

**UJEDINJEN BALKAN
ZA ČIST ZRAK
ОБЕДИНЕТ БАЛКАН
ЗА ЧИСТ ВОЗДУХ**

BALKANS UNITED FOR CLEAN AIR



**BALLKANI I BASHKUAR
PËR AJËR TË PASTËR
UJEDINJEN BALKAN
ZA ČIST VAZDUH**

IN THE WESTERN BALKANS, WE LIVE IN A POISONOUS CLOUD

Western Balkans has the worst air quality level in Europe – causing 13,500 premature deaths in the region every year. The harmful effects of the region’s obsolete coal-fired thermal power plants can be measured all the way to Egypt. Major health consequences are also caused by the use of fossil fuels in the industry, household heating boilers, agriculture and transportation. How can we start breathing again?

Is there another burning dumpster in the neighborhood? Not likely, because the unpleasant smell can be sensed for miles around. It is absorbed by hair and clothes and irritates the eyes. You can feel it in your mouth. Spots of haze seem to appear between the branches in tree crowns, though the line of trees across the road can't be seen clearly either.

Air pollution approaches its task in an absolutely democratic fashion – it endangers everyone. We can listen to the warnings and shut our windows, give up jogging and football and not let our children out. To a certain extent, we can protect ourselves at home using air purifiers. But there is no true escape.

The entire Western Balkans is equally affected, especially during heating season and when there is no wind to carry the poison elsewhere. Often times, we can see and sense this common enemy. It has made it abundantly clear that it is by no means shy. As the old saying teaches us, we need to know it well to defeat it, and it is high time for all of us to wage battle against pollution in this region.

There is no room for procrastination, and the coronavirus pandemic only worsens the situation. Consequences of air pollution can aggravate an infected person’s symptoms, but also render an organism more prone to infections, including COVID-19.

According to World Health Organization’s data, almost 13,500 people died in 2016 due to exposure to ambient air pollution in the Western Balkans: 3,051 in Bosnia and Herzegovina, 486 in Montenegro, 1,451 in North Macedonia, 6,592 in Serbia and 1,855 in Albania. The report contains no specific data on Kosovo.

WHO also determined that just exposure to airborne type PM2.5 solid particles emitted by coal-fired thermal power plants causes almost 9,500 premature deaths every year in the Western Balkans, out

of almost 13,500 deaths per year that occur because of the overall air pollution, most of the deceased being of working age.

A study published by HEAL, Sandbag, CAN Europe, CEE Bankwatch and Europe Beyond Coal has shown that 3,906 persons had prematurely died in 2016 due to air pollution produced just by coal-fired thermal power plants in the Western Balkans. In fact, the majority of those cases occurred outside of the region, in European Union member states.

According to the results of the 2019 research conducted by the United Nations Environment Programme (UNEP) only in 19 larger cities¹, not including Kosovo, direct exposure to polluted air prematurely claims the lives of almost 5,000 people every year.

States are not issuing consolidated data on the air pollution's economic consequences

State finances are under pressure, mainly because of the treatment costs and years of life lost. However, despite being one of the major cost items, air pollution-induced expenditures are not presented in consolidated form as part of the government budgets.

The aforementioned study specifies that coal-fired thermal power plants in the Western Balkans cause economic damages in the form of healthcare costs amounting to between €6.1 and €11.5 billion per year, more than half of which is borne by the EU. The Western Balkans account for a third of the total, while the consequences can be felt as far as Russia and Egypt. The money which is lost this way in a year or two in our region would suffice for the construction of solar power plants which could replace almost all of the existing coal-fired power plants.

On the other hand, calculating the suffering of people who become ill due to air pollution or whose condition worsens during episodes of extreme pollutant concentrations is beyond expert assessment. We also shouldn't exclude the consequences on their families and the companies in which they are employed. The most vulnerable groups include patients suffering from chronic diseases, children and the elderly.

