



Republic of Kosovo
Republika e Kosovës - Republika Kosova

Municipality of Prishtina
Komuna e Prishtinës - Opština Priština



**THE REPORT OF AIR QUALITY IN THE
MUNICIPALITY OF PRISHTINA**
for April, 2016

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The purpose of Pilot Project

Municipality of Pristina, through the Pilot Project for the Measurement of Air Quality, aims to enable the collection, update and process of the results of automatic monitoring of the air quality in real time, to inform citizens about the current state of air quality through 10 measurement parameters as well as to offer an evaluation of the measures that must be undertaken to increase the level of air quality.

Legal Basis – Own competencies of the Municipality in the protection of local environment according to the Law No. 03/L-04 for Local Self-Government; Law on Protection of Air Pollution No. 03/L-160, U.A No.15/2010 about network expansion and U.A. No. 02/2011 for the norms applied for the air quality monitoring.

Measurement Parameters	Measurement Unit
Temperature	(°C)
Carbon Monoxide (CO)	(mg/m3)
Ammonium (NH3)	(mg/m3)
Hydrogen Sulfide (H2S)	(ug/m3)
Sulphur Dioxide (SO2)	(ug/m3)
Nitrogen Dioxide (NO2)	(ug/m3)
Carbon Dioxide * (CO2)	(ppm)
Radiation	(uSv/h)
Dust 2.5M/Year	(ug/m3)
Noises	(db)

- *CO2 (Carbon Dioxide) is not foreseen to be measured according to the Law and Regulations for air protection, because it's the basic ingredient of air. This is the parameter that affects in one way or another (global warming) and the sensors that are located by the Municipality of Pristina are able to make this measurement. Despite that we have continued to make measurements of Carbon Dioxide, we are aware that this pollutant is measured at the source (e.g. vehicles technical control, gas release in chimneys etc.) because of the reason that its release is mainly done by burning of fuels. Municipality of Pristina is interested to continue with the measurement of this pollutant in order to encourage greater network expansion of city heating with the cogeneration project.*

Through this Pilot Project, Municipality of Pristina does not have intention of taking the role of MESP or Agencies for Environmental Protection, but only to show the air quality with the desire to increase citizens' awareness for environmental protection as well as impact on improving the air quality through concrete measures (projects) of the Municipality of Pristina in cooperation with MESP and Environmental Protection Agency.

Last year in December, in Paris, Municipality of Pristina participated and signed the declaration at the International Conference for policies in fighting climate change (COP 21), therefore this Pilot Project is supported by this declaration and "Compact of Mayors" coalition, where 400 cities have committed for concrete actions in this direction, including the city of Pristina.

The choice of locations and focus

The main focus is centered on these three objectives:

