

Annual Report
State on the Environment in Kosovo



MINISTRY OF ENVIRONMENT AND SPATIAL PLANNING
KOSOVO ENVIRONMENTAL PROTECTION AGENCY

AMMK

Republika e Kosovës
Republika Kosova-Republic of Kosovo

Qeveria - Vlada - Government

MINISTRIA E MJEDISIT DHE PLANIFIKIMIT HAPËSINOR
MINISTARSTVO SREDINE I PROSTORNOG PLANIRANJA
MINISTRY OF ENVIRONMENT AND SPATIAL PLANNING

AGJENCIA PËR MBROJTJEN MJEDISIT TE KOSOVËS | E KOSOVSKA AGENCIJA ZA ZAŠTITU SREDINE | KOSOVO ENVIRONMENTAL PROTECTION AGENCY

AMMK

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Pristina, 2017

Abbreviations

ADA	Austrian Development Agency
ALPS	Agricultural Land Pollution Survey
AO	Administrative Instruction
BOE	Biochemical Oxygen Exhausting
CCS	Climate Change Strategy
CLC	Land Coverage by CORINE Methodology
ECRAN	Environment and Climate Regional Accession Network
EFAS	European Flood Awarenes System
EO	Economic Operator
EU	European Union
GHG	GreenHouse Gases
GIZ	German International Development Agency
IHMK	Hydrometeorological Institute of Kosovo
IPA	Instrument for Pre-Accessopn
IUCN	International Union for Conservation of Nature
KAS	Kosovo Agency of Statistics
KEAP	Kosovo Environmental Action Plan
KEK	Kosovo Energy Corporation
KEPA	Kosovo Environmental Protection Agency
KINP	Kosovo Institute for Nature Protection
KLMC	Kosovo Landfill Management Company
KTOE	Kilo Ton Oil Equivalent
KUR	Regional Water Company
LEAP	Local Environmental Action Plan
MAFRD	Ministry of Agriculture, Forestry and Rural Development
MED	Ministry for Economic Development
MESP	Ministry of Environment and Spatial Planning
MF	Ministriy of Finance
MIE	Ministry for European Integration
MTI	Ministry of Trade and Industry
NC	Nature Conservancy
NGO	Non-Governmental Organisation
NIPH	National Institute for Public Health
NM	Nature Monuments
NP	National Park
PP	Powerplant
PPA	Powerplant A
PPB	Powerplant B
REC	Regional Environmental Center
RWMC	Regional Waste Management Company
SIDA	Swedish International Development Agency
UNDP	United Nations Development Programe
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
WHO	World Health Organisation
WSRO	Water Services Regulatory Office

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1. Introduction

Drafting of the Report on the State of Environment in Kosovo is based on the Law on Environmental Protection. Pursuant to Article 25 of this Law, the Government of Kosovo, upon the proposal of the Ministry of Environment and Spatial Planning, submits to the Assembly the Report on the State of the Environment. The report should contain information on:

- the state of the environment and changes in the environment compared to the previous report,
- environmental impacts on the health of the population,
- the situation of endangered environments,
- implementation of the Environmental Strategy, Action Plan,
- measures taken to protect the environment,
- utilization of natural resources,
- development of environmental institutions and
- financing of the environmental protection system.

In accordance with the duties and responsibilities of governmental institutions, the Kosovo Environmental Protection Agency is the institution that drafts this document. This Annual Report presents the state of the environment for 2015, but also previous data occupy a considerable place for comparison purposes.

For drafting the report, AMKK has collected environmental data from monitoring institutions, companies, operators, various companies, publications, reports and from other sources. The collected data are processed on qualitative environmental information that is now presented in this report. These data are in text, charts, charts, and graphical form.

Despite the maximum commitment, this report also has shortcomings, which are primarily due to the lack of data on many important issues, the lack of integrated environmental monitoring, legal basis and other institutional and management weaknesses.

It should be acknowledged that the quality of reporting depends on the quality of monitoring implemented at national level and the level of organization of the environmental information system. Given that these two environmental systems within us are not organized at the right level, we can conclude that the lack of complete data and their reliability is an important indicator of the state of the environment in Kosovo.

The purpose of this report is, first of all, to inform about the state of the environment in Kosovo but its data are a good basis for building adequate environmental policies and for orienting strategic development, planning and investment in sectors that Have an impact on the environment such as: economy, industry, energy, transport, agriculture etc.

We appreciate, appreciate and welcome all the commitments, remarks and suggestions of the institutions, experts and environmentalists who will help us in drafting future publications for enhancing their quality and credibility.

2. The state of the environment and changes compared to the previous report

2.1. Air

Air quality in this report reflects the situation for the territory of Kosovo based on measurements from continual air quality monitoring stations. The source of data is mainly monthly reports, which present data recorded from stations under the management of IHMK.
Two of the stations located in Prishtinë / Priština are representative of the quality of the air on the urban background (Rilindja) and the suburban background (IHMK), while the other 6 stations located in Mitrovica, Drenas, Peja, Prizren, Hani i Elezit, Gjilan are representative for the quality of air on the urban background and the station located in Brezovica is for the rural background. While 3 industrial background stations are located in the KEK area (Dardhishtë, Palaj and Obiliq). (Table 1)

Table 1 . Air quality monitoring stations

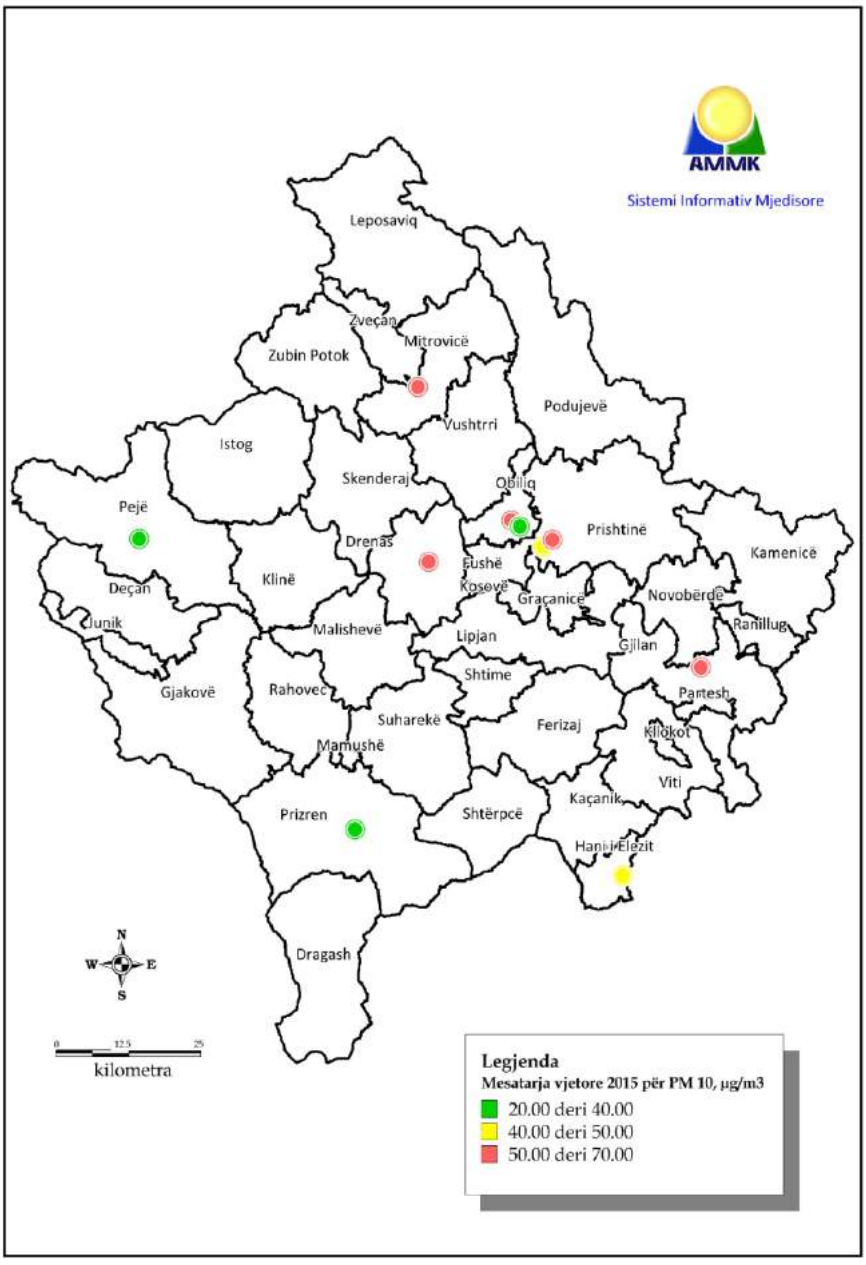
Nr.	Name of the monitoring station	Code of the station	Location	Responsible authority	Measured parameters	Type of the area
1	IHMK	KS0101	IHMK,Prishtinë	IHMK	PM10,PM2.5,SO_2, NO_x,O_3,CO	Urban
2	Rilindja	KS0102	Backyard of Rilindja, Prishtinë	IHMK	PM10,PM2.5,03	Urban
3	Pejë	KS0305	Primary School "Lidhja e Prizrenit"	IHMK	PM10,PM2.5,SO_2, NO_x,O_3,CO	Urban
4	Prizren	KS0406	Municipal building	IHMK	PM10,PM2.5,SO_2,	Urban
5	Brezovicë	KS0507	Skiing area	IHMK	PM10,PM2.5,	Urban
6	Hani i Elezit	KS0508	Primary School "Ilaz Hallaqi"	IHMK	PM10,PM2.5,SO_2,NO_x, O_3,CO	Urban
7	Gjilan	KS0609	Municipal building	IHMK	PM10,PM2.5,SO_2,NO_x, O_3,CO	Urban
8	Drenas	KS0103	Municipal building	IHMK	PM10,PM2.5 ,SO_2,NO_x,CO	Urban
9	Obiliq	KS0110	Family Health Centre	IHMK	PM10,PM2.5,SO_2,NO_x, O_3,CO	Urban
10	Dardhishtë	KS0111	Primary school	IHMK	PM10,PM2.5,SO_2,NO_x, O_3,CO	Industrial
11	Palaj	KS0112	Kosova Mont	IHMK	PM10,PM2.5,SO_2,NO_x, O_3,CO	Industrial
12	Mitrovicë	KS0204	Meteorology station	IHMK	CO,O_3,PM10,PM2.5	Urban

The report includes the average monthly values from the results of the air quality monitoring system at the national grid stations. It should be noted that there were no continuous data from some monitoring stations and this makes it difficult to estimate the overall condition of the air. This fact and other deficiencies are not subject to review of this report, so the data that were available was analyzed. The air quality standards based on which the assessment was made are based on the Administrative Instruction No. 02/2011, (Table 2).

Table 2. Air quality standards according to the Administrative Instruction No.02/2011.

Parameters	**Limit values**	**Units of measure**	**Limit values µg/m³**	**Rate of allowed exceedance in a year**
NO2	Limit value for 1 hour for the protection of human health	µg/m³	200	18
	Annual limit value for the protection of human health	µg/m³	40	Not foreseen
	Annual limit value for the protection of vegetation	µg/m³	30	Not foreseen
SO2	Limit value for 1 hour for the protection of human health	µg/m³	350	24
	Limit value for 24 hours for the protection of human health	µg/m³	125	3
CO	Limit value for the 8-hour daily average for the protection of human health	mg/m³	10	Not foreseen
PM10	Limit value for 24 hours for the protection of human health	µg/m³	50	35
	Annual limit value for the protection of vegetation	µg/m³	40	Not foreseen
PM2.5	Annual limit value for the protection of vegetation	µg/m³	25	Not foreseen
O3	Long-term objective for the protection of human health	µg/m³	120	Not foreseen
	Information threshold	µg/m³	180	Not foreseen
	Alarm threshold	µg/m³	240	Not foreseen

According to the measurements carried out by 2015 air network monitoring stations, significant pollution is observed from dust in the form of PM10 and PM2.5, while other parameters do not exceed the Maximum Allowed Value (VML).
Different results we have in the monitoring stations in Obiliq with 90 days of VML exceed, Gjilan with 75, Pristina-IHMK with 74, Pristina-Rilindja with 66, Drenas with 61 and Hani i Elezit with 45 days of exceed, as well as 35 days allowed According to Administrative Instruction No.02 / 2011, for air quality norms (see map and figures 1 and 2).
No other exceedances have been recorded for the other parameters (figure 3, 4, 5 and 6).