One should also consider the fact that hazardous airborne substances and compounds propel climate change and that the bill in this department will be enormous, too – for instance, in the form of floods, droughts and epidemics.

Where pollutants come from

The permitted, i.e. tolerable concentration of air pollutants is often exceeded in this part of Southeast Europe. Unfavorable weather conditions can also be a negative contributor. The previously discussed particulate matter, also called fine particles, has the most harmful effect on humans.

These fine particles are mainly measured in categories of up to 2.5 micrometers (PM2.5) and up to ten micrometers (PM10), and their concentration is given in micrograms per cubic meter. Only special masks can somewhat protect us from their penetration into our lungs and further into the organism, since the particles are too small to be blocked by surgical and cotton masks. However, they penetrate the skin, too.

¹ Korčë, Banja Luka, Brod, Prijedor, Sarajevo, Tuzla, Zenica, Bar, Nikšić, Pljevlja, Podgorica, Tivat, Bitola, Skopje, Tetovo, Belgrade, Pančevo, Užice and Valjevo

Exposure to particulate matter is linked with a series of diseases, ranging from cardiovascular and respiratory illnesses, diabetes and dementia, infertility, leukemia in children and lung cancer. The smaller the particle, the deeper and easier will it penetrate the body.

The most commonly measured pollutants include ozone (O₃), nitrogen oxides (NO_x) carbon monoxide (CO) and sulfur dioxide (SO₂). In certain locations, there is also a presence of airborne heavy metals, which comes as a result of industrial processes and combustion. A specificity of sulfur dioxide is the fact that it reacts to form so-called secondary particulate matter in the atmosphere.

Coal-fired thermal power plants and the industry are among the main sources of sulfur dioxide emissions in the Western Balkans, whereas nitrogen oxide emissions stem predominantly from coal-fired thermal power plants and traffic pollution. In most countries in the region, SO₂, NO_x and PM emissions from large plants exceed the limit values defined by national plans for the reduction of emissions.

Of all the air pollutants, fine particulate matter is the biggest killer

In Bosnia and Herzegovina, limit values are exceeded in the case of PM₁₀, SO₂, O₃ and nitrogen dioxide (NO₂). Concentrations of PM₁₀, NO₂ and O₃ in Serbia and North Macedonia often exceed the maximum permitted values. Albania's population is highly exposed to nitrogen dioxide and ozone. There are no coal-fired thermal power plants in that country.

Of the 37 countries submitting reports to the European Environment Agency, eight have exceeded the maximum recommended level of exposure to PM_{2.5} during 2018. Five of those are Western Balkan countries (all Western Balkan countries except Montenegro, for which no data was available). The PM₁₀ daily limit value in Western Balkan cities was exceeded on 120-180 days a year – the proscribed limit being 35 days a year.

Citizens of Albania, Bosnia and Herzegovina, Montenegro, Kosovo, Serbia and North Macedonia suffer because of pollutants from power plant and heating plant chimneys, as well as factories using coal and oil products. Air is being poisoned by fossil fuel processing plants and obsolete household furnaces. Considerable pollution also comes as a result of construction and agricultural activities and traffic.

Apart from the fact that public health and the environment are jeopardized by fires at uncontrolled landfills, in recent years a part of the population have been increasingly burning plastic, rubber and discarded varnished and painted wood in their household furnaces. This is not necessarily out of lack of knowledge or a whim, but rather a manifestation of poverty – energy poverty, in this case. Furthermore, we are creating an increasing amount of waste, and the system has no adequate response, nor does it with regard to other air quality issues.

