Megacities. Metropolitan areas.
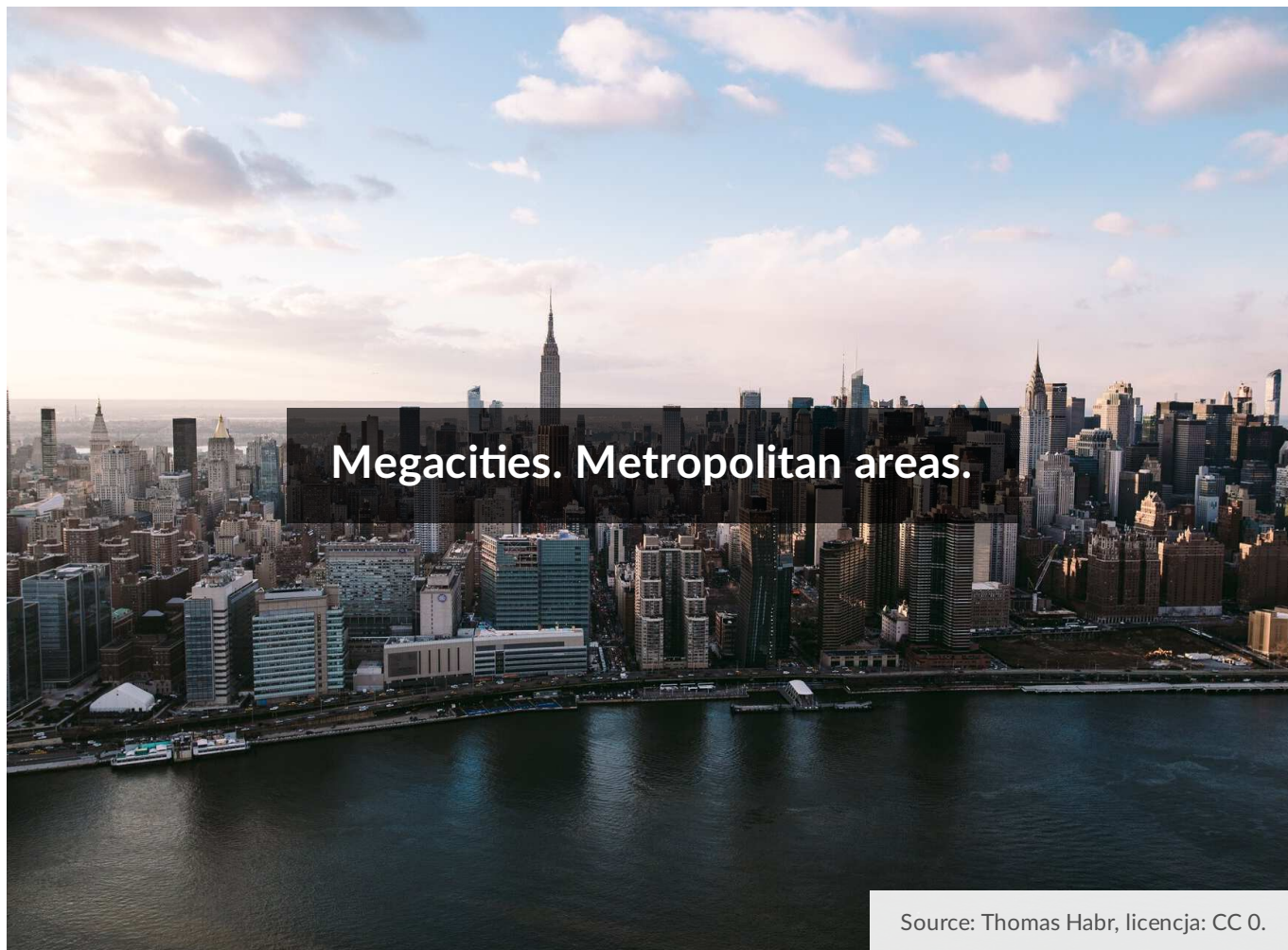
- Megacities. Metropolitan areas.
- Lesson plan (Polish)
- Lesson plan (English)

Megacities. Metropolitan areas.

Source: Thomas Habr, licencja: CC 0.