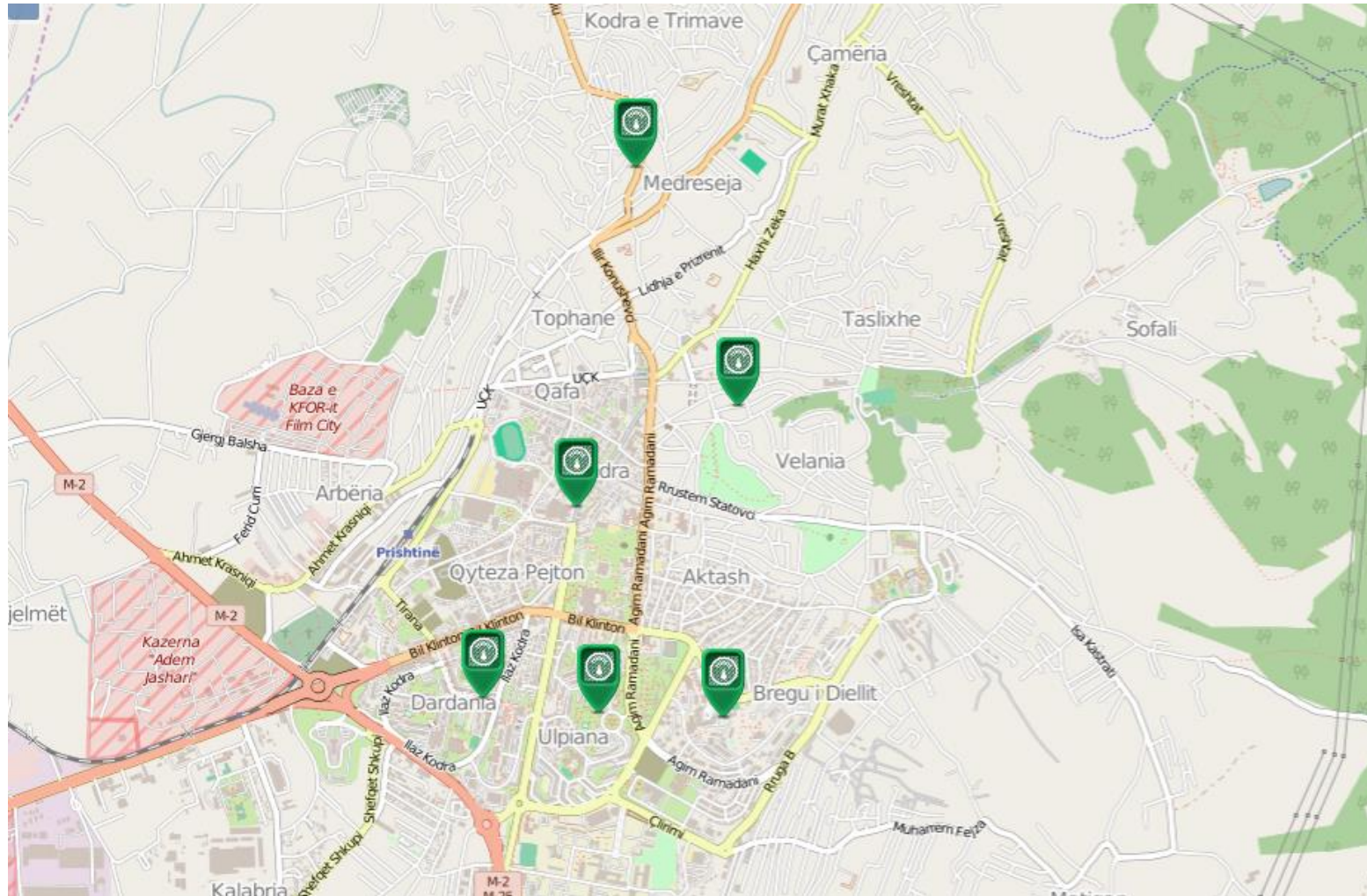
- Measurement of air quality in busy roads
- Measurement of air quality within neighborhoods
- Movement of pollution from sources in other countries

The choice of locations was made by referring to abovementioned criteria and objectives of the project. From six monitoring equipment, four of them are located within neighborhoods while the other two are located in busy streets. With this, it is assumed to achieve results which will present the condition of air quality in the main streets and how they can change within the neighborhoods.

A total of six (6) sensors are located for the measurement of air pollution in the following neighborhoods of Pristina:

1. Sunny Hill - St. Enver Maloku
2. Ulpiana - St. Mujë Krasniqi
3. Kodra e Trimave - St. Vëllazërit Fazliu
4. Dodona - St. Afrim Loxha
5. Dardania - St. Ilaz Kodra
6. Center - "Zahir Pajaziti" Square

Graphical presentation of locations



Pristina, May 2016

More detailed information according to neighborhoods:

	Capital neighborhoods where the sensors are located					
	Sunny Hill St. Enver Maloku	Ulpiana St. Mujë Krasniqi	Kodra e Trimave St. Vëllazërit Fazliu	Dodona St. Afrim Loxha	Dardania St. Ilaz Kodra	Center Zahir Pajaziti Square
The importance of the street	Direct connectivity (City center-Street B)	Direct connectivity (Fountain-City center)	Direct connectivity (Besiane-Pristina)	Connectivity (City park - Velani)	Direct connectivity (Termokos-Tunell/Kurriz)	Street closed for traffic
Load (average 12:00;15:00;17:00/h)	22 cars/minute	9 cars/minute	28 cars/minute	5 cars /minute	13 cars/minute	0
Permanent source of pollution	Houses, Flats, inst. School, Wastes	Buildings, Wastes	Houses, Agriculture	Houses, Wates	Buildings, Wastes	Buildings, Wastes
Temporary source of pollution	Vehicles, Public Transport	Vehicles	Vehicles, Public Transport, Goods	Vehicles	Vehicles	
Wind movement	Open movement (mainly North-North-West)	Open movement (mainly North-West-East)	Open movement (mainly North-South)	Open movement (all directions)	Open movement (mainly North-South)	Open movement (all directions)
Altitude	653 m	608 m	677 m	604 m	574 m	589 m
Latitude	42.651262	42.65145	42.674668	42.664508	42.652057	42.660219
Longitude	21.169382	21.162224	21.164352	21.170236	21.155515	21.160941

THE REPORT OF AIR QUALITY IN THE MUNICIPALITY OF PRISHTINA

for April - 2016

In this report, the condition of air quality in the Municipality of Pristina is reflected. These measurements are realized from six (6) stations which are located in different parts of the city, as described above. Calculations of values are as a result of daily measurements which are performed and interpreted by the sensors in a digital way.

