note: The GDP per capita of the top and bottom 20% regions are defined as those with the highest/lowest GDP per capita until the equivalent of 20% of the national population is reached. A ratio of 2 means the richest regions have a GDP per capita twice as large as the poorest regions. The indicator is calculated using large regions, except for Latvia and Estonia, where small regions are used instead. Irish GDP underwent an upwards revision in 2016. Care is advised in its interpretation.
Source: OECD (2022), "Regional economy", *OECD Regional Statistics* (database)

Productivity trends in the last decade

Between 2010 and 2019, Southeastern Anatolia - West and Southeastern Anatolia - Middle experienced the highest and lowest productivity growth in Türkiye, respectively. Southeastern Anatolia - West saw a labour productivity increase of 5.4% per year, above the OECD average of 0.9%[1]. During the same period, Southeastern Anatolia - Middle experienced more modest growth in measured labour productivity, averaging 0.1% per year.

Less than half of Turkish regions experienced a decline in labour productivity between 2019 and 2020. Mediterranean region - West experienced the largest decline, with a drop of 21.2%

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[1] International comparability in 2019 and 2020 is limited because of methodological differences in the calculation of employment counts during the height of the COVID-19 economic crisis.
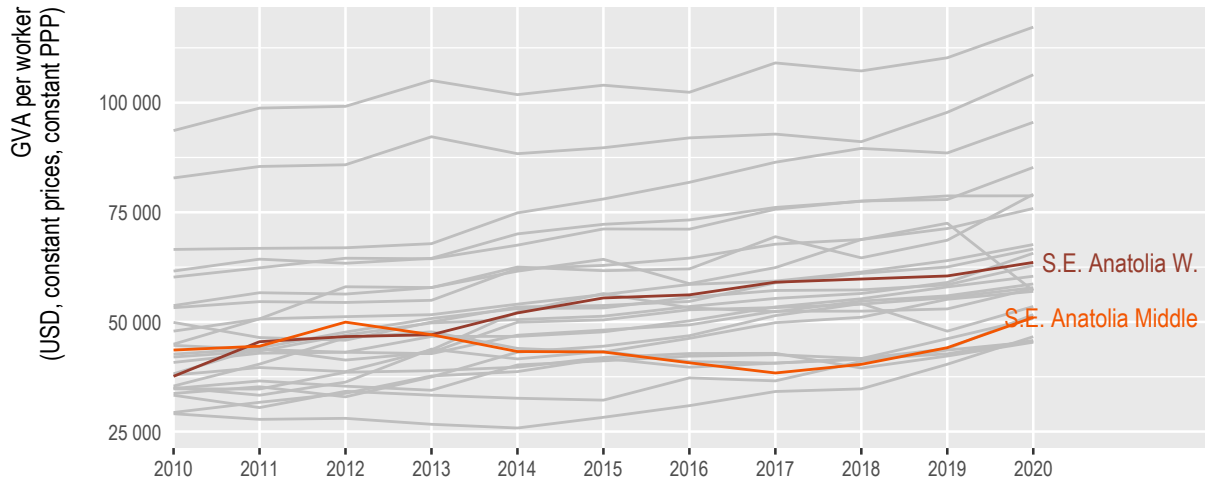
Figure 6: Regions with the highest and lowest productivity growth between 2010 and 2020

Note: Regional Gross Value Added (GVA) per worker, in USD, constant prices, constant PPP, base year 2015.
Source: OECD (2022), "Regional economy", *OECD Regional Statistics* (database)

Well-being, liveability and inclusion in regions

Regional well-being

Türkiye faces stark regional disparities across four well-being dimensions, with the starkest disparities in terms of community, housing and jobs.

Figure 7: Regional gaps in well-being

Note: Regional indices provide a first comparative glance of well-being in OECD regions. The figure shows the relative ranking of the regions with the best and worst outcomes in the eleven well-being dimensions, relative to all OECD regions. The eleven dimensions are ordered by decreasing regional disparities in the country. Each well-being dimension is measured by the indicators in the table below.

Relative to other OECD regions, Türkiye performs best in the civic engagement dimension, with most of Turkish regions lying in the top 20% of OECD regions.

