

Newsletter No.3

February 2022

TOGETHER NOW FOR THE FUTURE OF OUR
PLANET

BREATHE

AND

LET BREATHE



S.Trubina

J.Balčiráková

V.Kerechany



Funded by the
Erasmus+ Programme
of the European Union



Air Pollution

what is the reason for this occurrence

The main reason why this air pollution is caused is because of solid and liquid particles and certain gasses that are suspended in the air. These particles and gasses can come from car and truck exhaust, factories, dust, pollen, mold spores, volcanoes and wildfires. The solid and liquid particles in our air are called aerosols.

when does it happen

Air pollution happens when solid and liquid particles—called aerosols—and certain gasses end up in our air. These particles and gasses can be bad for the planet and for our health, so keeping track of them is important.



comparing CZ and another countries

The Czech Republic is one of the most polluted countries in Europe per capita. For example Sweden is in first place, ranks first in the least polluted countries. Compared to Luxembourg, the Czech Republic is mostly still doing well.



Funded by the
Erasmus+ Programme
of the European Union



The World Health Organization has established a health-based guideline for long term exposure to fine particulate matter of 10 µg/m³ (micrograms per cubic meter). The European Union has set an annual limit value for fine particulate matter of 25 µg/m³ under policies to deliver clean air in Europe. Based on the European Air Quality Viewer the air quality in Czech Republic is below average, with Prague ranking as 203 out of 323, with the best air quality in the South Bohemian and South Moravian regions.



Lucembursko		15,37
Estonsko		11,63
Česko		10,43
Holandsko		9,6
Německo		8,76
Irsko		8,68
Belgie		8,67
Kypr		7,97
Polsko		7,91
Dánsko		7,11
Slovinsko		7,09
Rakousko		6,95
Řecko		6,41
Finsko		5,95
Slovensko		5,57
Itálie		5,15



Funded by the
Erasmus+ Programme
of the European Union



Španělsko	■	4,94
Bulharsko	■	4,92
Maďarsko	■	4,59
Francie	■	4,5
Portugalsko	■	4,37
Lotyšsko	■	4,13
Litva	■	3,44
Malta	■	3,17
Chorvatsko	■	3,06
Rumunsko	■	2,6
Švédsko	■	-0,19



What will happen if the level of air pollution continues to increase?

Air pollution is one of the biggest problems in the world. India caused approximately 1.2 million deaths in 2017. Lancet Planetary Health has concluded that an unusually high rate of lower respiratory tract infections, heart disease, stroke, diabetes and lung cancer has caused one in eight deaths. but the question is? what it will look like in the future and what we can do for the next generation. I don't think we'll ever know, but we can do something about it. The impact on melting air pollution is more dangerous than we think. If air pollution is not controlled, by 2030 the air will become so toxic that it will be necessary to use an oxygen kit to breathe easily. Increasing air pollution will also lead to premature aging.



Erasmus+ Programme
of the European Union



resulting in polluted air

PM2.5 particles are considered the most dangerous - they can penetrate the lungs, affect the respiratory and cardiovascular systems of a person, including contributing to the development of respiratory and other diseases.

People who are exposed to these pollutants may suffer from eye, nose and throat irritation, heaviness in the chest, and difficulty breathing. For example, burning fossil fuels releases sulfur dioxide (SO₂) and nitrogen oxides into the atmosphere. When these compounds come into contact with water, oxygen and other substances, sulfuric and nitric acids are formed, which increase the acidity of rainfall. Another serious consequence of air pollution is the depletion of the ozone layer



composition

Air pollution is an enormous problem across the Czech Republic and around the world. It is also probably the most serious environmental problems today. The WHO Global Air Quality Guidelines (2021) provide an assessment of the health effects of air pollution and set recommended limit values for pollutants that pose health risks. The WHO Global Air Quality Guidelines provide global recommended limit values for air pollutants that pose a threat to public health. For example: PM - particle pollution.

Ozone-O₃ funded by the
Erasmus+ Programme
of the European Union



Sulfur dioxide - SO₂

Nitrogen dioxide - NO₂

what is the government doing to help

Immense funds were invested in emission reductions during the 1990s, resulting in a visible improvement in air quality. Emissions from the main pollutants dropped extensively in the Czech Republic between 1990 and 2013.

Czech legislation has established air quality objectives for both limit and target values for different pollutants. Limit values are concentrations that must not be exceeded in a given period of time. Public transport is widely available across the entire country, that's why the levels of pollution emanating from the transportation section has fallen steadily since 2007. The burning of waste in the open is illegal; therefore anyone can call the police to report any occurrence.

solution

The World Health Organization (WHO) emphasizes that effective ways to reduce air pollution exists. So, experts recommend, firstly, to abandon fossil fuels in favor of energy from renewable sources - the sun and wind.

Second, humanity needs to reduce and reuse waste.

Garbage that cannot be recycled must be disposed of in an environmentally friendly manner, such as being processed under anoxic conditions to be converted into biogas.

IS THE
ONLY HOME
WE HAVE



Funded by the
Erasmus+ Programme
of the European Union



resources

<https://zpravy.aktualne.cz/zahranici/jak-cesko-znecistuje-ovzdusi-srovnani-se-ze-memi-eu/r~f0c6988a913d11eb8335ac1f6b220ee8/>

<https://climatekids.nasa.gov/air-pollution/>

<https://www.kent.co.in/blog/what-will-happen-if-the-level-of-air-pollution-continues-to-increase/>

<https://www.eea.europa.eu/themes/air/urban-air-quality/european-city-air-quality-viewer>

<https://www.eea.europa.eu/soer/2010/countries/cz/air-pollution-why-care-czech-republic>

https://www.chmi.cz/files/portal/docs/tiskove_zpravy/2022/TZ_kvalita_ovzdusi_2021_MS_VN.pdf

<https://www.iqair.com/czech-republic>



Funded by the
Erasmus+ Programme
of the European Union