[Link to the lesson](#)

Before you start you should know

- what urbanisation is;
- that the rate of urbanisation varies between individual countries;
- that the urbanisation process varies in different parts of the world;
- that life in a city has both advantages and disadvantages.

You will learn

- you will explain why certain cities are referred to as megacities;
- you will name the most populous metropolitan areas in the world and identify them on the map;
- you will divide metropolitan areas by type and give examples;
- you will identify the largest megalopolis in the world on the map.

[Nagranie dostępne na portalu epodreczniki.pl](#)

Nagranie abstraktu

In certain countries, a minimum number of inhabitants is required before a given place can be recognised as a city. In Denmark, for example, 200 residents are sufficient, whereas in

India there must be a minimum of 20 thousand inhabitants.

Cities with a population of over 10 million inhabitants are called **megacities**. In 1950 there were only two – New York-Newark and Tokyo. In 1995 the number had risen to 14. There are currently more than 20, and in 2025 they are expected to exceed 30.

Data from 2014 is presented in the table.

Ranking	Country	Name	Population
1	Japan	Tokyo-Yokohama	37,239 million
2	Indonesia	Jakarta	26,746 million
3	South Korea	Seoul–Incheon	22,868 million
4	India	Delhi	22,826 million
5	China	Shanghai	21,766 million
6	The Phillipines	Manila	21,241 million
7	Pakistan	Karachi	20,877 million
8	The United States	New York	20,673 million
9	Brazil	São Paulo	20,568 million
10	Mexico	Mexico City	20,032 million
11	China	Beijing	18,241 million
12	China	Canton (Guangzhou)	17,681 million
13	India	Mumbai (Bombay)	17,307 million
14	Japan	Osaka-Kobe-Kyoto (Keihanshin)	17,175 million
15	Russia	Moscow	15,788 million

The chart shows that the majority of megacities are located in underdeveloped countries. It seems to be a paradox – the degree of urbanisation there is low, yet cities are growing to immense sizes.

There is a simple explanation for the apparent paradox. The low level of urbanisation in developing countries means that people who wish to move to a city have a limited choice. Migrating to a city is life-changing, which is why the metropolitan areas with the best development prospects are most frequently chosen. The choice usually falls on the country's capital, the largest city or a port city. Sometimes all of these criteria are fulfilled at once. This is why there is a mass influx of migrants to one urban centre, which, in a city with an already high natural increase, causes the population to rise dramatically. The population of Lagos, for example, has grown to 34 times its previous size over the course of 65 years.

A large percentage of city residents in developing countries have a low income, and some of them arrive in the city with no means of living. This is why they seek out areas of the city which are unappealing to others and attempt to live there. These areas could be, for example, floodplains by a river, the steep slopes of hills located in the suburbs or areas in very close proximity to the centre. As time goes on, these areas grow to the size of housing estates and districts. They are usually called **slums**, however in India they are known as **bustees**, and in Latin America **favelas**.

Life in these areas is not easy. Residents earn low incomes, if at all, meaning that houses are built with the cheapest materials available, hence their small size and low quality. Population density there is high. Since the areas are often occupied illegally, there is usually no water supply, sewers or power networks. There is a lack of state care and no one is responsible for safety, so crime flourishes. Diseases appear, caused by the lack of clean water and fires break out, etc.

The problems caused by the rapid urbanisation of cities in developing countries do not only affect residents with low incomes. City authorities usually cannot keep up with the development of infrastructure, which leads, for example, to an inefficient transport system or difficulties disposing of rubbish.

