

## **GLOBAL WARMING AS A RESULT OF MEGALOPOLISES ACTIVITIES**

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Today more than half of the 7 billion people worldwide live in cities. By 2030, 5 billion people will have lived as urban dwellers on the planet. In recent years, the number of large cities - large urban agglomerations with a population of over 10 million people - has increased worldwide. The most populous metropolitan area in the world is Tokyo with 37.2 million inhabitants. It is followed by Delhi (22.7 million), Mexico City and New York (20.4 million each), Shanghai (20.2 million) and Sao Paulo (19.9 million). [1]

The purpose of the article is to draw attention to the influence of large cities on the problem of global warming and the search for an optimal way of solving this complicated situation.

Cities are engines for sustainable development and innovation centers. At the same time, rapid urbanization leads to urban overpopulation, pollution and an increase in greenhouse gas emissions.

Cities use most of the world's energy resources, and cause 70 percent of the greenhouse gas emissions that heat our planet. The high carbon footprint in urban areas is partly due to inefficient transport systems and poor thermal insulation in residential buildings, resulting in unnecessary energy losses. Many city offices are located far from residential areas, which mean their employees have to use cars, especially with poorly developed public transportation systems.

To solve all these problems, new urban planning and management strategies need to be developed. After all, it is mainly cities and citizens who are affected by the effects of global warming.

Moving to a new strategy for planning and developing cities with more bike lanes and pedestrian zones and green spaces will drastically reduce greenhouse gas emissions. Experts believe that future green cities shouldn't have buildings that use fossil fuels for lighting, heating and cooling.

UN experts call for the development of an urban infrastructure based on advanced technologies. For example, it is assumed that most new buildings will be built in Africa and Asia over the next 30 years. When planning, natural ventilation systems could be considered, which would make it possible to abandon expensive and environmentally harmful air conditioning systems or to reduce their use. [1]

In recent years, the cost of energy from renewable sources - solar and wind - has dropped significantly, which means that citizens are increasingly avoiding fossil fuels, including in the transport sector.

Transport causes a quarter of greenhouse gas emissions and a fifth of global energy. Moving to clean, low-carbon transportation by mid-century would save governments, businesses, and individuals a total of up to \$ 70 trillion. There are now over a billion

passenger cars worldwide, and by 2040 there will be at least two billion. This means that we need to find ways to further reducing of traffic emissions. [1]

By 2040, electric cars will make up 55 percent of all car sales, and globally, they will make up a third of the world's vehicle fleet. It is estimated that this will save 7.3 million barrels of transport fuel per day and prevent 250 million tons of CO<sub>2</sub> from entering the atmosphere by 2050. [2]

By 2050, the number of people in coastal cities threatened by cyclones and hurricanes will double by 2050. More than half of the cities are in earthquake-prone areas. Poor people have the slightest chance of escaping the aftermath of disasters. Therefore, the priority for sustainable development should make such cities more resilient to natural disasters.

As one of the measures to improve the lives of citizens, the United Nations is proposing to curb the spread of cities in their width, leading to the emergence of slums and illegal run-down buildings. Today around 880 million people live in such spontaneously created settlements.[1]

In general, big cities are the centers of humanity, but if their structure is not correct, they will destroy it.

#### **References:**

1. UN News - the United Nations URL: <https://news.un.org/en/> (дата звернення 20.03.2021)
2. Infographics URL: <https://unfccc.int/timeline/#infographics> (дата звернення 20.03.2021)

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