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Kosovo, Air and Land Pollution

## **Fighting Air Pollution with Biking in Kosovo**

### **Kosovo: a Young Country with Potential**

Kosovo is a small country located in Southeastern Europe facing big problems. Its total area is 10,887 sq. kilometers, and its population is 1,907,592 people. More than 70% of the people are under the age of 35, which makes it the youngest country in Europe by age. It is also the newest country in Europe, having declared independence from Serbia in 2008. The total Gross Domestic Product annually is \$7.192 billion and the Gross Domestic Product per Capita is \$3,893. The Unemployment Rate in Kosovo increased to 57.3% last year (CIA). Around 56% of Kosovo’s land is agricultural, and more than 62% of Kosovo's population lives in rural areas. Additionally, Kosovo has unfavorable farm structures, with an average Utilized Agricultural Area (UAA) per holding of 1.5 ha, usually fragmented into seven plots. This means that most of the crop farms are too small to turn a profit, and are not performing efficiently despite the huge potential for technical efficiency improvement (Muriqi, Fekete-Farkas and Baranyai 2019).

The newest country in Europe is experiencing air pollution levels worse than Beijing, China, and it’s getting worse day by day. The electricity in Kosovo comes mainly from the two coal-fired power plants which are located near the capital city Prishtina. These plants have been called the “worst single point source of pollution in Europe” (Plesch 2018). Because of the political and economic situation, changes to the power plants can not be done by the government

and the ordinary people. But if we can not do anything about these power plants, maybe we can find other solutions to reduce the air pollution. I believe that the government, non-governmental organizations, businesses, and citizens of Kosovo should all work together to encourage people to cycle, because cycling is a cost-effective and achievable way to reduce air pollution, improve the health of citizens and it's safer.

### **Air and Land Pollution in Kosovo**

The air quality in Kosovo fatally affects the lives of Kosovars everyday and that should not be acceptable. Cities and urban areas are the most dangerous places to breath in Kosovo. Several times during the winter months, the air pollution levels in Prishtina exceed livable standards outdoors (Ramadani 2019). Firewood and coal are the main fuels used for heating in cold weather, which release smoke over the cities and towns and end up becoming smog (Plesch 2018). Hospitalization, illness and death by cancer, pulmonary and respiratory diseases are being caused by the prevalence of air pollutants in these cities. In the area which includes Prishtina Obilic, Vushtrri and Mitrovica, one of the country's most densely populated areas, air pollution levels exceed the limits set by Europe (Krasniqi 2015).

In a study done mainly by scientists from the National Institute of Public Health of Kosovo, they've found out that the particulate matter floating around in the air of Kosovo can cause cardiovascular diseases in pretty big numbers. Particulate matter, or PM, is a pollutant that can be found everywhere in the world. Several epidemiological studies confirm that exposure to fine particulate matter PM 2.5 increases the risk for strokes, arrhythmia and heart failure. The EC (Europe Commission) limit value of an average annual concentration is 40 micrograms per cubic meter ( $\mu\text{g}/\text{m}^3$ ) for PM<sub>10</sub>. However, in Prishtina the one day limit value (35 times per year) both

in city and suburban areas often exceeds the acceptable limit 50 ( $\mu\text{g}/\text{m}^3$ ), showed in the air quality data by KHMI ( Kosovo Hydro-meteorological Institute) (Ukëhaxhaj et. al. 2013).

The industrial facilities in Kosovo not only pollute the air that we breath but also contaminate the land, which also pollutes the food that grows into these lands. Within 25 kilometers of Mitrovica, an urban center in Kosovo, soil and plant tests have shown that farmlands are contaminated with lead, zinc, mercury and cadmium. The area is unsuitable for agriculture because of the health impacts from the Trepca smelting plant and the coal power plants in Obiliq. The World Bank is not entirely sure, but does suggest that there is a chance that the lack of agricultural development may be related to air pollution (World Bank 49). The water in Kosovo is also getting contaminated, from the dumping of untreated waste disposal, from air polluters such as the KEK power plants, and from the Trepca mines releasing heavy metals (Krasniqi). And also as a citizen of Kosovo I have seen that many of the local farmers use old equipment and machinery in agriculture. Many of them still have tractors from Yugoslavian times, which release higher levels of exhaust emissions because they are from times when emissions standards were not so good.

### **Biking, a Solution both Smart and Efficient**

The best solution for Kosovo would be to get rid of the power plants and mines since they are the main polluters in the country. However, the country tried to cut down using coal but it did not work. For example, last winter Kosovo's Ministry of Environment tried to reduce the air pollution by banning the use of coal in public buildings. This decision followed up with banning coal use in schools. But according to Prishtina Insight, replacing coal with wood is costly and unsustainable (Travers 2018). Other big countries that are economically stable and powerful have been able to cut down their main polluters such as coal plants, mines and smelters.

But that would not work for Kosovo, because those power plants are basically the only power source, and Kosovo is not in the position economically to build another power plant which would meet the requirements of The World Bank. Based on these factors, I don't think that there can be any major change in Kosovo to reduce air pollution at least for now. Looking at other countries in the world, I've found a successful solution: cycling.

Both China and Kosovo are struggling with air pollution, but China has taken some good steps to reduce the problem which seem to be working. A city in China, Hangzhou, started a system in 2008 where everyone share bikes. The goal of this initiative was to provide citizens with new public transportation. But unexpectedly, Hangzhou was surprised with two positive benefits: fewer vehicles on the road and reduced air pollution. The general manager of the Hangzhou Public Bicycle Service Tao Xejun, says "this healthy transport has made our city better and its air quality is good" (UN Environment). And even in the most polluted cities in the world, like Prishtina, you could still cycle everyday. Dr Audrey de Nazelle says "the good news is that across the world, in 99% of cities it is safe to cycle up to two hours a day." In Delhi, one of the most polluted cities in the world, you would need to bike for over 5 hours per week before pollution would outweigh the health benefits (Boseley 2016).

I think that the Kosovar government should adopt a nationwide bike project like in Hangzhou and London. The city of London has a good plan to raise the number of bike users, by making an investment in bike roads. These roads would be wide enough to deal with a higher capacity of bikers, they would be only for bikers, and the city of London would cover the expenses of building them (London). Kosovo is a mountainous and a beautiful place, so what I think the government should do is to build routes in a way that would make cycling attractive to citizens by building these routes through nature. And, the study suggests that if 15% of the

citizens in London use bikes for their journeys, NOx known as the biggest air pollutant from vehicles would fall by 30% in the city (32). Which means that if Kosovo were to apply this bike project there would be significant improvement in air quality in the country.

This could have a significant impact on soil quality in the country. More bikes on the roads mean less cars, which means less emissions. Less emissions would lead to less contamination of the soil and water, which would lead to greater crop yields. It may not seem that way, but biking could really lead to improvements in the quality of crops in Kosovo.

As for the bikes, I think that the government should buy a bunch of bikes according to the Hangzhou initiative, which citizens would be able to share for a low price. Kosovo is very rich with coal, in fact it “has the world’s fifth largest reserve of brown coal” (Plesch). I think that the government should sell the coal and use the funds that come from this for the bike project. By mining out this coal, we would cause air pollution in the short term. But we would use these funds for something that would show a positive effect on air pollution in the long term.

### **Conclusion**

As I wrote earlier in the paper, for any major solution to be done in Kosovo, a lot of money would be needed. So I really think that this is a great opportunity for Kosovo, because it is cheap and efficient. Plus by doing so the health of citizens would be improved. Kosovo has the opportunity to prove that it is a country who actually cares and is willing to fight this global problem of air pollution.

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