Pressure and association as means for getting clean air

What is left to be done then? First and foremost, institutions are responsible to the citizens. United Balkans for Clean Air joins the solidary, common struggle by citizens of every street, neighborhood, village and city in the Western Balkans to be able to breathe clean air. On a global level, coal is becoming an ugly memory. It is already more profitable to build solar power plants and wind farms than to maintain the majority of existing thermal power plants, even the newer ones. Equipment for the production of energy from renewable sources is becoming drastically cheaper. Companies which produce and use coal face increasing expenses for obtaining licenses to emit carbon dioxide and complying with environmental regulations. They are speeding up their plans to shut down or, at least, switch to other fuels.

Sixteen coal-fired thermal power plants in Western Balkan countries have emitted more sulfur dioxide in 2016 than all of the 250 plants in the EU combined

According to the data from the 2016 report published by HEAL and other organizations, sixteen coal-fired thermal power plants in the Western Balkans, which remains their number to this day, have emitted more sulfur dioxide (SO₂) than all of the 250 such plants operating in the European Union combined. According to the data gathered by Europe Beyond Coal, there are only 219 active coal-fired thermal power plants with capacity larger than 15 MW left in the EU and Great Britain. In the wider region which includes Turkey, only last year, investors have cancelled plans for the construction of nine plants and shut down or announced the shutting down of an additional 68.

It is almost certain that the few remaining projects will be halted, the question remaining what will happen with the ones in mid-construction. Almost half of EU members intend to completely phase out coal within ten years, and this number could easily increase. There are similar tendencies in Japan, China, and the United States. Meanwhile, Serbia and Bosnia and Herzegovina are still pushing their plans for new thermal power plants.

The dirty coal industry should not be financed with public money

One way or another, countries in the region spend enormous amounts of taxpayers' money on coalmines and the construction, maintenance and reconstruction of thermal power plants. As this sector is losing its market battle against renewable energy sources, it cannot survive without subsidies. It doesn't take a genius to conclude that these funds could be used in a more sensible way.

The pollution monitoring station system still fails to comply with all the necessary criteria. Here, too, there is room for citizens' involvement. Numerous small household appliances for measuring air quality are networked via popular apps, thus controlling the at times unreliable official data on air pollution.

In North Macedonia, there are already incentives to replace fossil fuel heating appliances in households with cleaner solutions, which could be a positive example for the other countries in the region, as well. There are modest improvements elsewhere in the Western Balkans, especially concerning the construction of heating plants that use renewable energy sources. Biomass plants are emerging all over Serbia and Bosnia and Herzegovina, and the entire region is witnessing an increased usage of geothermal pumps for heating and cooling.

The Balkans' energy transition can only be achieved by joining forces

Eliminating the use of coal is the most important factor for the improvement of air quality

The states in the region should be well aware of the fact that there is no future with obsolete thermal power plants and that an accelerated transition to solar and wind energy is the only choice. Since it depends on weather conditions, the functioning of such a system requires the connection of the Western Balkan countries' power grids and the construction of electricity storage facilities. These are the most important measures to reduce air pollution. However, serious progress is also predicated on stricter air quality control standards and the improvement and strict implementation of regulations concerning polluters – both in case of state-owned thermal power plants and those under private ownership.

In November last year, all six countries in our region have signed the Sofia Declaration, thus committing to the Green Agenda for the Western Balkans and to following the EU's policies and the European Green Deal. The latter envisions achieving climate neutrality by 2050. Regional cooperation is a path

towards improving air quality, as is technological advancement and raising economic competitiveness, with the possibility of ambitions reaching beyond the goals defined in the document.

The Green Agenda for the region implies regulating the cross-border impact of air pollution, adopting strategies for the improvement of air quality and raising the capacity of measuring systems. EU leaders have hinted that access to non-refundable funds and cheap loans will not be possible if the objectives are not being fulfilled.

The process of installing renewable energy production devices in households should be made easier for citizens. Furthermore, energy efficiency projects in the field of building design and construction, as well as incentives and tax breaks, could significantly decrease energy consumption.

All this so that the air becomes transparent and odorless again, except for the smell of nature. Tasteless, too! Let there be real fog again, instead of smog and dust clouds.