Metropolitan areas

An increasing population, the building of new industrial plants and the establishment of shopping centres causes cities to expand outwards – they occupy a larger and larger area. This causes neighbouring cities to converge, until consequently their suburban areas meet. Due to the ease of travelling between the cities, administrative authorities and companies begin to co-operate more closely, people commute to work, to school and to go shopping. This is how **metropolitan areas (agglomerations)** are formed.
If one of the cities in a metropolitan area is significantly larger, and is dominant in terms of population or its economy, we call it a monocentric agglomeration. Some examples are the Berlin and Moscow metropolitan areas, and in Poland, the Warsaw and Wrocław agglomerations.
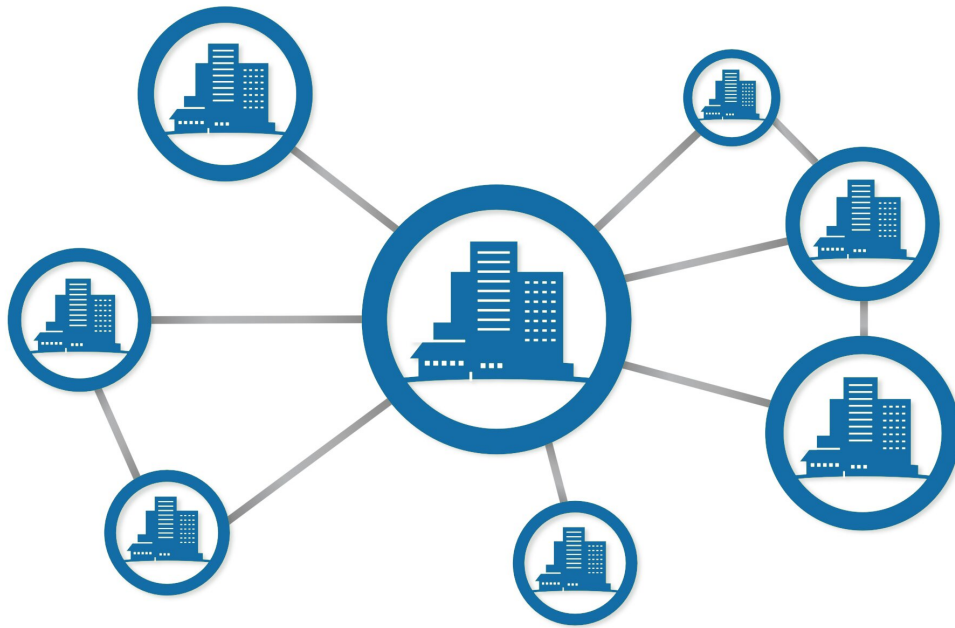
Diagram of monocentric agglomeration
Source: Olga Mikos, licencja: CC BY 3.0.

In certain cases, the neighbouring cities have developed at the same speed, due to, for example, vast deposits of raw materials. Then, the growth of each of them has contributed equally to the creation of the metropolitan area. Since none of the cities stands out, we call this a polycentric agglomeration (conurbation). Some examples are: the region in the West of Germany between Düsseldorf and Dortmund, called **the Ruhr district**, and in Poland, the area between Gliwice and Dąbrowa Górnicza (**the Upper Silesian metropolitan area**).
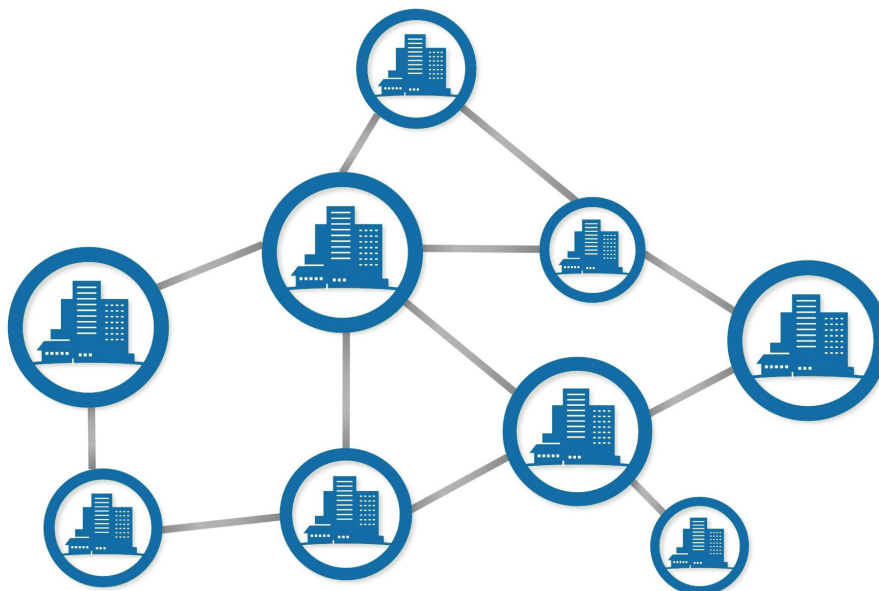

Diagram of polycentric agglomeration
Source: Olga Mikos, licencja: CC BY 3.0.