Map of air quality index (PM10 annual averages, according to monitoring stations)

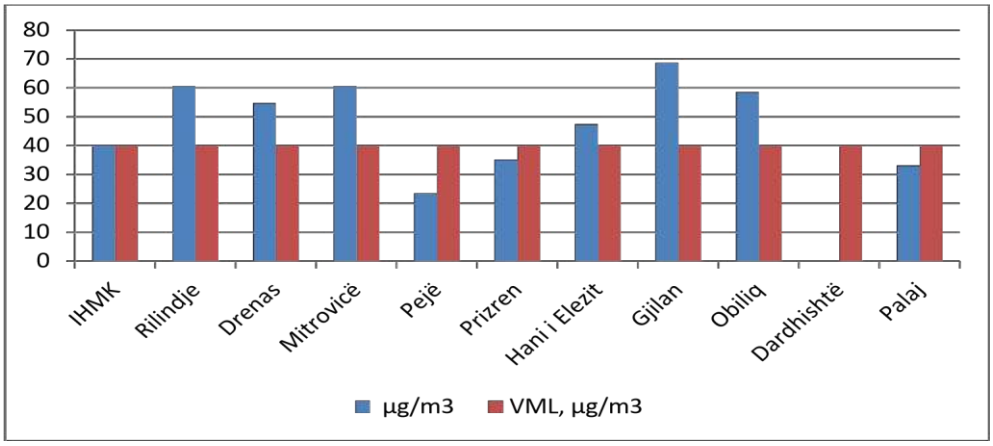


Figure 1. Annual average of PM10 in 2015

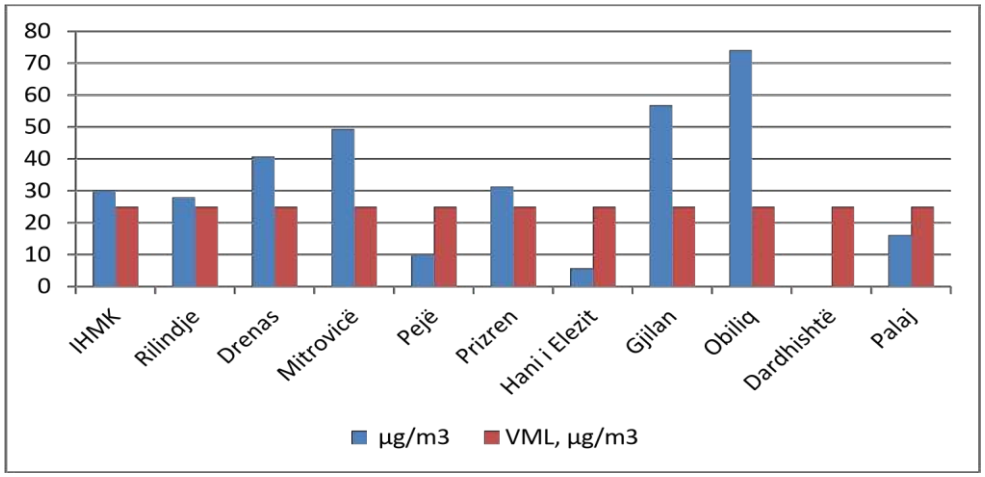


Figure 2. Annual average of PM2.5 in 2015

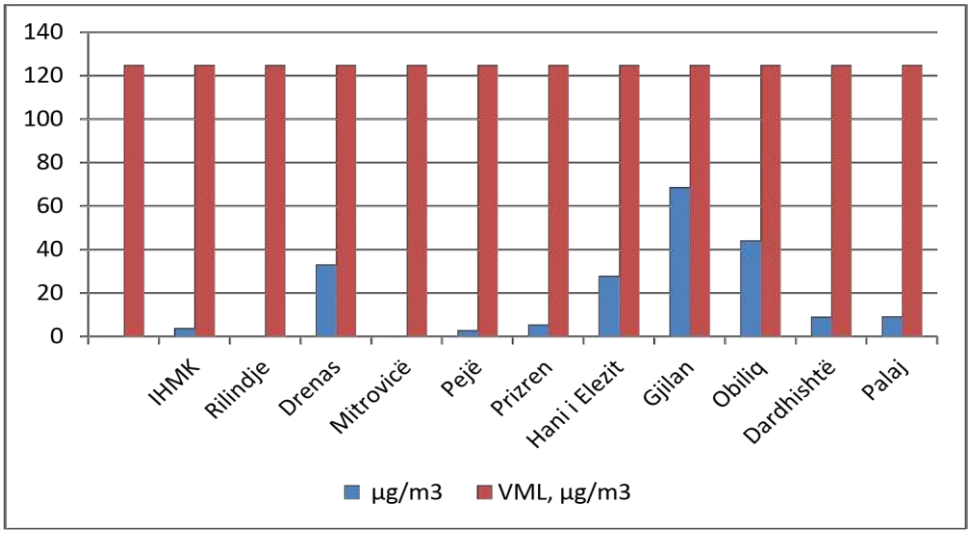


Figure 3. Annual average of SO_2 in 2015

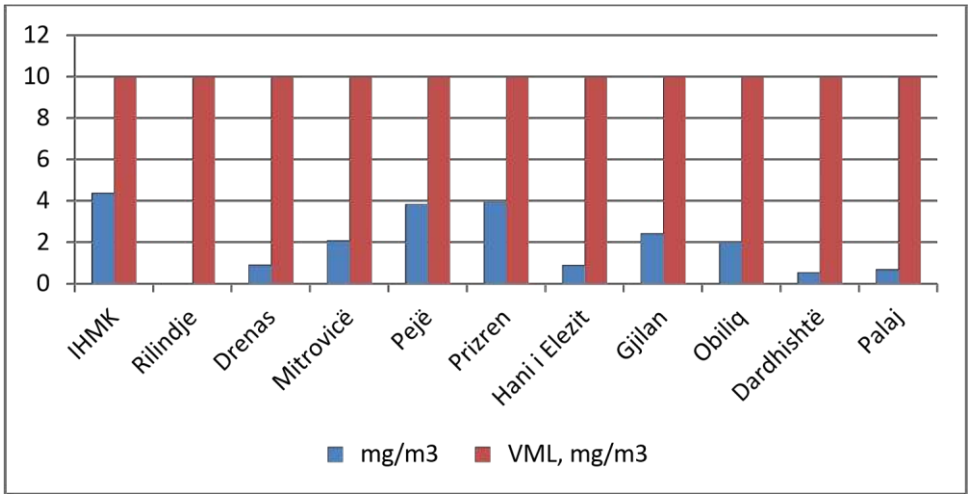


Figure 4. Annual average of CO in 2015

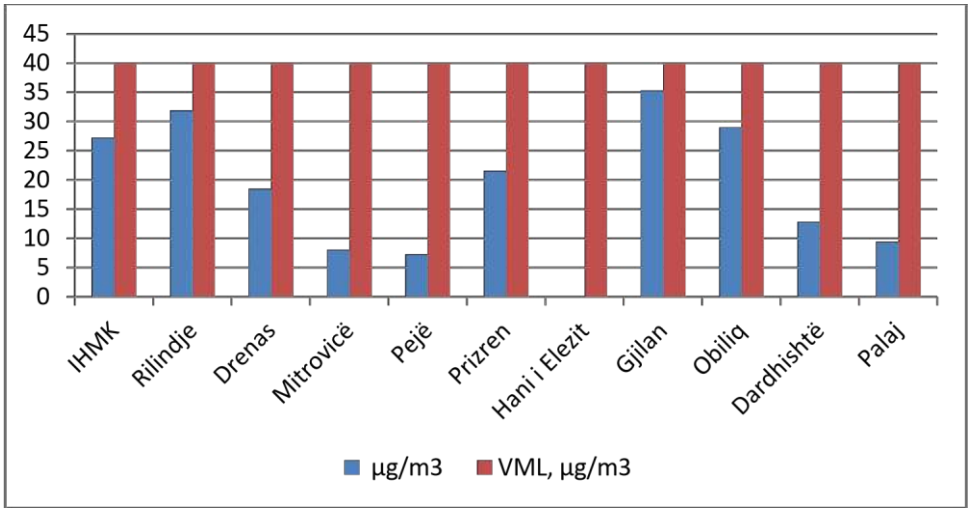


Figure 5. Annual average of NO_2 in 2015

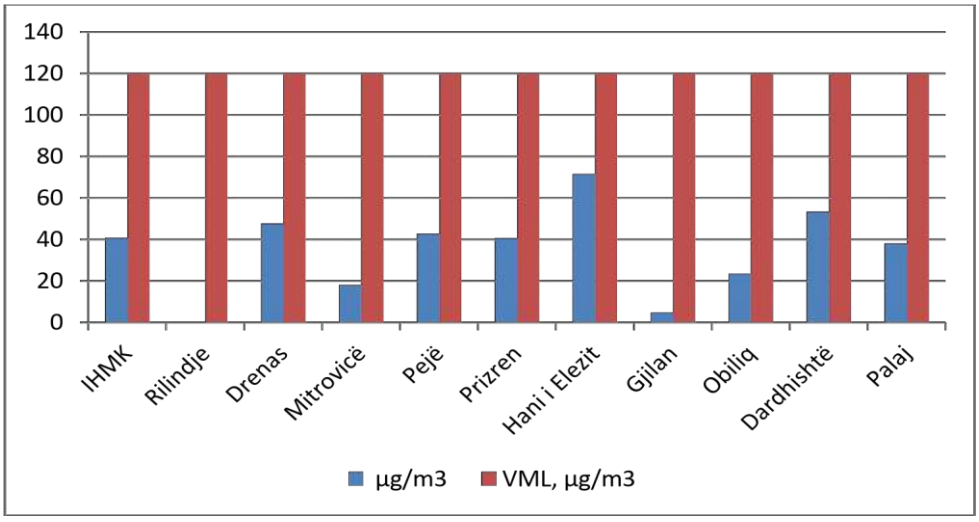


Figure 6. Annual average of Ozone in 2015

Detailed data on parameters of air quality in 2015 are presented by months in Appendix 1 of this report and in the 2015 Air Condition Report for 2015, available at the www.ammk-rks.net web site.
Compared to 2014, there is no change in air quality. The same as during 2015 and during 2014, exceedance were recorded only for the PM10 and PM2.5 parameters, as well as the monitoring stations in Prishtinë / Priština, Obiliq, Palaj, Dardhishtë, Prizren and Gjilan for the PM10 and the stations in Dardhishtë, Prizren And Gjilan for the PM2.5 parameters. More information on the air condition for the years 2013 and 2014 can be found in the Report on Air Condition in Kosovo for 2013-2014 on the website www.ammk-rks.net.

Monitoring PM10 in the air and determination of heavy metals presence in PM10 in Drenas area, October 2015 - March 2016

A PM10 monitoring in Drenas was also carried out through a UNDP-funded project to support the obtaining of data on the level of air pollution in the Drenas area, respectively in the Feronikeli plant operating area.

The project's objective was to extract representative concentrations of suspended particles of less than 10 micrometers (μm) (PM10) and concentration of heavy metals in these particles (PM) in the Drenas area and evaluation of data and identification of the potential impact of pollution compared to European Union air quality standards under EU Directive 2008/50 / EC.

Sampling is done for a period of 24 hours, which means that the filter has been exposed for 24 hours. Samples were collected at these locations: Gllobar, Çikatovë e Re, Çikatova e Vjetër and Lagja e FeroNikelit. The sampling is carried out in the period between October 2015 - March 2016. During this time, a total of 103 samples were taken.

Location of sampling points are selected in residential areas, populated and located near the FerroNikeli Factory and are considered representative for the impact assessment of this air quality plant in Drenas.

Methodology – the portable Air Metrics MiniVolTM Tactical Air Sampler (TAS) device is used to measure the concentration of PM10 in the air. Definition of the concentration of suspended airborne particles (PM10) was performed in the laboratory of the Hydrometeorological Institute of Kosovo (IHMK), whereas the determination of the concentration of heavy metals was carried out by the Center for Ecotoxicological Research - CETI in Podgorica.

Results - Figure 7 shows the average PM concentration in 24 h according to months where it can be seen that in most cases we have exceeded the allowed value while the maximum values were recorded in November 2015

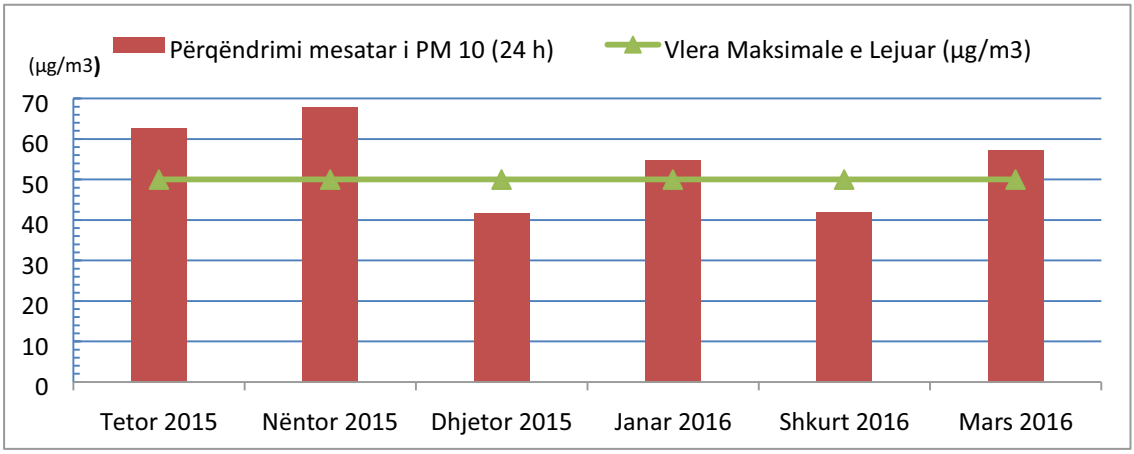


Figure 7: The average concentration of PM 10 in 24 h per month[1]

If we compare the values based on the sampling location, from Figure 8 we see that the average concentration value of PM10 for the period October 2015 - March 2016, for Gobar, Old Çikatovë and Feronikeli Quarter is within the allowed limits, while at the NewCity location, A slight exceedance was recorded, where the average value for the 6-month period was 51.67 µg / m3