The top 20% of Turkish regions rank above the OECD median region in 2 out of 14 well-being indicators, performing best in terms of voter turnout in the last national election (prior to 2022) and households with broadband access.

		Country average	Median OECD region	Turkish regions	
				Top 20%	Bottom 20%
	Community				
	Perceived social network support (%), 2016-20	80.9	90.5	87.3	71.9
	Housing				
	Rooms per person, 2014	1.0	1.6	1.5	0.9
	Jobs				
	Employment rate 15 to 64 years old (%), 2021	50.2	68.5	55.7	41.2
	Unemployment rate 15 to 64 years old (%), 2021	12.2	5.8	8.4	18.3
	Health				
	Life Expectancy at birth (years), 2019	79.1	80.3	80.1	78.3
	Age adjusted mortality rate (per 1 000 people), 2019	9.0	8.0	8.3	9.6
	Civic engagement				
	Voters in last national election (%), 2015	85.2	66.7	89.5	83.7
	Access to services				
	Households with broadband access (%), 2021	88.0	86.0	94.8	82.0
	Internet download speed: deviation from OECD average (%), 2021-Q4	-71.2	..	-65.5	-80.9
	Education				
	Population with at least upper secondary education, 25-64 year-olds (%), 2020	40.7	80.4	49.2	27.8
	Safety				
	Homicide Rate (per 100 000 people), 2020	7.3	1.4	4.9	10.5
	Income				
	Disposable income per capita (in USD PPP), 2021	6 635	20 601	9 272	3 483
	Environment				
	Level of air pollution in PM 2.5 (µg/m³), 2020	22.6	10.8	18.8	26.0
	Life Satisfaction				
	Life satisfaction (scale from 0 to 10), 2016-20	5.0	6.6	5.4	4.3

Figure 8: How do the top and bottom regions fare on the well-being indicators?

Note: Regional well-being indices are affected by the availability and comparability of regional data across OECD countries. The indicators used to create the indices can therefore vary across OECD publications as new information becomes available. For more visuals, visit https://www.oecdregionalwellbeing.org.

The digital divide

Fixed Internet connections in Turkish cities and rural areas deliver speeds significantly slower than the OECD average (-73% and -83%, respectively). This gap (10 percentage points) is smaller than in most other OECD countries.
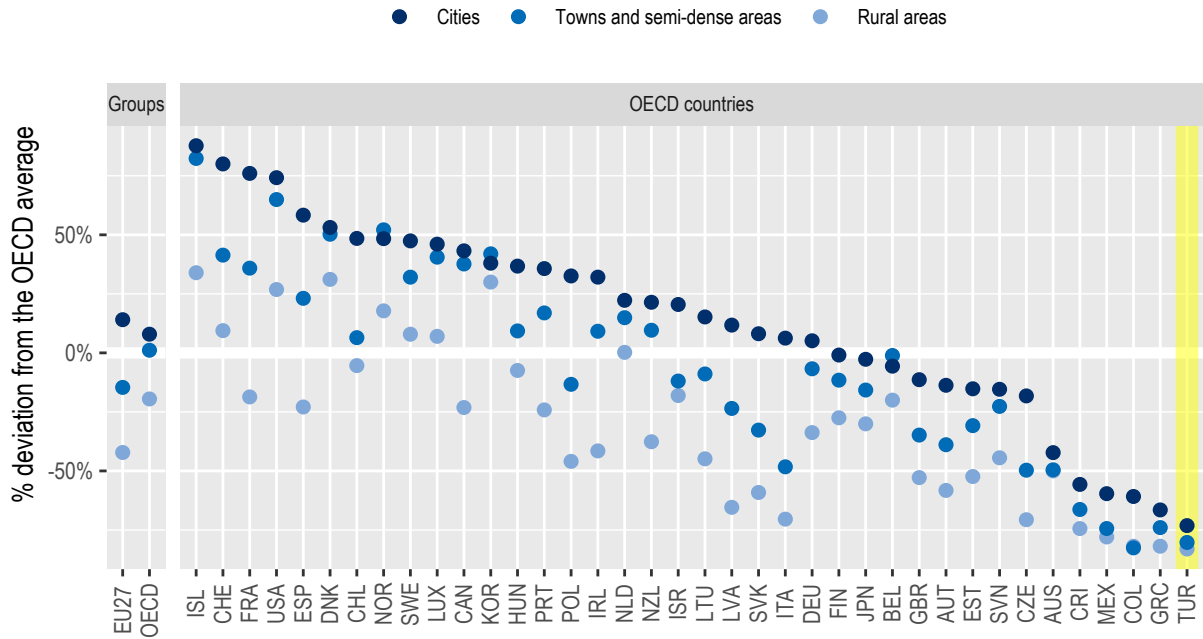
Figure 9: Speed of fixed Internet connections relative to the OECD average, by degree of urbanisation, 2021Q4