Task 1

Why are cities in developing countries more populous than those in highly developed countries?

Metropolitan areas which are especially large in terms of population and expanse have even been given their own name – megalopolis. A classic metropolitan area of this type is located on the East coast of the United States between Boston and Washington, occupying an area a little less than half of Poland, where around 45 million people live. Other examples of megalopolises are: the Japanese Pas Taiheiyō (83 million inhabitants), the British agglomeration encompassing London, Birmingham, Manchester and Liverpool (20.5 million inhabitants) as well as the Brazillian megalopolis which combines the São Paulo and Rio de Janeiro-Nova Iguaçu agglomerations (34.5 million inhabitants).

Exercise 1

Use the data available on the Internet to match the city to the population.

Chicago	20 673 million
London	2 705 million
Tokyo	13 754 043
New York	8 788 million
Delhi	22 826 million

Exercise 2

The largest cities in highly developed countries in the world are shown below. Identify the Nippon group of cities.

○ Cleveland, Kyoto, Kawasaki, Manchester, London

○ Baltimore, Kyoto Nagoya, Pittsburgh, Liverpool

○ Tokyo, Kawasaki, Nagoya, Osaka-Kobe, Yokohama

Determine the type of metropolitan area

| {image#Banan} | monocentric agglomeration |

| {image#Wiśnia} | polycentric agglomeration |

Exercise 3

Highlight the agglomerations from the following which are monocentric in green.

☐ green

the Warsaw metropolitan area

the Paris metropolitan area

the Ruhr district

the Cracow metropolitan area

the Upper Silesian metropolitan area

the London metropolitan area

Keywords

megalopolis, polycentric agglomeration, monocentric agglomeration, megacity, urbanisation

Glossary

polycentric agglomeration (conurbation)

Nagranie dostępne na portalu epodreczniki.pl

Nagranie słówka: polycentric agglomeration (conurbation)

---

aglomeracja policentryczna - zespół miejski bez wyraźnie dominującego ludnościowo lub ekonomicznie ośrodka

megalopolis

Nagranie dostępne na portalu epodreczniki.pl

Nagranie słówka: megalopolis

---

megalopolis - wielkoprzestrzenne układy osadnicze, powstające w wyniku łączenia się rozległych, peryferyjnych stref zabudowy jednorodzinnej i związanych z nią usług rozwijających się wokół aglomeracji i dużych miast. Potocznie tak nazywa się silnie zurbanizowany, powiązany funkcjonalnie i komunikacyjnie obszar dwóch lub więcej aglomeracji.

monocentric agglomeration

Nagranie dostępne na portalu epodreczniki.pl

Nagranie słówka: monocentric agglomeration

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aglomeracja monocentryczna - duże skupisko ludności, w którego centrum znajduje się ośrodek miejski, a naokoło są przyrośnięte miasta satelitarne, najczęściej pełniące funkcje dzielnic sypialnych lub przemysłowych.

Lesson plan (Polish)

Temat: Megamiasta. Zespoły miejskie.

Adresat

Uczeń klasy drugiej liceum ogólnokształcącego i technikum.

Podstawa programowa

VII Zróżnicowanie struktur społecznych i procesów urbanizacyjnych: struktury językowe i wykształcenia, kulturowe postrzeganie przestrzeni, zwartość socjoetniczna, fazy urbanizacji, procesy metropolizacji, typy fizjonomiczne i funkcje miast, formy zespołów miejskich.

Uczeń:

6) identyfikuje funkcje, typy fizjonomiczne miast i formy zespołów miejskich na świecie, wiąże typy fizjonomiczne miast z kręgami cywilizacyjnymi oraz poziomem rozwoju gospodarczego państw.

Ogólny cel kształcenia

Uczeń nauczy się wskazywać na mapie największe miasta świata oraz pozna typy zespołów miejskich.

Kompetencje kluczowe

- porozumiewanie się w językach obcych;
- kompetencje informatyczne;
- umiejętność uczenia się.