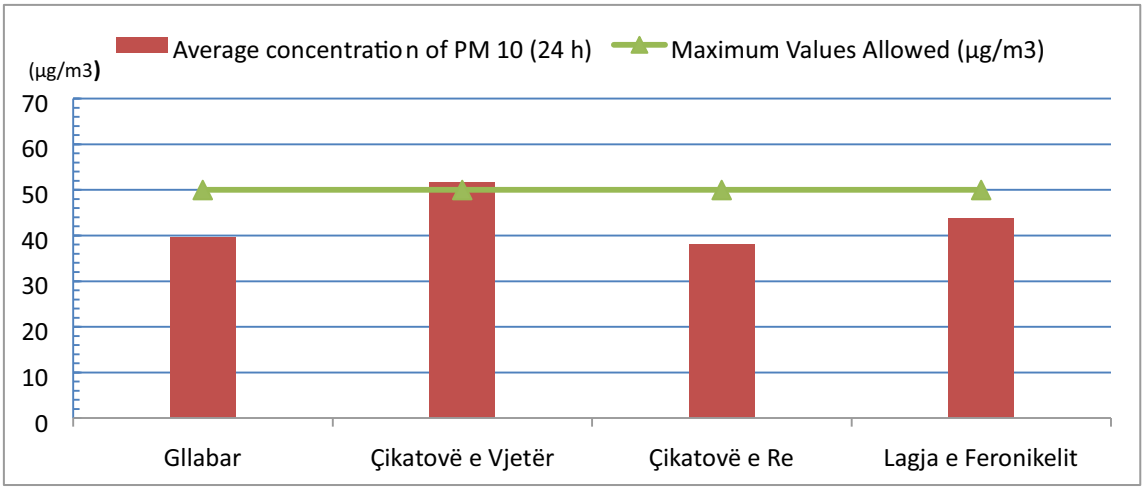


Figure 8: Average PM 10 concentration by location sampling

Regarding the concentration of heavy metals in PM10, the metals are analyzed by means of Arsenic (As), Cadmium (Cd), Chromium (Chr), Copper (Cu), Mercury (Hg), Nickel (Ni), Lead (Pb), Zinc (Zn) and Iron (Fe). According to the results of filter analysis, exceeded allowed values (20 µg / m3) were recorded only for

1 UNDP/IHMK, " PM10 monitoring in the air and determination of heavy metals in PM10 in the Drenas area, October 2015 - March 2016".
2 UNDP/IHMK, " PM10 monitoring in the air and determination of heavy metals in PM10 in the Drenas area, October 2015 - March 2016".

nickel (Ni), in 12 cases, mainly during October, November and December 2015 in all four sampling locations (Çikatovë e vjetër, Çikatovë e Re, Gllobar and Lagja e Feronikelit)2.

Recommendations:

In order to improve air quality and its protection against pollution, and in order to improve monitoring and reporting on air quality it is recommended that:

- Implement the Strategy and Action Plan on Air Quality,
- To design specific projects in order to improve the quality of air,
- To complete inventory of emissions and sources of pollutants in the air,
- Fully functionalize the national air quality monitoring system in order to improve the collection, processing and reporting of data on air quality,
- Implement the online (real-time) live data reporting system for air quality,
- Strengthen the technical and institutional capacities for maintenance of the air quality monitoring network, servicing and calibration of equipment as well as the accreditation of the laboratory for air quality.
- Improve cooperation between monitoring institutions and operators, especially in the process of information flow, processing, reporting and more efficient public information on air quality.

1 UNDP/IHMK, " PM10 monitoring in the air and determination of heavy metals in PM10 in the Drenas area, October 2015 - March 2016".

2.2. **Water**

Even in Kosovo, like in many other parts of the world, human health and the fulfillment of its needs are increasingly threatened by the lack of clean water. The protection, conservation and monitoring of the quality of water resources is one of the biggest environmental challenges facing our society. Industrial development, urbanization, intensive agriculture are just some of the factors that affect water pollution. Despite continued engagement, uncontrolled use of water resources and damage to river beds still remains one of the forms of degradation of our water resources

Pressures in the waters come mainly as a result of increased volume of wastewater without proper physical, chemical or biological treatment. All of this has an impact on water bodies to increase values in physical, chemical and microbiological parameters. Also, multiple impacts come from atmospheric precipitation: gases in the air (NOx, SO2, CO2, etc.) during the atmospheric rainfall form acidic rains, which directly affect the acidity increase in the water. Other precipitation pressures are the irrigation of agricultural lands and other contaminants, which lead to the growth of suspended matter, inorganic materials (fertilizers N, P, K, NH4 + etc) and organic ones (PAHs, PCBs, Herbicides etc.). Among the biggest pressures on water bodies are industrial discharges of various activities.

Monitoring of river waters in the territory of the Republic of Kosovo is done by the Hydrometeorological Institute of Kosovo. The quality of these rivers is determined on the basis of physical, chemical and heavy metal analyzes. The monitoring network has a total of 54 sites (monitoring stations). The physical parameters currently being monitored are 10 physical parameters (measured 11 times a year), 39 chemical parameters (measured 11 times a year) and 8 heavy metals (2 times a year).

In **Annex 2 and 3 of the report**, river monitoring stations, monitored parameters and frequency of measurements are presented.

In this report, we have reflected the state of the waters through these indicators / parameters: dissolved oxygen / mg / l O2; Total Organic Carbon / mg / l C; Biochemical Oxygen Expansion / mg / l O2 (SHBO5); Dry Oxygen Expansion / mg / l O2 (GOO); Total phosphorus / mg / l P and Total suspended / mg / L (MTS). The values presented in the graphs are as the average value for 2015. Annual Report on the state of the Environment in Kosovo
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Parameters such as: dissolved oxygen (O2), spent biochemical oxygen for 5 days (SHBO5), chemical oxygen consumption (COC), indicates the level of organic and bacteriological contamination of water entering the set of parameters expected to have Pressure from those phenomena that were mentioned above. While, the presence of phosphorus (Ptot) causes eutrophication in the waters.

The Drini i Bardhe Basin - in this basin the selection is made for the two rivers: Drini i Bardhe, where as an annual average value is presented the chemical waste of oxygen / mg / l O2 (GOI), while the Ereniku river results in an annual average increase in value of total suspended / mg / L (MTS) parameters.

(fig.9)

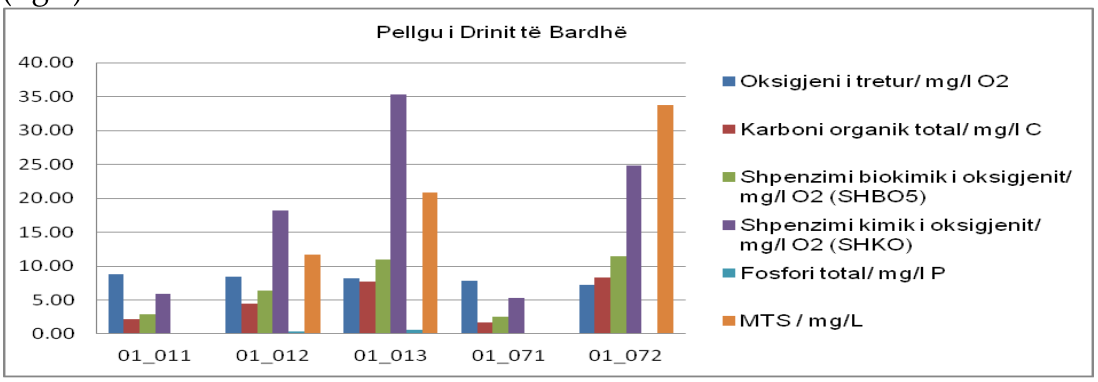


Figure 9. Indicators selected by river water quality monitoring - IHMK 2015 (Brini i Bardhe basin)

Iber River Basin - in this basin the selection has been made for these rivers: Ibri, Sitnica, Prishtevka, Graçanka and Drenica (figure 2), where it can be seen that the river Pristevka / Bresje, with almost all the parameters presented shows higher values, because the river stretches itself along the most populous areas and includes also industrial areas (fig 10).

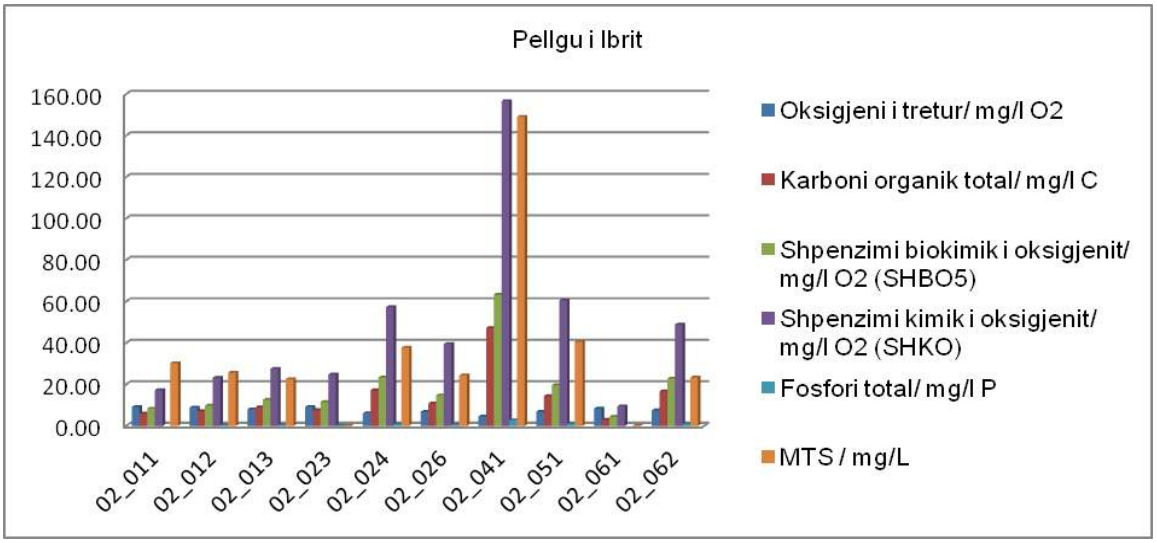


Figure 10: Indicators selected by river water quality monitoring - IHMK 2015 (Iber river basin)

Morava e Binçit and Lepenc Basin - in the Morava e Binçit basin, Morava e Binçit River has been selected with four monitoring stations (figure 3), where almost all of its monitoring stations show an increase of these six parameters. While in the Lepenci Basin, two rivers have been selected: Lepenci and Nerodimja. (fig 11).

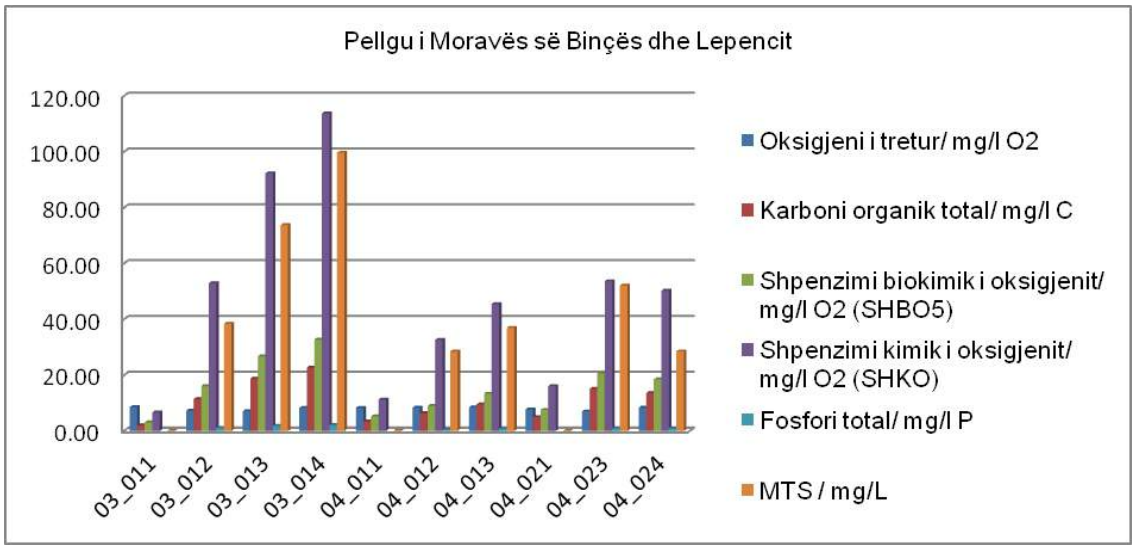


Figure 11: Indicators selected by river water quality monitoring - IHMK 2015 (Morava e Binçit and Lepenc Basin)

Based on these three graphs (the territorial extent of all basins), the presence of total phosphorus / mg / l P, where from the analyzes made during this period, the amount of phosphorus in river waters indicates that the pressures are not expressed in groundwaters, because its values shown in the diagrams are between 0.110 and 2.814 mg / l P. By concluding that groundwaters in Kosovo are not endangered by eutrophication.

Also, the Biochemical Oxygen Exhaust (BOE5), during the monitoring period for 2015, are estimated to be between 2.53 and 63.33 mg O2 / l, which indicates the highest annual average water pollution at the river Prishtevka / Bresja. Even though in natural conditions clean waters do not possess at all levels of BOE5, but this pollution is justified by the fact that groundwaters are increasingly exposed to polluted water discharges through which optimal conditions are created for the development of microorganisms of various species Where their reproduction is extremely fast. Compared with 2014, there is no significant change in the quality of river waters. Detailed data on the state of waters in Kosovo for 2014 can be found in the Water Status Report 2015 and in the Environmental Status Report at www.ammk-rks.net.