Note: Cities and rural areas are identified according to the degree of urbanisation (OECD et al. 2021). Internet speed measurements are based on speed tests performed by users around the globe via the Ookla Speedtest platform. As such, data may be subject to testing biases (e.g. fast connections being tested more frequently), or to strategic testing by ISPs in specific markets to boost averages. For a more comprehensive picture of Internet quality and connectivity across places, see OECD (2022), *"Broadband networks of the future"*.
Source: OECD calculations based on Speedtest by Ookla Global Fixed and Mobile Network Performance Maps for 2021Q4.

The average speed of fixed Internet connections is below the OECD average in all Turkish regions. Within the country, residents of Istanbul, Izmir and Ankara experience the fastest connections.
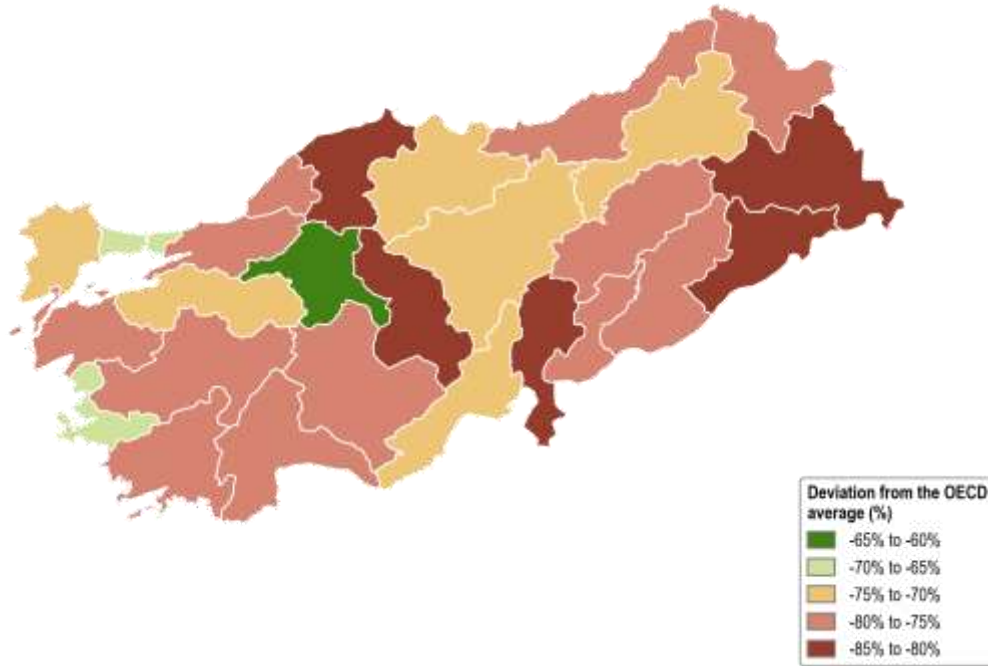
Figure 10: Speed of fixed Internet connections relative to the OECD average, in large regions (2021Q4)