Kryteria sukcesu
Uczeń nauczy się:

- wyjaśnić dlaczego niektóre miasta nazywa się megamiastami;
- wymienić najliczniejsze zespoły miejskie świata oraz wskażesz je na mapie;
- dokonać podziału zespołów miejskich oraz wskażesz przykłady;
- wskazać na mapie świata największe megalopolis.

Metody/techniki kształcenia

- **podające**
  - pogadanka.
- **aktywizujące**

- dyskusja.
- **eksponujące**
    - pokaz.
- **programowane**
    - z użyciem komputera;
    - z użyciem e-podręcznika.
- **praktyczne**
    - ćwiczeń przedmiotowych.

Formy pracy

- praca indywidualna;
- praca w parach;
- praca w grupach;
- praca całego zespołu klasowego.

Środki dydaktyczne

- e-podręcznik;
- tablica interaktywna, tablety/komputery;
- Google Earth;
- mapa fizyczna Świata;
- atlasy geograficzne;
- rzutnik multimedialny.

Przebieg lekcji

Przed lekcją

- Uczniowie zapoznają się z treścią abstraktu. Przygotowują się do pracy na lekcji w taki sposób, żeby móc przeczytany materiał streścić własnymi słowami i samodzielnie rozwiązać zadania.

Faza wstępna

- Nauczyciel podaje uczniom temat i cele lekcji.

Faza realizacyjna

- Nauczyciel prosi uczniów o wyjaśnienie pojęcia megamasta. Uczniowie korzystają z podręcznika do nauczania geografii.
- Nauczyciel uruchamia program Google Earth i za pomocą zdjęć satelitarnych przedstawia miasta wielomilionowe Tokio, Nowy Jork, Paryż itp. Pogadanka.
- Nauczyciel wyświetla na tablicy interaktywnej tabelę z e-podręcznika Megamiasta. Uczniowie odczytują najbardziej zaludnione miasta świata i wskazują na mapie świata.

Spośród podanych miast wskazują miasta zaliczane do państw rozwijających się.

- Uczniowie zastanawiają się nad problemem: Dlaczego miasta w państwach rozwijających się są bardziej liczebne, niż w państwach wysokorozwiniętych? Uczniowie analizują pytanie w parch, następnie dzielą się swoimi wnioskami na forum.
- Nauczyciel dokonuje podziału zespołów miejskich na aglomeracje monocentryczną policentryczną i megalopolis. Uczniowie szukają w podręczniku wyjaśnienia pojęć. Wyjaśniają na forum klasy. Podają przykłady zespołów miejskich na świecie.
- Na ekranie nauczyciel wyświetla schemat z e-podręcznika: aglomerację monocentryczną i policentryczną. Uczniowie wskazują różnice.
- Uczniowie podają przykłady zespołów miejskich na świecie, posługują się różnymi materiałami źródłowymi: Internet, e-podręcznik, podręczniki do geografii. Określają nazwy miast wchodzących w skład zespołów miejskich, podają liczebność.
- Nauczyciel prosi uczniów, by w parach zastanowili się nad problemami, które wynikają z funkcjonowania wielkich miast. Giełda pomysłów. Każda para przedstawia przedyskutowane swoje przykładu, które zostają zapisane na mapie mentalnej.

Faza podsumowująca

- Uczniowie wykonują ćwiczenia interaktywne na tablicy multimedialnej, zawarte w e-podręczniku.
- Nauczyciel ocenia pracę uczniów, biorąc pod uwagę wkład i ich możliwości.

W tej lekcji zostaną użyte m.in. następujące pojęcia oraz nagrania

Pojęcia

polycentric agglomeration (conurbation)

Nagranie dostępne na portalu epodreczniki.pl

Nagranie słówka: polycentric agglomeration (conurbation)

---

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Nagranie słówka: megalopolis

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monocentric agglomeration

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Teksty i nagrania

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agglomeration encompassing London, Birmingham, Manchester and Liverpool (20.5 million inhabitants) as well as the Brazillian megalopolis which combines the São Paulo and Rio de Janeiro-Nova Iguaçu agglomerations (34.5 million inhabitants).

Lesson plan (English)

Topic: Megacities. Metropolitan areas.

Target group

Second class of a high school and a technical secondary school.

Core curriculum

VII. Diversification of social structures and urbanization processes: linguistic structures and education, cultural perception of space, socio-ethnical cohesion, urbanization phases, metropolization processes, physiognomic types and functions of cities, forms of urban complexes.