In addition to water quality, IHMK also monitors the amount of waters. Monitoring of the amount of water is done through the hydrometric network, which consists of a number of measuring stations in the rivers where measurements are made for the amount of water. The hydrometric network consists of 25 hydrometric stations. In these stations, the Level (h) and Feed (Q) are measured. The following table presents the data for the water level H (cm), for some stations where the measurements of the level for 2015 are realized.

Tab.3: Average annual values of H (cm) by metering stations

Nr.	Stations	Avg.	Max	Min
1	Berkovë	0.89	1.10	0.81
2	Drelaj	0.55	0.88	0.39
3	Grykë e Rugovës	0.53	1.08	0.35
4	Klinë	0.63	0.86	0.53
5	Mirushë	0.71	2.06	0.48
6	Deçan	0.50	0.63	0.41
7	Këpuz	1.01	1.30	0.90
8	Gjakovë	0.57	1.80	0.23
9	Piranë	1.08	1.24	1.04
10	Gjonaj	2.68	6.01	1.40
11	Prizren	0.57	0.93	0.28
12	Vllashnje	0.49	0.81	0.40
13	Drenas	1.05	1.83	0.74
14	Lluzhan	1.32	3.58	0.78
15	Nedakovc	1.46	1.61	1.39
16	Vragoli	0.72	2.74	0.29
17	Milloshevë	1.15	1.87	0.91
18	Leposaviq	1.49	1.98	1.30
19	Konçul	2.31	3.19	1.91
20	Domorovc	0.78	1.35	0.59
21	Viti	0.38	0.91	0.14
22	Kaçanik	0.42	1.28	0.14
23	Brod	0.52	0.97	0.22
24	Hani i Elezit	0.46	0.97	0.38
25	Mlikë	0.80	0.93	0.72

In order to protect and sustainable use of water resources during 2015, MESP has drafted the National Water Strategy 2015-2034. The overall goal of this strategy is, effective water management as an essential element of economic development and social welfare of the Republic of Kosovo.

3 National Water Strategy 2015-2034

In accordance with the principle of integrated water management, the strategy has a wide multisectoral approach that seeks to include all important aspects of water management in the Republic of Kosovo, including, among others, water-based services and economies in the inhabited areas by: water supply, sewage collection and sewage treatment[3]. This strategy also defines strategic objectives for efficient water use, as well as fair and effective water governance.

Recommendations:

- Lack of groundwater monitoring is a problem that requires solutions.
- Special attention should be paid to the development of water infrastructure, the establishment of wastewater treatment plants and adaptation to climate change in the water sector,
- Completion of legislation in the water sector and its transposition with the European Union directives and the adoption of the National Water Strategy are among the key sector priorities.

[3] National Water Strategy 2015-2034

2.3. Land (Soil)

Land protection is an activity of general interest of society that is carried out in accordance with the Law on Environmental Protection. The land's importance is multidimesional and non-replaceable to the population, as a basis for food production and life on earth. Since 2005, the Law on Agricultural Land has been in force, which has as its main purpose the establishment of a legal regulation on the use, protection and regulation of agricultural land.

Soil pollution is considered to be the presence of hazardous waste, which is usually not a product of normal pedogenic processes and which causes soil functions to collapse. Land degradation in Kosovo occurs especially along the main roads and is one of the most widespread and threatening forms of damage to land and the environment. Various reports indicate land occupation by construction, land degradation for economic activities and benefits, and unfavorable land-use decision-making, indicating a negative trend of land conservation for future generations.

Land degradation is the result of several specific factors such as: Natural Factors (Large Precipitation and Floods, Erosion and Sliding of Earth and Drought) and Human Factor (Continuous building pressures from chaotic urbanism, soil compression, pollution from Economic and industrial activity (chemical pollution, corrosion interventions, road openings and river exploitation, etc.).

The total area of agricultural land in Kosovo is 512,000 ha of land. The utilized land area for agricultural production in 2014 was 413,635 ha or 80% of the total land area. This area is utilized by 129,884 households, with an average land area of utilized agricultural land of 3.2 ha per household (tab.4)

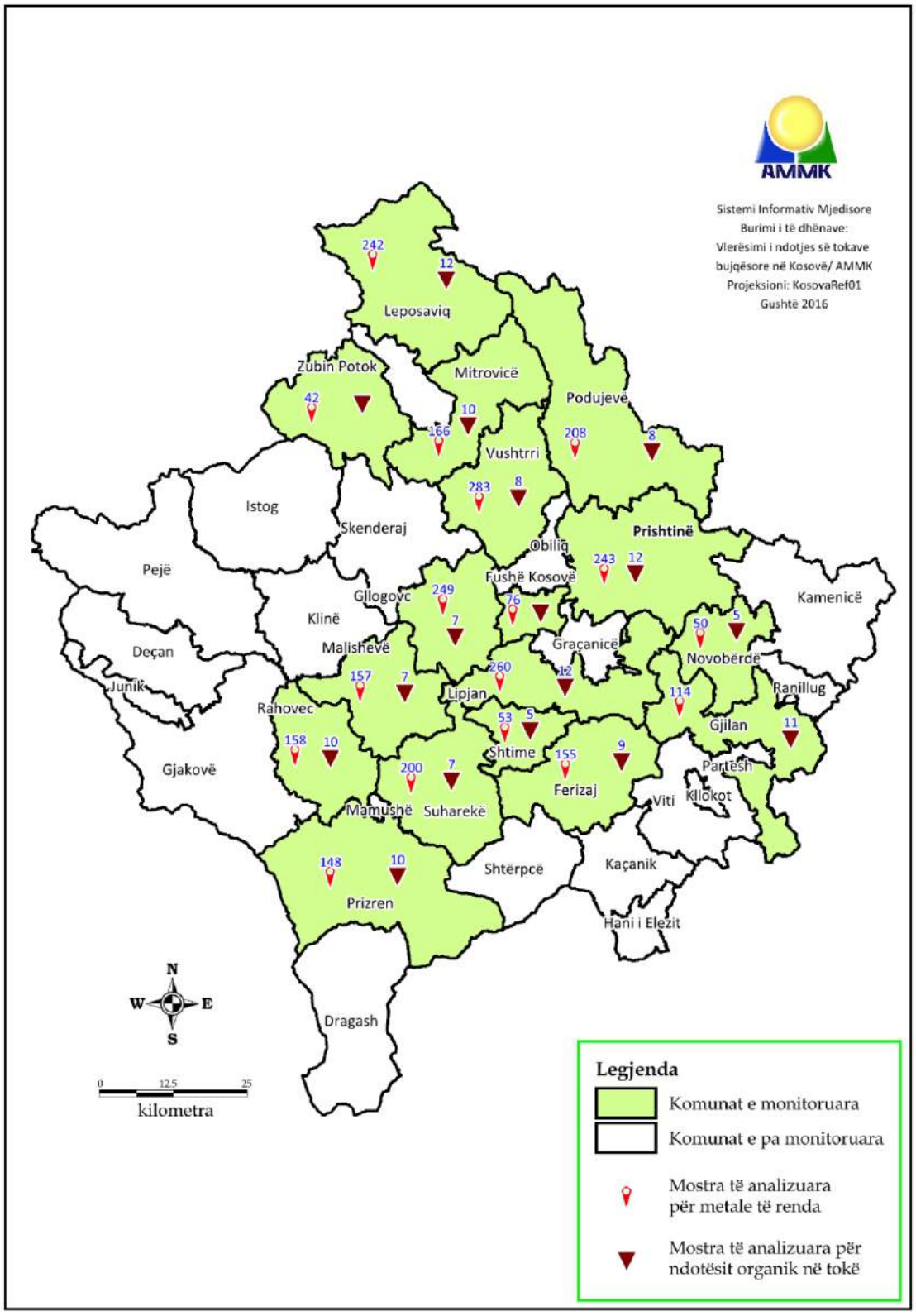
Tab 4. Utilization of Agricultural Land in Agricultural Economies, 2014

	Number of Agricultural Economies	**Area (ha)**
Total area	130,662	512,000
Area of utilized agricultural land	129,884	413,635
Arbale land	113,231	180,381
Gardens	46,458	1,055
Meadows and permanent pastures (including common land)	79,761	224,411
Permaculture	24,909	7,788
Trees	19,619	4,390
Vineyards	6,242	3,215
Plant nurseries	698	183
Unused agricultural land	18,317	17,142
Forestry land	58,874	66,558
Agricultural land	125,515	14,665

The use of land for agricultural produce is of a good level and with an increased awareness of farmers in recent years as well as support from numerous grants and grants given by local and international institutions. The results of the Agriculture Census 2014 show that there are 130,775 agricultural economies in Kosovo[4]. The average size of Agricultural Economies in Kosovo in terms of arable land is much smaller than in most EU countries but is similar to neighboring countries. The average size of Agricultural Economics in Kosovo is 8 times lower than the EU average[5].
There is still no land quality monitoring system in Kosovo. A survey on agricultural land contamination was carried out through EU funds and implemented by GIZ and NIRAS. The project is implemented within 2 years 2013-2014. This project monitored agricultural lands of 17 Kosovo municipalities which included 214,749 ha. In this area 2840 soil samples were taken. According to the final report, findings that the pollution of agricultural land in Kosovo is limited in certain areas in which were previously identified by MESP / KEPA. These sites are not used for agricultural crops.
The main problems identified in this project can be divided into 3 specific issues:

- problems with the protection of agricultural land located throughout the project a area,
- problems related to the presence and transmission of pollutants (mainly heavy metals) in the food chain, and
- lack of public trust in the food safety management system (FSMS) in Kosovo.

4 MAFRD; Green Report 2015
5 KAS; Agriculture census in Kosovo 2014



Map: Land monitorin in Kosovo's municipalities [6]

[6] Data from the project "Soil Pollution Study in Kosovo 2015""

Environmental monitoring in Kosovo under paragraph 1 of this Article shall be made by the Ministry of Environment and Spatial Planning, natural or legal persons who, by activity or activity, may pollute the environment as well as persons authorized by the polluter or the Ministry7.
Additionally, the Kosovo Agricultural Institute conducted quality control over agriculture, food and environment.
Recommendations for sustainable management of agricultural land in the future:

- Waste management should be carried out according to standards throughout Kosovo and start construction of sewage treatment plants for the used urban industry and water;
- Encourage the use of the best available technologies (BATs) for mining and sewage management, and for the control of water flows and landfills;
- Monitor the so-called "environmental hotspots" and apply their rehabilitation.
- Continue monitoring the parameters of soil quality, its fertility and the parameters for food quality,
- Continue monitoring the lands for 21 other municipalities that are not included in this project.
- Respect institutional, technical, financial and scientific legal measures in determining institutional responsibilities.
- Draft and approve a permanent monitoring program of agricultural and industrial lands,
- Planning of land use in harmony with sustainable development concepts

7 Law no. 03 / L-025 on environmental protection

2.4. Protected areas and biodiversity

The number of protected nature areas in Kosovo (2016) is 173 and includes an area of 126070.29 ha, or 11.55% of Kosovo's total area. Within these areas there are 19 Strict Nature Reserves ("Koretnik", "Lubeteni", "Arnen Reservoir", "Maja e Rops", "Rusenica", "Kamilja", "Pisha e Madhe", Bistra etc. (NP "Sharri", PK "Bjeshkët e Nemuna"), 1 Nature Park (Pashtriku and Lake Vermicë) 146 Monuments of Nature ("Drini i Bardhë with Radavc cave", "Cave of Gadime"," Mirusha Waterfalls "," Rugova Gorge "," Drini i Bardhë Canyon at the Ura e Fshejtë ", Trungu i Rrapit në Marash", Shpella e Panorcit, etc.), 5 Landscapes ("Gërmia", "Shkugeza", etc.), and 1 Special Protected Zone of Birds ("Ligatina e Hencit, Radeva"). (Tab.5).
The largest areas of protected areas are National Parks: "Bjeshkët e Nemuna" and "Sharri", Nature Park "Pashtrik Mountain and Lake Vermicë" Protected Landscapes "Germia" and "Waterfalls of Mirusha" etc.

Table 5. Protected Areas by Categories (2016)

IUCN Category	**Name**	**Nr.**	***Area in ha***	**Share in the protected areas %**
I	Strict Nature Reserves	19	10,885.82	0.99
II	National Parks	2	115,957	10.6
III	Nature Monuments	145	6,010.79	0.56
V	Nature Park	1	5,934	0.5
V	Protected Landscape	5	2.437	0.2
V	Special Protected Zone of Birds	1	109.5	0.01
	Total	**173**	**126070.29**	**11.55 %**[8]

8 Clarification: this area of protected areas does not include protected areas located within the National Parks "Sharri" and "Bjeshkët e Nemuna"

During 2015 - 2016, with the initiative of the Kosovo Institute for Nature Protection, professional justifications for taking under legal protection and 68 new objects / nature areas were prepared, of which: 18 strict nature reserves, 46 monuments, 1 Park of Nature and 3 Protected Landscapes. During this period monitoring of protected areas was carried out and recommendations were given as well as professional opinions on the intervention in nature. During the year 2015/16 financed by the Government of Kosovo, a project for the marking of protected areas-nature monuments was carried out, marking 130 monuments of nature.