Demographic trends in regions and cities

Population in cities

Between 2010 and 2021, 88% of cities in Türkiye experienced a rise in population. Population growth ranged from -0.7% per year in Kars to 2.6% per year in Antalya.
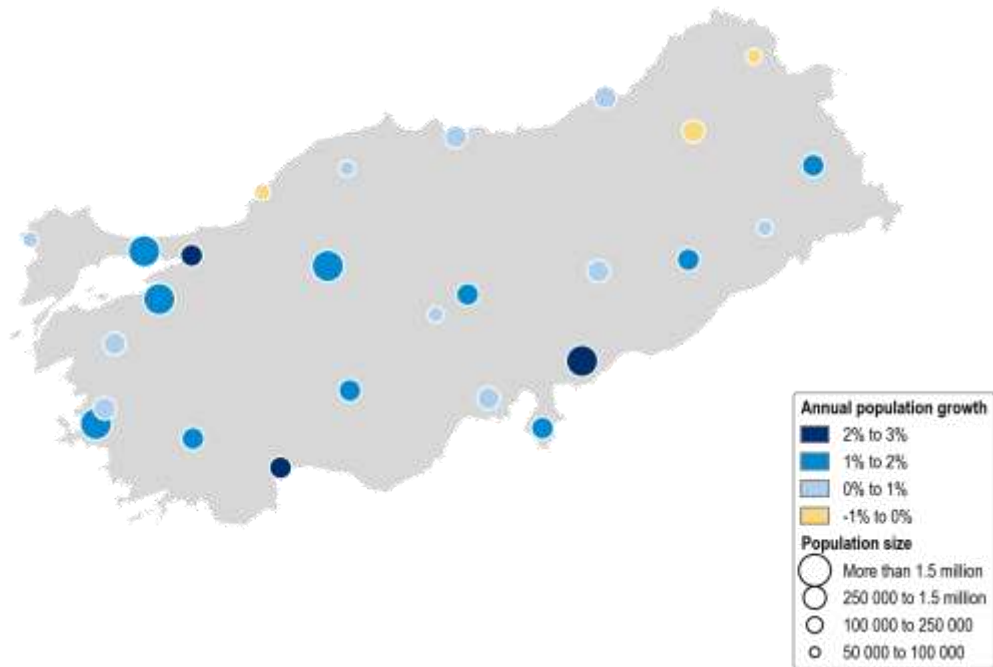
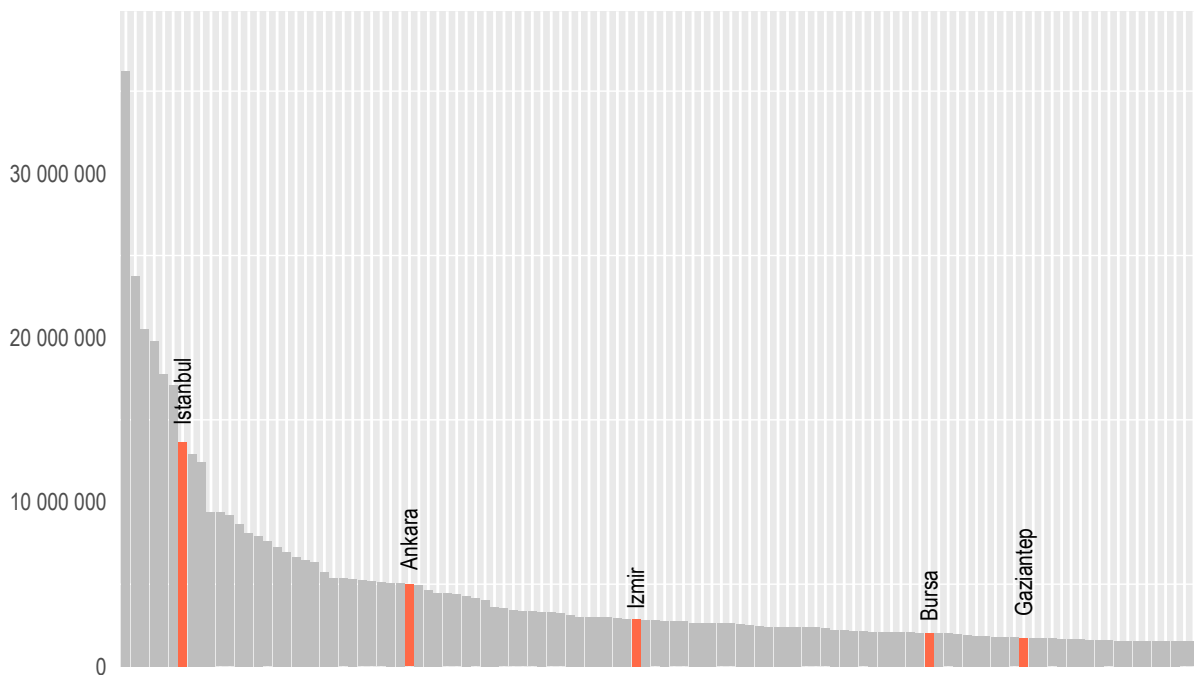**Figure 11: Population growth between 2010 and 2021**