The data interpretation is three times a day in the online system, where as a result a daily average is drawn out which includes morning, midday and evening measurements.

In the following table, the average results of air quality measurements are presented for 10 parameters in six neighborhoods of Pristina.

Measurement Parameters	Measurement Unit	Sunny Hill	Dodona	Dardania	Ulpiane	Center (square)	Kodra e Trimave	Allowed level according to the EU
Temperature	(°C)	18.22	18.22	18.22	18.22	18.22	18.22	
Carbon Monoxide	(mg/m3)	0.13	1.58	7.01	1.59	2.36	1.19	10
Ammonium	(mg/m3)	0.08	0.49	0.65	0.49	0.07	0.27	14
Hydrogen Sulfide	(ug/m3)	13.92	144.59	176.61	105.84	144.12	152.63	150
Sulphur Dioxide	(ug/m3)	5.34	158.13	289.19	212.54	62.12	83.17	350
Nitrogen Dioxide	(ug/m3)	9.16	54.8	164.87	103.82	62.42	72.87	200
Carbon Dioxide	(ppm)	402.13	401.16	402.36	400.13	403.12	401.17	500
Radiation	(uSv/h)	0.06	0.20	0.10	0.21	0.18	0.07	10
The Dust 2.5M/Year	(ug/m3)	13.15	10.13	11.69	12.1	10.7	11.3	25
Noises	(db)	57.9	61.5	59.45	60.13	59.7	58.19	85

¹EU (European Union)

Evaluations and assumptions

Based on the above table, we can conclude that the results of measurements for April are not tragic, but nevertheless disturbing. Excesses of pollution are presented only in two cases (in Dardani and Kodrën e Trimave with Hydrogen Sulfide), whereas the city

Center and Dodona neighborhood are within the limit of pollution with the same pollutants.

Comparing the air pollution to neighborhoods, it is noticed that Dardania neighborhood is more polluted, while Sunny Hill neighborhood is cleaner. Differences in air pollution are minor between neighborhoods.

The results from the report indicate that Dardania is mainly threatened by the growth of Hydrogen Sulfide (H₂S), Sulfur Dioxide (SO₂), Oxides of Nitrogen and noise. All these parameters still do not exceed the allowed limits, but tend to increase.

In the Dardania neighborhood, as the main causers of air pollution are supposed to be burned fuel or road transport (Dardania represents one of the entrances in the most frequented city by other Municipalities, and also serves as a transit neighborhood).

Sunny Hill neighborhood is polluted by dust particles but still within the allowed limits, as a result of vehicle traffic of material transportation and inert waste from numerous sites in Mati neighborhood. One of the protective measures is evaluated to be the control of this transport.

Dodona neighborhood has a higher level of noise, as a cause of road transport but also as a result of lack of green areas.

Recommendations

In order to influence in increasing the level of air quality in the Municipality of Pristina, the following measures are recommended:

1. Decrease the number of vehicles by promoting public transport against private
2. Road network management
3. Improvement of public transportation
4. Promoting clean technologies
5. Promoting cycling
6. The growth of green surfaces
7. Quality control of fuels
8. Businesses that use fuels are controlled and obligated to be equipped with LKM (ventilation improvement and quality of fuel).

Conclusion

This is the first report after the implementation of the Pilot Project for air pollution measurement in the Municipality of Pristina. We will have reports of this kind in the future, but those reports will be based on quarterly results. The next report is foreseen to be published in July of this year for the second quarter (April, May and June). Reports will also be considered and discussed MESP, Environmental Protection Agency and IHMK.

Expansion of the sensors network in other neighborhoods of Pristina is foreseen after the completion of the pilot phase of this project (in 2007). Each report will be published on the websites of the Municipality of Pristina (<https://kk.rks-gov.net/prishtina/>) and (<http://prishtinaonline.com/>)