Flora and vegetation - Kosovo, although it is a small area (10,908 km2), is quite rich in plant diversity. According to various authors' remarks, it is believed that in Kosovo are present nearly 2,800 to 3,000 species of vascular flora.9
Uncontrolled deforestation, habitat degradation, global climate change are factors that directly affect different plant and animal species to face the risk of extinction. Important habitats are being damaged and degraded and ecosystems are being destabilized as a result of human intervention in particular in ecosystems near settlements. In recent years, as a result of unattractive forests and forest fires, different species are at risk of losing their habitat and the emergence of invasive species that often change the ecosystem's floral structure.

Although Kosovo's diversity has been exploited for centuries, it is worrying that recent exploitation is not very rational and without planning, which in the future may result in unpredictable consequences. Major damage is being caused to the medicinal, aromatic and industrial plants from their improper collection.

Fauna - In terms of fauna, Kosovo is characterized by a wide variety of species, although researches in this regard have not been completed.
The overall condition of fauna is good as a result of the expansion of the protected areas. Damage to fauna in Kosovo is caused by illegal hunting that occurs from time to time, especially during the weekends in the protected areas.

9 The Red Book of Vascular Flora of the Republic of Kosovo



Roe Deer (*Capreolus capreolus*)



*Buteo buteo (*Petriti minjngrënës*)*

Of the most vulnerable species from illegal hunting are deer and wild goats, while situation is better for brown bear and wolf. Endangered are also the types of predatory birds.

It is estimated that in Kosovo live about 250 species of vertebrates, 200 species of butterflies and over 500 taxa of macro zoobenthos of water. The exact number of fauna species should be determined based on the inventory that is planned to be implemented in the future as during the drafting of the Red Book for fauna and other projects.

Monitoring of Endangered Species of Mammals- Within the activities for monitoring and inventorying of biodiversity in nature protected areas, during 2015/2016, KEPA, respectively the Institute for Protection of Nature, has begun the deployment of monitoring equipment in different parts In the two National Parks, "Sharri" and "Bjeshkët e Nemuna".

Placement of trap cameras is carried out in several parts of the Parks where it is believed to be possible areas of wildlife movement. During this period, data were available on the presence of mammal species such as: Brown bear (Ursus arctos), Roe Deer (Capreolus capreolus), Deer (Cervus elaphus), Wild pigs (Sus scrofa), Fox (Vulpes vulpes) Wild cats (Felis sylvestris), Badger (Meles meles) as well as some other common species.

Due to their considerable number, it can be concluded that the status of fauna in the protected areas is relatively good, especially in the national parks ("Sharri" and "Bjeshkët e Nemuna").

Recommendations:

- Research and inventory of species and habitats,
- To design the Red List of fauna of Kosovo,
- Continuous monitoring of the condition of rare and endangered plant and animal species,
- Protection of rare and endangered species habitats and preparation of professional justifications for the designation of protected areas of birds and habitats according to the Natura 2000 network.
- Establishment of management bodies for protected areas,
- Approval of the Spatial Plan for the National Park "Bjeshkët e Nemuna"
- Drafting of the Management Plan for the National Park "Bjeshkët e Nemuna"
- Capacity building of employees in protected areas,
- Increase of staff in National Institute for the Protection of Nature.

2.5. Waste

Sanitary landfills - The condition of sanitary landfills in Kosovo is not satisfactory as a result of their bad management. In most of them we have leakage of wastewater from the landfill. Also, compact and waste coverage is not done properly and according to the criteria required



Sanitary landfill in Mirash



Sanitary landfill in Peja

Table 6: Quantity of waste by sanitary landfills 2013-2015

Sanitary Landfills	Total TON 2013	Total TON TON 2014	Total TON 2015
Prishtinë	89,806.18	88,803.29	104,742.68
Gjilan	36,378.46	21,263.30	38,244.60
Prizren	58,994.49	44,490.70	79,661.07
Podujevë	7,858.09	7,679.20	10,315.42
Pejë	36,475.00	38,950.00	44,424.00
Mitrovicë	36,190.61	40,284.64	39,546.52
Ferizaj	14,345.26	23,462.00	13,801.23
Total of landfills	**280,048.09**	**264,933.13**	**330,735.52**

The amount of waste disposed in sanitary landfills in Kosovo is increasing as noted in Table 6. The largest amount of waste is stored in the sanitary landfill in Mirash while the smallest quantity in the sanitary landfill in Podujevë / Podujevo.
Even the amount of disposed waste per capita has marked a growth trend (figure 12).

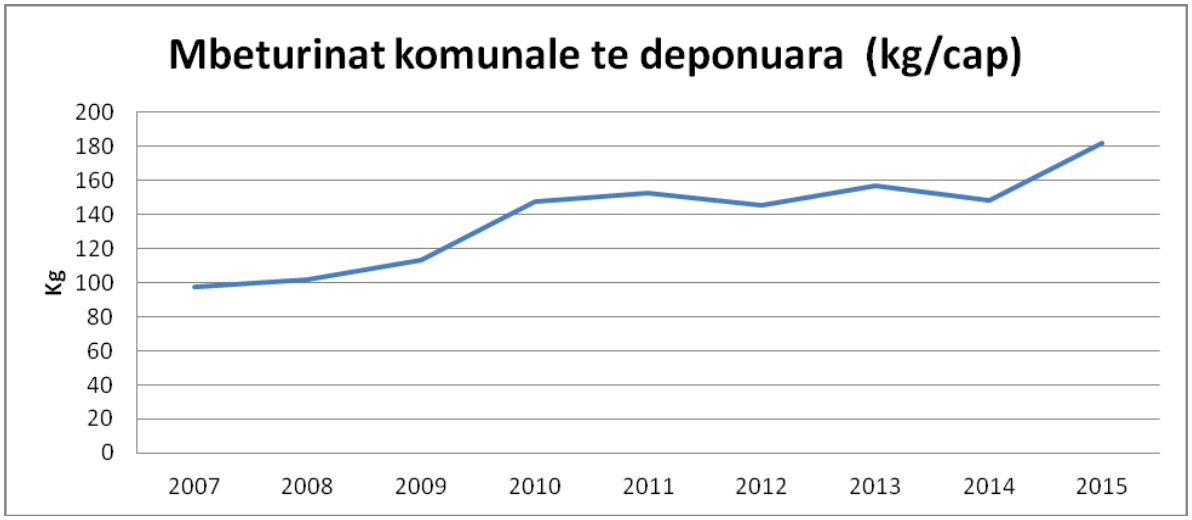


Fig. 12. Amount of municipal waste deposited in kg/cap

Illegal landfills - During May, AMMK in cooperation with GIZ has identified illegal landfills in 16 municipalities which are part of the GIZ "Clean Environment Race" project. Identification of these illegal landfills were formed of set-up terrains: an expert from AMK or GIZ, an official from the municipality and an official from the Regional Waste Company.

Table 7 shows table data for the number of illegal landfills identified in these municipalities. Based on the collected data, the largest number of illegal landfills was identified in the municipality of Peja (123) Drenas (137), Lipjan (105) and Pristina (95). (Tab 7)

Tab 7. Number of illegal landfills in municipalities

Nr.	Municipality	Number of illegal landfills
1	Drenas	137
2	Graçanica	32
3	Obiliq	55
4	Ferizaj	61
5	Istog	82
6	Klina	57
7	Fushe Kosova	43
8	Kaçanik	35
9	Lipjan	105
10	Podujeve	41
11	Skenderaj	71
12	Mitrovicë	41
13	Prishtine	95
14	Vushtrri	57
15	Peja	123
16	Shtime	27
17	Total	1062

Hospital wastes - These wastes are treated in seven treatment plants that are located in the main hospitals in Kosovo. Based on the data collected by KEPA we have increased the amount of hospital waste treated from 2014 with 417822 kg in 2015 with 481375 kg treated.

The largest amount of hospital waste treated for 2015 is in the plant located at University Clinic of Kosovo in Prishtina, while the smallest for 2015 is in Gjakova. Apart from the Gjakova plant, all others are functioning with full capacity for hospital waste treatment. (Table 8).

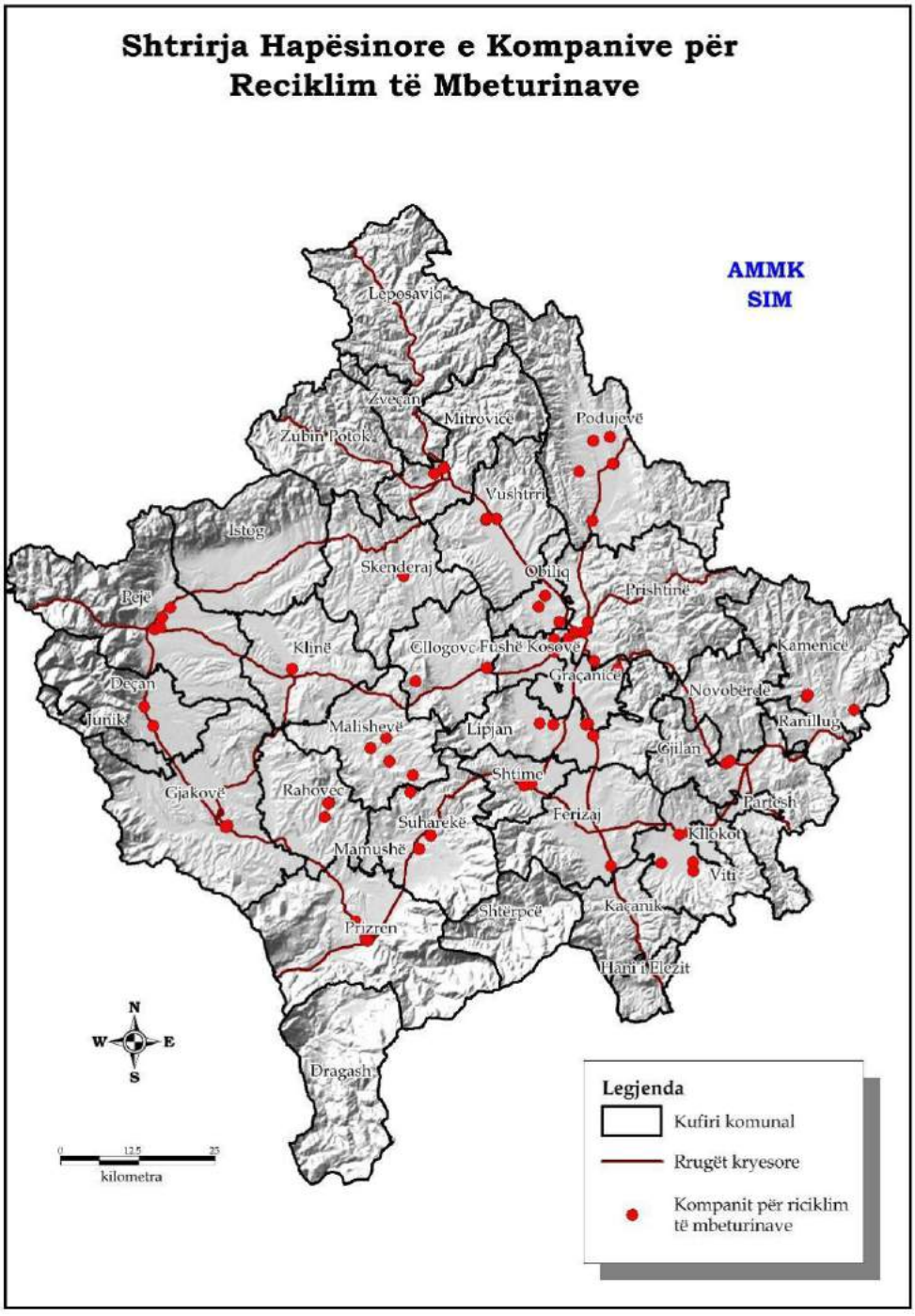
Tab.8 The amount of hospital waste treated for the year 2015

Nr.	Treatment plant	Amount/kg
1	Prishtine	205967
2	Prizren	91760
3	Pejë	44418
4	Ferizaj	52082
5	Gjilan	26591
6	Gjakovë	9365
7	Mitrovicë	51192
8	Total	481375

Waste Management in Kosovo - During 2015, KEPA has identified all waste treatment companies in Kosovo. As a result of this research it has emerged that in Kosovo there are a total of 72 companies dealing with waste treatment. Municipalities with the least waste treatment companies are Deçani, Ferizaj, Skenderaj Klina and Gracanica with one company, while the municipalities with most companies are Vitia, Podujeva and Pristina with six companies. The following table presents the types of waste treatment and the number of companies that deal with them. (Table 9).

Tab.9 Number of companies that deal with waste treatment

Nr.	Type of waste	Number of companies
1	Metal waste	55
2	Electric and Electronic Waste	19
3	Plastic waste	36
4	Accumulators	14
5	Paper and cardboard waste	12
6	Rubber waste	5
7	Other	11



Map: spatial distribution of companies dealing with waste recycling

Recommendations:

In order to improve the waste management system it is recommended that in addition to the implementation of the Waste Management Strategies and Plans further work be done on the strengthening of central, local and waste management companies, in the design and implementation of projects, plans and Programs for recycling, treatment and reuse of waste and raising awareness.