Figure 12: Population in OECD functional urban areas, 2021 or latest available year

Note: Cities refer to functional urban areas (Dijkstra, Poelman, and Veneri 2019). Population counts for the functional urban area are estimated from administrative regional data (TL3 regions, OECD regional database), using the population distribution from population grids. For readability, only a selection of cities are labelled.

Over the past decade, the population has grown the most in Turkish cities with more than 1.5 million inhabitants. Cities with 50 000 to 100 000 inhabitants have seen their population shrink, on average.
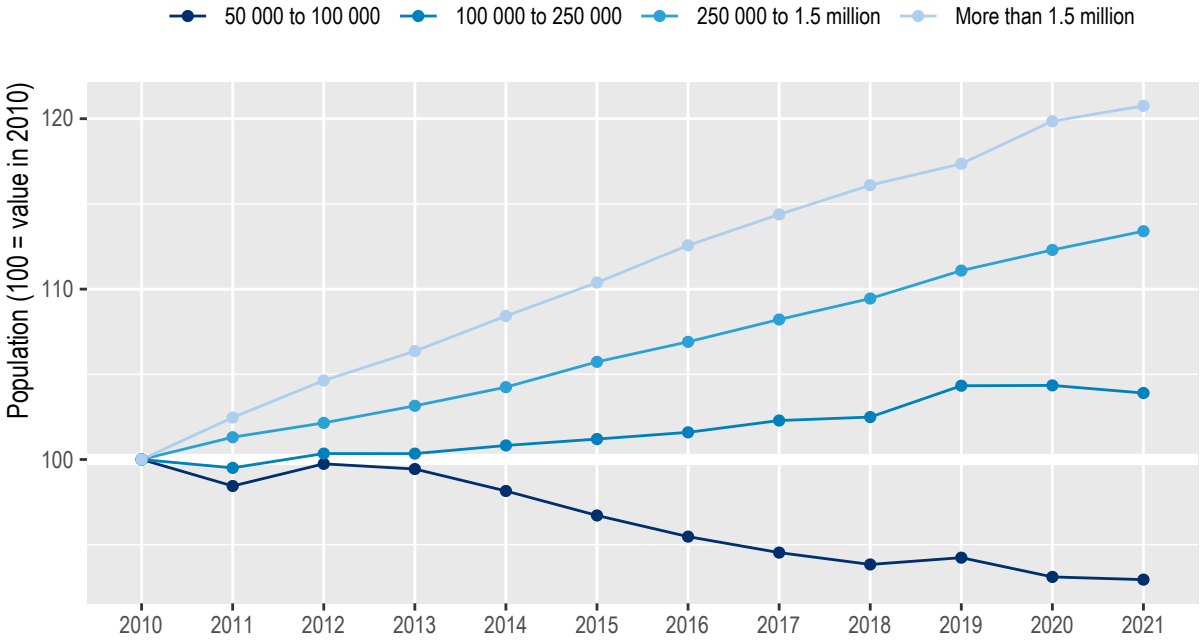

Figure 13: Population by size of functional urban area (100 = value in 2010), 2010-2021