Student:

6) identifies the functions, physiognomic types of cities and forms of urban complexes in the world, links the physiognomic types of cities with civilization circles and the level of economic development of countries.

General aim of education

The student will map the largest cities in the world on the map and discuss the types of city teams.

Key competences

- communication in foreign languages;
- digital competence;
- learning to learn.

Criteria for success
The student will learn:

- explain why some cities are called megacities;
- list the largest urban complexes in the world and show them on the map;
- divide up urban teams and give examples;
- indicate the largest megalopolis on the world map.

Methods/techniques

- **expository**
    - talk.
- **activating**

- discussion.
- **exposing**
        - exposition.
- **programmed**
        - with computer;
        - with e-textbook.
- **practical**
        - exercices concerned.

Forms of work

- individual activity;
- activity in pairs;
- activity in groups;
- collective activity.

Teaching aids

- e-textbook;
- interactive whiteboard, tablets/computers;
- Google Earth;
- physical map of the World;
- geographical atlases;
- projector.

Lesson plan overview

Before classes

- Students get acquainted with the content of the abstract. They prepare to work on the lesson in such a way to be able to summarize the material read in their own words and solve the tasks themselves.

Introduction

- The teacher gives the pupils the topic and goals of the lesson.

Realization

- The teacher asks students to explain the concept of a megamast. Students use the geography teaching handbook.
- The teacher launches the Google Earth program and shows satellite cities of Tokyo, New York, Paris, etc. using satellite imagery. Talk.
- The teacher displays on the interactive whiteboard a table from the e-textbook Megacity. Students read the most populated cities of the world and point to the world

map. Among the given cities, cities belonging to developing countries are indicated.

- Pupils are reflecting on the problem: Why are cities in developing countries more numerous than in highly developed countries? Students analyze the question in a parch, then share their conclusions on the forum.
- The teacher divides the urban teams into monocentric polycentric agglomerations and megalopolis. Students look for explanations in the textbook. They explain on the class forum. They give examples of urban teams in the world.
- On the screen the teacher displays a diagram from the e-textbook: monocentric and polycentric agglomeration. Students indicate differences.
- Students give examples of urban teams in the world, they use various source materials: Internet, e-textbooks, geography textbooks. They determine the names of cities that are part of urban teams, they give numbers.
- The teacher asks students to think about the problems that arise from the functioning of big cities. Stock market ideas. Each pair presents the discussed example, which is saved on the mental map.

Summary

- Students perform interactive exercises on a multimedia board, included in the e-manual.
- The teacher assesses the students' work, taking into account the contribution and their possibilities.

The following terms and recordings will be used during this lesson

Terms

polycentric agglomeration (conurbation)

Nagranie dostępne na portalu epodreczniki.pl

Nagranie słówka: polycentric agglomeration (conurbation)

---

aglomeracja policentryczna - zespół miejski bez wyraźnie dominującego ludnościowo lub ekonomicznie ośrodka

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Nagranie słówka: megalopolis

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monocentric agglomeration

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Nagranie słówka: monocentric agglomeration

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Texts and recordings

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In certain cases, the neighbouring cities have developed at the same speed, due to, for example, vast deposits of raw materials. Then, the growth of each of them has contributed equally to the creation of the metropolitan area. Since none of the cities stands out, we call this a polycentric agglomeration (conurbation). Some examples are: the region in the West of Germany between Düsseldorf and Dortmund, called **the Ruhr district**, and in Poland, the area between Gliwice and Dąbrowa Górnicza (**the Upper Silesian metropolitan area**).

Metropolitan areas which are especially large in terms of population and expanse have even been given their own name – megalopolis. A classic metropolitan area of this type is located on the East coast of the United States between Boston and Washington, occupying

an area a little less than half of Poland, where around 45 million people live. Other examples of megalopolises are: the Japanese Pas Taiheiyō (83 million inhabitants), the British agglomeration encompassing London, Birmingham, Manchester and Liverpool (20.5 million inhabitants) as well as the Brazillian megalopolis which combines the São Paulo and Rio de Janeiro-Nova Iguaçu agglomerations (34.5 million inhabitants).