3. Environment and public health

The development of a health information system is of particular importance in providing information on illnesses of the environment, illnesses caused by epidemics and pandemics, injuries (in work, traffic, or elsewhere), protection measures, promotion and Promoting sound behaviors, responding efficiently to natural disasters, ensuring quality and equal access to health services, etc.[10]

It is evident that environmental pollution causes serious public health problems such as diarrhea, respiratory, heart, skin diseases, premature death and other illnesses.

Environmental pollution with particular emphasis on air and water pollution is one of the greatest risks to the health of the population. Therefore, it is crucial that environmental pollution is the focus of priorities of central and local institutions. Factors affecting air and water pollution in Kosovo are the energy industry, metallurgical industry, mining, mining, industrial and urban dumpsites, transport, agriculture etc.

Water pollution is often caused by flooding, which can result in deterioration of water quality, contamination of wells that supply rural residents with drinking water and difficulties in the process of drinking water supply and processing. It is well known that sewage networks are often blocked by debris, enabling flooding or flooding to surface waters of fecal origin that pose a potential risk to epidemic outbreaks of contagious diseases.

A person directly or indirectly attacked by environmental pollution is adversely affecting the health of the population by causing diseases of acute or chronic forms. Monitoring of the state of public health is done by the MOH / NIPHK. This institution for 2014/2015 has monitored and monitored the epidemiological situation with communicable diseases and other diseases in the country. In the period January - December 2014, a total of 127449 infectious diseases were reported with over 7374.5 in every 100,000 inhabitants. In 2015, the number of these diseases is lower compared to the same period of 2014 (137591 cases of illness or 7578.2 per 100,000 inhabitants). In this decrease in the number of cases has affected the lowest occurrence of cases of acute diarrhea, ITPR / ARI and epidemic parotitis, (Tab.10).

[13] http:// www.niph-kosova.org/index.php?option=com_content&vie ë=article&id=10&Itemid=3

Tab. 10. Environmental Diseases and their incidence during 2014-2015

Diseasses	**2014**		**2015**	
	Cases	**Over 100000 inhabitants**	**Cases**	**Over 100000 inhabitants**
ITPR-Pneumonia/ARI	15242	839.4	12133	664
SARI (Severe form of pneumonia)	521	28.7	66	3.6
Seasonal Influenza	39758	2189.7	41798	2287.5
Acute Diarrhea	66196	3635.8	60361	3303.4
Chickenpox	8651	476.4	7172	392.5
Bleeding Syndrome Diarrhea	38	2.1	22	1.2
Meningitis syndromes	188	10.3	250	13.6
EHKK	5	0.2	1	0.05
EHSV	14	0.7	2	0.1
West Nile virus	4	0.2	2	0.1
Leishmaniasis	3	0.1	0	0
Malaria	-	-	4	0.2
Exanthematic Fever Syndrome	21	1.1	23	1.2
Pertussis	16	0.8	39	2.1
Epidemic parotitis	3743	206.1	1900	103.9
TBC	834	45.9	770	42.1

Intoxicatio alimentaris	684	37.6	1202	65.7
Acute Jaundice A	154	8.5	124	6.7
Jaundice B	52	2.8	63	3.4
Jaundice C	14	0.7	12	0.6
Toxic Jaundice	0	0	2	0.1
Typhus abdominalis	6	0.3	3	0.1
Sallmonelosis	53	2.9	81	4.4
Rota virus	117	6.4	75	4.1
Tularemia	105	5.8	378	20.6
Lymphadenitis	92	5.1	192	10.5
Leptospirosis	6	0.3	3	0.1
Brucelosis	34	1.8	31	1.6
Anthrax	6	0.3	-	-
Tetanosis	0	0	2	0.1
Echinoccocosis	0	0	4	0.2
Toxoplasmosis	0	0	14	0.7
Vulnus morsum viperi	9	0.5	13	0.7
Other contagious diseases	752	33.8	592	32.3
Total	137591	7578.2	127449	7374.5

As noted in Table 10 cases with seasonal influenza cases are reported in the highest number during 2015, Diseases that are reported aggregately (aggregated), have been reported 127449 cases. The largest number of this group of diseases belongs to acute diarrhea which is reported with 60,361 cases or 3303.4 / 100,000 inhabitants. The origin of this disease is related to poorly regulated infrastructure such as drinking water supply from uncontrolled sources-wells, long water

discharges from water supply, lack of sewerage, presence of waste near water springs, poor hygiene and conditions Weak socio-economic conditions in the country.

With regard to cases of pneumonia / ARI, it is high with 12133 (over 664/100000 inhabitants), which may be due to the appearance of upper respiratory infections but also the possibility that some of them are cases of influenza with complications As well as environmental pollution. It is worth mentioning that hemorrhagic fever (EHC & EHSV), in 2015, only one case with EHC and 2 cases with EHSV is reported. Cases of deaths from contagious diseases in Kosovo in 2015 are registered 37 cases. Of these cases the highest number of deaths are from Sepsa (8), Meningoencephalitis ac. (8) Purulent (4) and SARI (5) cases.[11]

In 2014, the number of new cases of patients with cancer disease (malignant and benign) is 2989 cases. The percentage of female patients is 46% and males 54% of cases. The largest number of people affected by malignant diseases was recorded in the municipality of Prishtina with 557 cases or 18.6%, followed by Peja with 228 cases or 7.6%.[12] Regarding the number of cases with this disease for 2015, there is still no official report but according to health institutions this disease has a slight increase from year to year.

In order to increase the quality of life and protect public health, one of the most important institutional actions is to improve sanitation conditions and the environment in general. Hence in Kosovo since the war, to date, continuous investments have been made.

Water quality provided by RWCs was generally satisfactory and in line with Administrative Instruction 16/2012. However, there have been some current concerns in the RWCs (Prishtina and Hidromorava, Hidroregjioni Jugor), which are addressed and the water quality is quickly returned. In total there are 11,286 samples analyzed by NIPHK in 2014, out of which 7,794 were subjected to microbiological tests, while failures were recorded at 221 or 2.8%. This d.th. That 97.2% of the samples are in compliance with the parametric values of the local standards.

In physico-chemical aspects, a total of 3,492 samples were analyzed, and only 36 of them or 1.0% did not meet the parametric values of the standards. In general, the average water quality of the sector declined from 98.4% in 2013 to 97.7%.[13]

[11] IPH; Annual Infectious Disease Bulletin, January-December, 2015.
[12] Kosovo Statistic Agency; Health Statistics, Pristina, 2014
[13] WWRO; Annual Performance Report for Water Service Providers in Kosovo in 2014

Another indicator of public health is the longevity at birth. According to KAS data, the average life expectancy at birth of the population is over 76 years. This average for female gender ranges over 79 years, while for male gender over 74. Also the number of normal deaths or causes of deaths can be used as an indicator to present the trend of developments in public health.

Recommendations:

In order to improve public health in general but also to assess the impact of the state of the environment on public health it is recommended that:

- More detailed research on the impact of air, water and soil pollution on public health.
- Collect specific information and data on the number of communicable diseases and environmental diseases and draw up regular reports on the quality of drinking water that should be available to the public.
- To invest further in improving the quality of drinking water and its regular monitoring,
- Using new technologies in energy and industry and favoring the use of renewable energy sources in order to improve air quality and public health.
- To rehabilitate the contaminated areas.

4. The environmental condition of the endangered areas

4.1. KEK area and the impact in environment

KEK, in the framework of fulfilling the legal obligations, regularly reports each month and for each previous year sends an annual report on the state of the environment. The annual report contains data on the material and energy balance, air quality, air emissions, water quality in the KEK operation area, waste status, radioactivity, noise, vibrations, re-cultivation and data on projects in general . The object of this environmental assessment will precisely be the data from the 2015 annual report and the monthly reports, selecting some of the features that have the greatest impact on the environment.

KEK produces around 97 (%) of the total amount of electricity in Kosovo (lignite-powered energy), while only 3% (of electricity) is provided from water resources. KEK consists of these units: Coal Mines (DPQ) and Generation with Kosovo A Power Plant (TCA) and Kosovo B Power Plant (TCB).[14]

KEK continuously conveys and analyzes the impact of its activities on the environment.
During coal production in surface mines and coal combustion in power plants we are dealing with large-scale excavation of materials using heavy equipment. This digging during which mineral resources are exploited, causes an inevitable negative impact on the environment, such as:

- Large surface area occupied by surface mines and waste deposits.
- Change of flora and fauna in the area around the mine due to construction and operational activities.
- Possible soil contamination and surface water pollution (ash deposits, mining waters and discharged from power plants).
- Total loss of existing habitats in the conquered land. Changing the hydro-geological regime in a wide area.
- Air pollution from dust during excavation and transport and emissions after combustion at the Thermal Power Plant.
- Impact on terrain stability from steep slopes and deformation of surfaces (land sliding).
- Noise from the mine equipment and the activity of the conveyor belts, etc.

The total degraded area in KEK covers an area of cca 32 (km2) where 15 (km2) mines and 17 (km2) folding layers of lignite cover.

- *The annual output of electricity from TPP Kosovo A for 2015 was: 2,056,681 (MWh).*
- *The annual output of electricity from TPP Kosovo B for 2015 was: 3,922,014 (MWh).*
- *Total lignite consumption for 2015 from KEK power plants: about 8151443 (l) lignite.*
- *During 2015, TC Kosova A spent on average about 1,569 (t / MWh), while TPP Kosova B was about 1,265 (t / MWh).*
- *The total amount of ash produced during 2015 for two TCs was around 1205576*
- *The de-carbonized and de mineralized water consumption of TCA and TCB has been: 16.724.102 m3:*

[14] Environment Report at KEK for 2015, Department of Environment

- *Quantities spent on oil and gas oil for 2015: TPP Kosova A - 2.762.478 liters and mazut in TPP Kosova B - 3152.26 t.*

Evaluation of emissions in Power Plants Kosovo A and Kosovo B for 2015

According to Directive 2001/80 / EC, as well as AO No. 06/2007 on air emission rules and norms from non-portable sources of large combustion:

- ***SO_2***.....*400 mg/Nm³*
- ***NOx***.....*500 mg/Nm³*
- ***Dust***.....*50 mg/Nm³*

Below are graphically presented the emissions of Dust, SO2 and NOx in Power Plants Kosovo A and Kosovo B during the months of January - December 2015. The parameters of SO2, NOx and CO2 are calculated (except dust emission, which is measured) in TCA, while in the TCB all the parameters are measured.

Dust emissions in mg / Nm3 - Figure 13 shows dust emissions in TC A and TC B, showing that there was no overcapacity in TC A during January - December, while TC B values were very high.
It is worth mentioning that at TC B the emission values of dust from March are always decreasing. It is also noted that from October to December there is a rise.

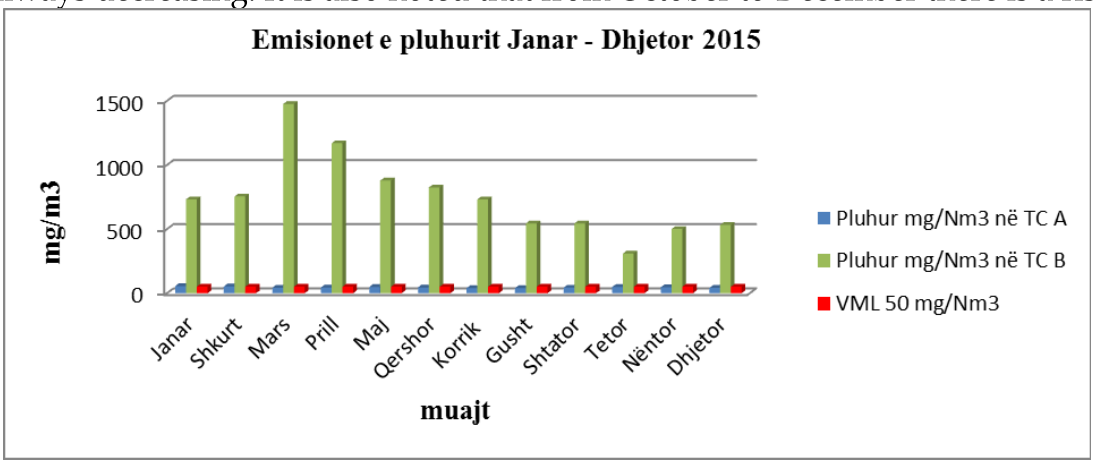
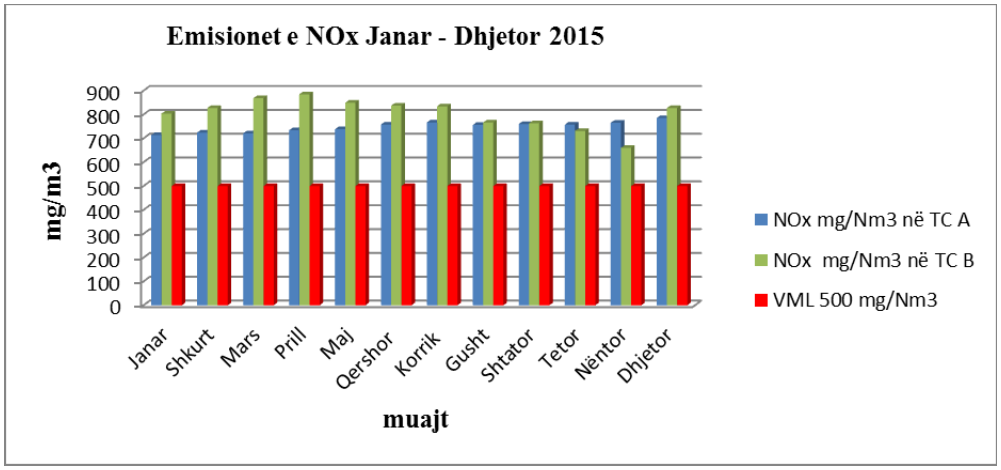