Environmental challenges in regions and cities

Greenhouse gas emissions in regions

Since 1990, production-based greenhouse gas emissions have increased in all Turkish regions. Southern Marmara - West (513%) and Northeastern Anatolia - West (70%) experienced the largest and lowest increase in emissions, respectively.
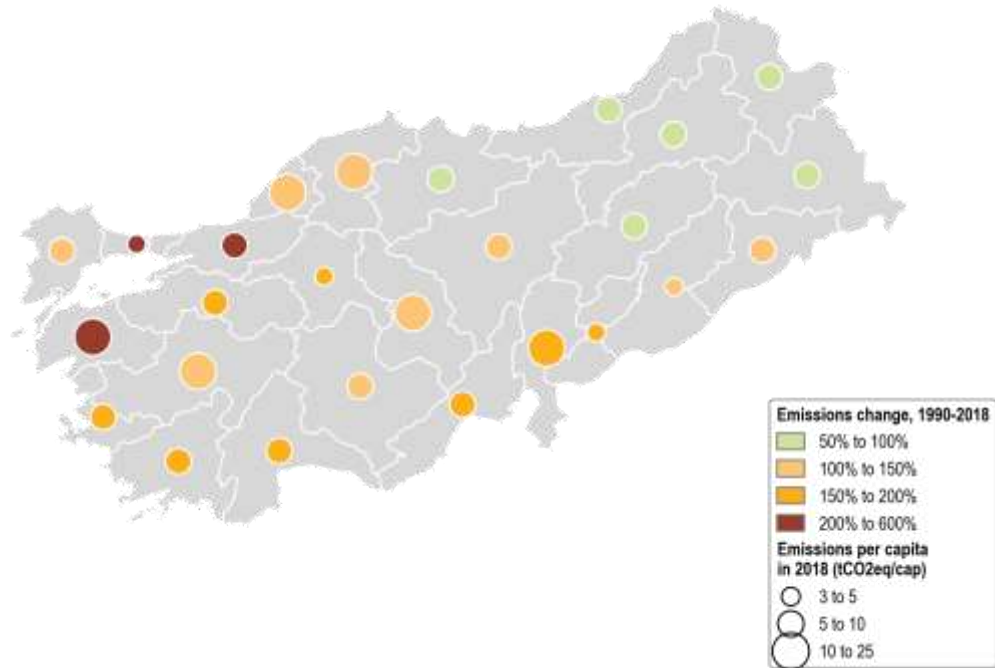
Figure 14: Change in production-based emissions in large regions, 1990-2018

Note: Bubbles are proportional to *per capita* greenhouse gas emissions, not to the overall level of greenhouse gas emissions in the region.
Source: OECD calculations, based on the Emissions Database for Global Atmospheric Research (European Commission. Joint Research Centre. 2019).

In 2018, greenhouse gas emissions per capita in Türkiye were largest in Southern Marmara - West, Western Black Sea - West and Mediterranean region - East. Power accounts for the largest share of greenhouse gas emissions in the three regions.
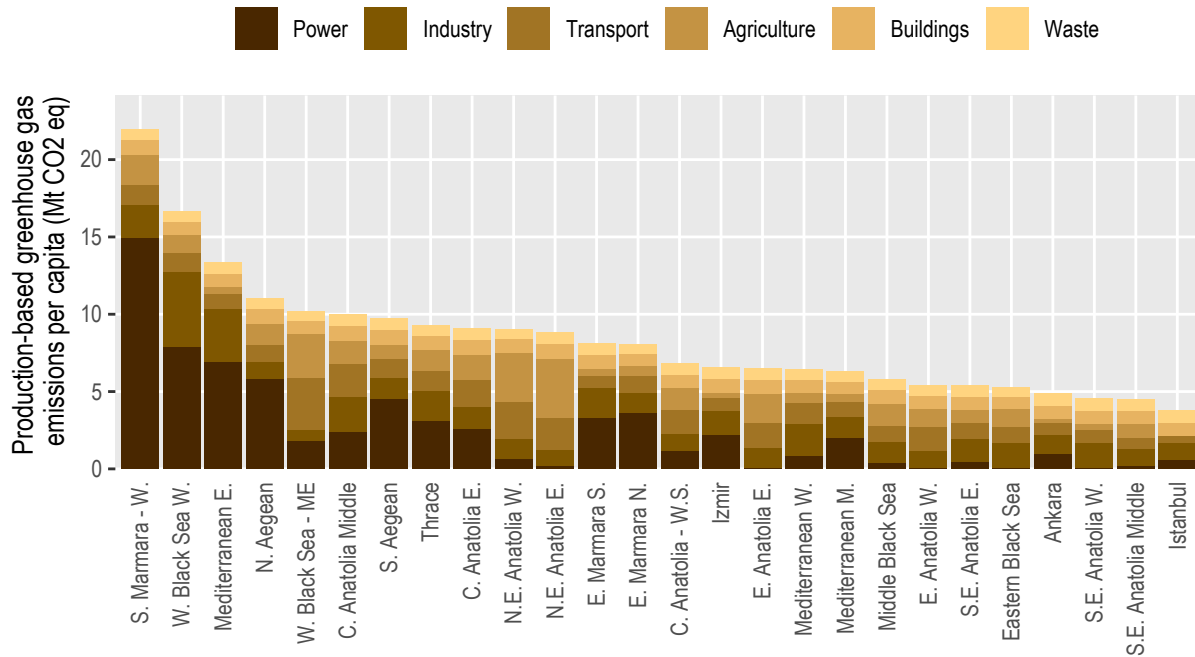
Figure 15: Production-based greenhouse gas emissions per capita in large regions, 2018