Fig.13. Dust emissions in mg/Nm3 during 2015



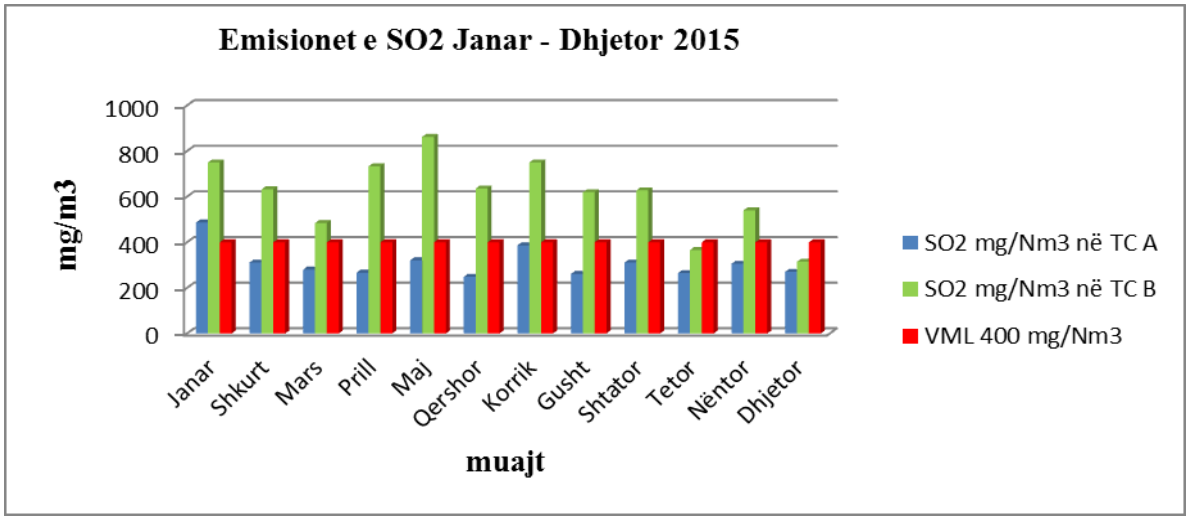


Fig.15. Emisionet e SO_2 në mg/Nm3 gjatë vitit 2015

Emisionet e NOx në mg/Nm3- Në figurën 16, janë paraqitur emisionet e NOx në TC A dhe në TC B, nga shihen tejkalime gjatë krejt muajve si në TC A po ashtu edhe në TC B.

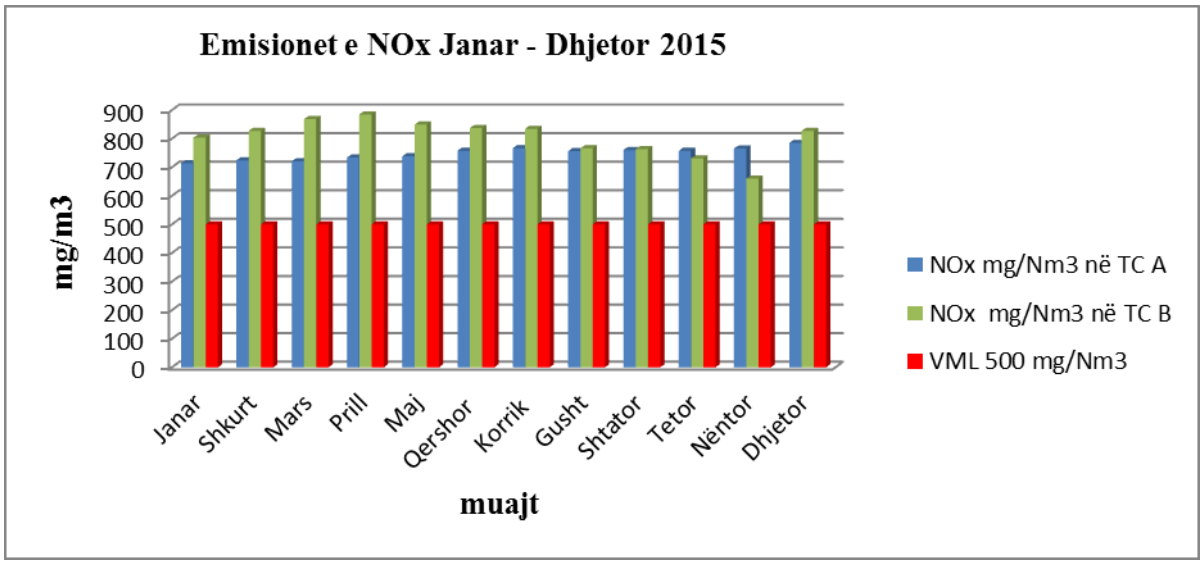


Fig.16. Emisionet e NOx në mg/Nm3 gjatë vitit 2015

Vendimi i ri i Këshillit të Evropës (KE) 2013 sqaron se së pari duhet të qartësohet se Republika e Kosovës apo ndonjë anëtarë i Komunitetit të energjisë a ka ndonjë marrëveshje kontraktuare me BE-në për ndërprerjen e punës të ndonjë impianti (në këtë rast TC Kosova A) deri 2018. Atëherë nëse jo ai impiant mundet të punojë prej 2018 deri me 2023 me gjithsejtë 20000 orë pune ose duke zbatuar PNZE (Planin Nacional për Zvogëlim e Emisioneve në ajër).
Është hartuar Draft Plani Nacional për reduktimin e Emisioneve/NERP(PNZE) për TC Kosova (A3,A4,A5) si tri njësi shkarkuese te ndotësve në ajër dhe TC Kosova B si një njësi shkarkuese te ndotësve në ajër dhe i njëjti ju ka përcjellë TKE ne të njëjtën ditë kur ju ka përcjellë edhe deklarata.

The new Council of Europe (EC) 2013 decision clarifies that it should be first clarified that the Republic of Kosovo or any member of the Energy Community has any contractual agreement with the EU to terminate the operation of any plant (in this case PP Kosovo A) by 2018. Then if not, that plant can work from 2018 until 2023 with a total of 20000 working hours or by implementing NPREA (National Plan for Reduction of Emissions in Air).
A Draft Draft National Plan for the Reduction of Emissions / NPREA (PNZE) for TPP Kosovo (A3, A4, A5) has been drafted as three air pollutant discharging units and TPP Kosovo B as a pollutant emission unit in the air and the same has conveyed ECT on the same day that the statement has been forwarded.

Environmental projects implemented in the KEK area
CLRP Project at DSK- CLRP Project: Removal of phenols, tar, contaminated oils and other hazardous materials stored in chemical imaging facilities (DSK). Even in 2015, there were project activities for the removal of hazardous substances in the Department of Chemical Sections (CLRP). In the gasification sector, during the month of April, 2015, the contractor has also taken out the last 20 (t) of contracted chemicals for export by increasing the amount of chemicals treated abroad at 7208.04 (t).

During June 2015, the final part of the B-5 tank (reservoir) has been cleared through the personnel access to the tank spaces, whereby 15 big sacks and 2 plastic canisters (IBCs) Dangerous ones that are placed in the hangar. The CLRP project started in 2011 by the company "EPE" -Environmental Protection Enginneering S.A. Based on the research project made by the company "Chiresa AG". The project has beeninterrupted depending on the conditions. EPE activity is over, while big sacks are still in the storages for lack of tools.

Co-generation Project - After many years, the co-generation project was realized. This project involves the connection of the district heating system of Pristina city "Termokos" sh.a. With TPP Kosova B through the heating of the city's heating water with the steam of the power plant. This is also an investment in the course of investments made in reducing environmental impacts. The Prishtina city heat exchanger instead of the burning of heavy oil that has high emission of pollutants will henceforth use the steam of the power plant for central heating. This project also foresees the refurbishment of the existing network and substations in the future as well as the improvement of heat for the customers of "Termokos" sh.a.
This project is funded by: EU, German Government, SIDA and the Government of Luxembourg as well as KFW.

Recultivation - In 2015, the process of cultivating ash and overburdened dumps continued, the green belt in the western part of mine M.S. Sibovc-JP, with a length of 1500 (m) or surface area of S = 2 (ha). In total, 1025 seedlings have been planted, of different varieties.

4.2. Ferronickel area and its impact on the environment

NewCo Ferrinikeli Complex.LL.C, fulfilling the legal obligations for environmental reporting, reports on monthly and annual basis. The object of this environmental assessment will be some data from the Annual Report 2015 and the monthly reports.

Ferronikeli produces a unique ferro-alloy ferronickel (Fe-Ni). Metallurgy is supplied by local mines (Gllavica and Çikatova as well as imported mines from abroad (Guatemala, Albania, etc.).

The technological process is quite long and complicated. After grinding, the jade is sent to the rotary kiln (there are two such ovens) where drying and baking is done, using pet coke and mazut as fuel. The gases and dust released into the rotary kilns are treated in electrostatic precipitators. The baked jade is passed through the electric furnace where it is melted at 140016000C.

The gases released from the electric furnace are treated in a gas scrubber system (skruber). Ferronickel refining now as a raw material (13-16% Ni) is realized in a vertical converter (two are) by blowing up oxygen and adding lime or limestone. Refining creates the converter slider, which is sent to a magnetic separation plant (now a mobile crusher). The gases released from here are treated in liquid crumbs

(water purification). The split of refined pheromone is made in granular form for commercial reasons or in the form of 25 kg cups.

Nickel ferrous produces Fe-Ni alloy, which mainly contains 25% Ni and 75% Fe. Design capacity of ferrous nickel: 12,000 t Ni / Fe-Ni (25% Ni, 75% Fe). With two electric ovens, about 10,000 tons of Ni / Fe-Ni are produced over a year.

The raw materials, fuels and auxiliary materials used in nickel ferrous during 2015:

Ore: 1 164 439 t; Lignite: 126 337 t; coal 15 027 t; Koks: 15 t; Limestone: 36 6685 t; Liquid oxygen: 682 t; Gaseous oxygen: 12 756 t; Electricity: 581 507 MW; Mazut: 18 045 t; Petrochemical: 38 081 t; Technological water: 1 948 221 m3. etc.

Evaluation of emissions for 2015

Nickel iron in its entire production chain since the exctraction of the ore, transport, preparation, drying, baking, depositing, the production process of the iron-nickel alloy to the industrial waste landfill represents a dangerous resource for the environment where they lie Parts of the production chain.

The content of heavy metals in the initial jar, such as Fe, Ni, Co, Cd, Cr, As, Pb etc. And the metallurgical processes that accompany the whole process characterize the category A Ferro-nickel pollutant (according EIA and BB criteria)



View of iron nickel and emission measuring points

Below are graphs of Powder, SO2 and NOx emissions measured in nickel ferrous or rotary kilns.

Measured Dust Emissions in mg / Nm3 - In Figure 17, dust emissions in Nickel Ferrous, ie rotary kilns, are shown, as there is no excess of allowed values during the months of January - December 2015. It is worth mentioning That in September and October we had lower dust emission values compared to previous months

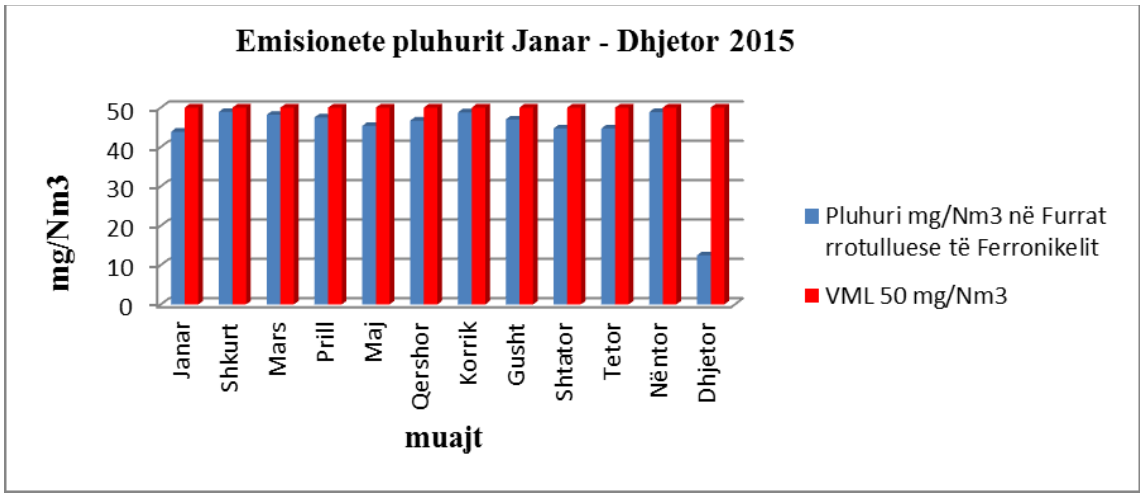


Fig.17. Measured dust emissions in mg/Nm3 during 2015

Measured emissions of SO2 in mg / Nm3 - Figure 18 shows SO2 emissions in Ferro-Nickel, ie rotating kilns, it is apparent that during the months of January-December 2015 there was no exceedance of allowed values.