Note: Regions with low population counts may rank high in greenhouse gas emissions per capita while contributing relatively little to overall emissions in the country.

Urban heat island effect

In Turkish cities, the difference in temperature between cities and their surrounding areas (i.e. urban heat island intensity) reaches 0.5 degrees Celsius (°C). The largest effect is observed in Istanbul and Kocaeli, two cities that are, on average, 5.5°C and 4°C warmer than their surrounding areas, respectively.
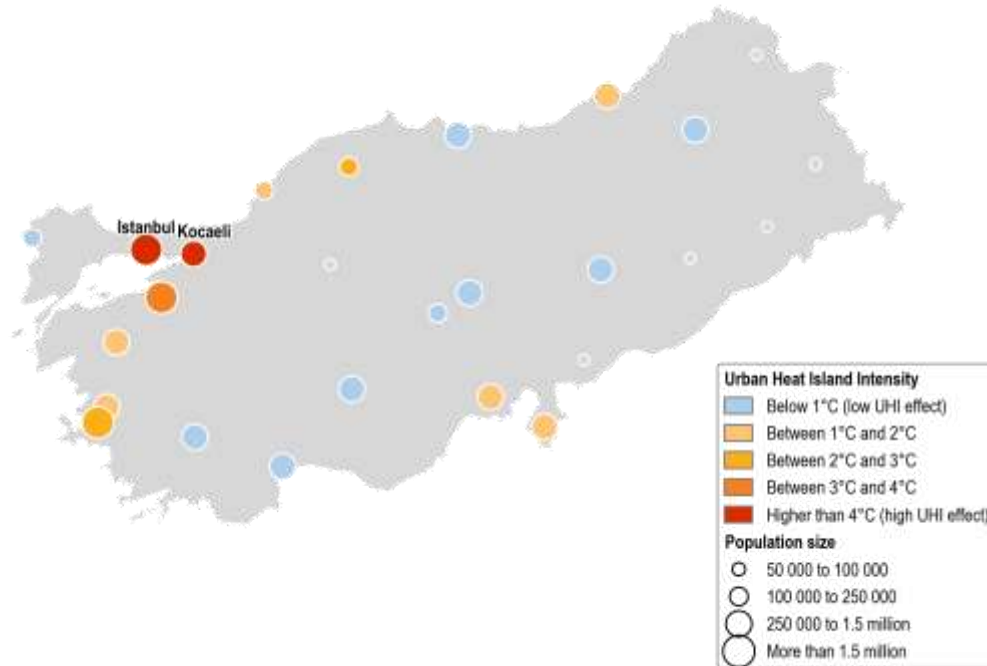
Figure 16: Urban heat island intensity index, 2021

Note: The Urban Heat Island Intensity (UHI) index is defined as the difference in land surface temperature between built-up areas and non-built-up areas within functional urban areas. This index can be affected by the type of vegetation and climate in non-built-up areas.
Source: OECD calculations, based on land surface temperature data from NASA's Moderate Resolution Imaging Spectroradiometer (MODIS) (Wan, Hook, and Hulley 2021a, 2021b)

References

Source of administrative boundaries: © OECD, © EuroGeographics, National Statistical Offices, © UN-FAO Global Administrative Unit Layers (GAUL)

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