It is worth noting that in August, September and October there were lower SO2 emission values compared to the previous months.

Also in December it is noticed very low compared to other months !!

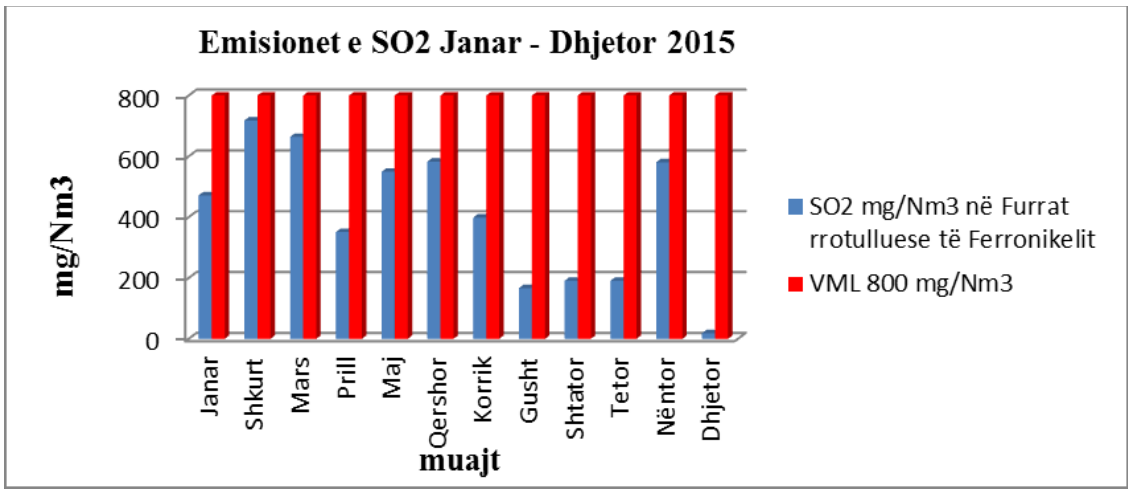


Fig.18. SO_2 measured emissions in mg/Nm3 during 2015

Measured NOx emissions in mg / Nm3 - Figure 19 shows NOx emissions in Ferro-Nickel, ie rotary kilns, which shows that during the months of January-December 2015 there were very low values of allowed values, ie There was no overtaking.

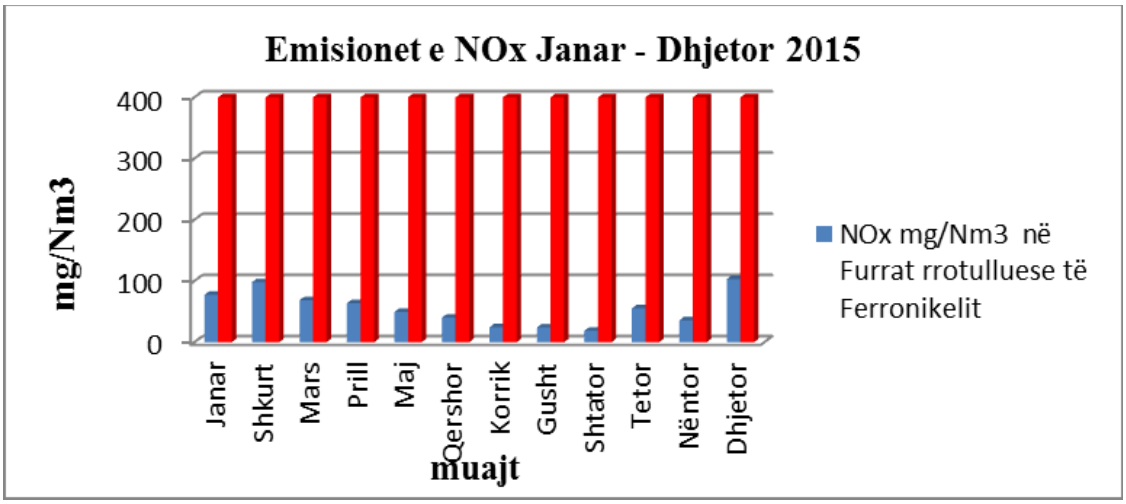


Fig.19. NOx measured emissions in mg/Nm3 during 2015

4.3. SharrCem Area and its impact on the environment

Sharrcem reports on MESP / EMCDK on a monthly and annual basis about the environmental situation. Some data from the Annual Report 2015 and the monthly reports will be presented for the purpose of assessing the state of the environment.

Tab 11: Performance of production facility

Environment Performance Indicators	***Year 2015***
Production of clinker [t/yr]	**357,140**
Cement products [t/yr]	**630.203**
NOX, [mg/Nm3]	**409.54**
SOX, [mg/Nm3]	**7.93**
Powder, [mg/Nm3]	**2.31**
Cooler for clinker/powder mg/Nm3]	**0.36**
Cement mills 1 & 2 - powder, [mg/Nm3]	**5.36**
Total emissions- CO2 [t CO2/yr]	**319,215**
Specific emissions CO2 [kgCO2/t clinker]	**893.81**
Specific emissions CO2 [kgCO2/t cement]	**570.82**
Specific energy consumption, [kcal/kgclink]	**865.39**
Specific consumption of electricity, [kWh/t cem]	**100.70**
Specific water consumtion, [l water/t cement]	**141.76**
Alternative raw materials [%]	**16.16**
Clinker/cement ratio, [%]	**67.93**

Evaluation of emissions for 2015

Below are graphs of Powder, SO2 and NOx emissions in SharrCem.

Powder emissions in mg / Nm3- In fig. 20, the powder emissions in Sharr Cem are displayed, during the months of March - December 2015, it is seen that the values are very low compared to the allowed value.

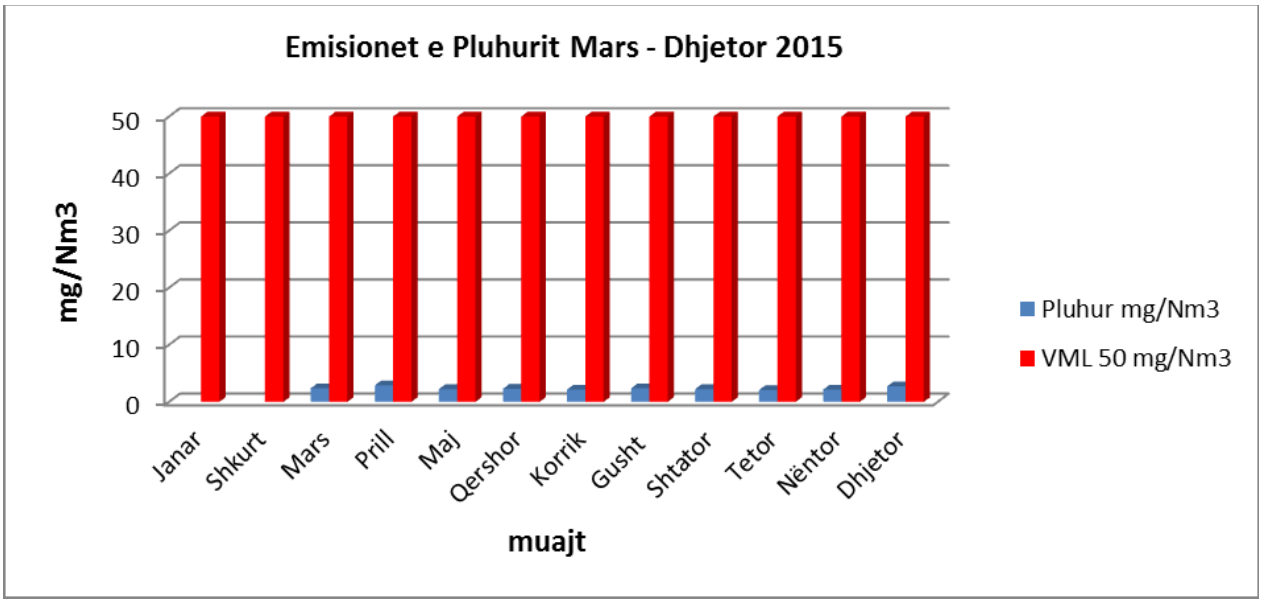


Fig. 20. Average monthly emission value of Powder in mg / Nm3 during 2015

SO2 emissions in mg / Nm3 - Figure 21 shows SO2 emissions at Sharr Cem, showing that values are very low during March to December 2015

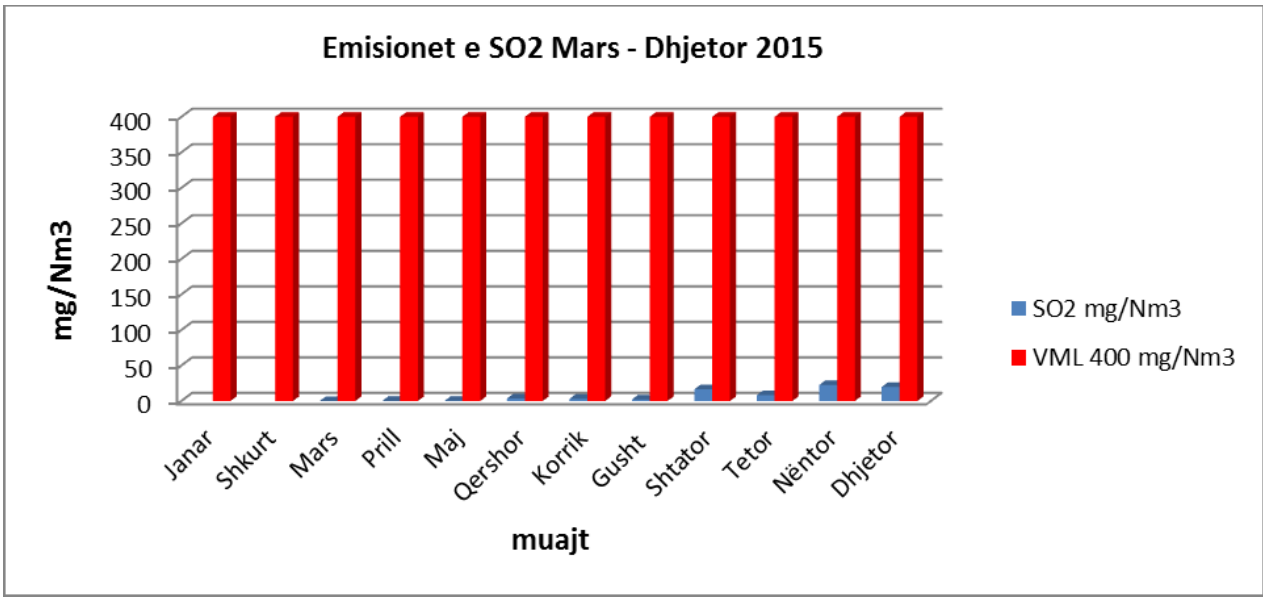


Fig.21 Average monthly SO_2 emissions values in mg/Nm3 during 2015.

Nox emissions in mg/Nm3 - Figure 22 shows NOx emissions at Sharr Cem, showing that there are no overtakings during the months of March - December 2015.

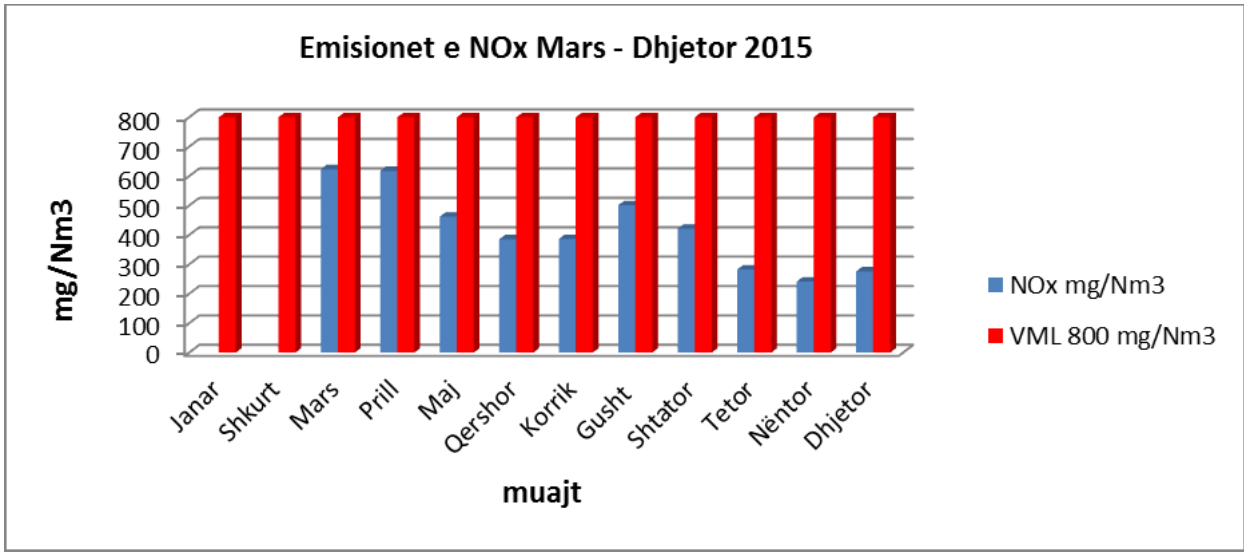


Fig.22. Monthly average of NOx emission values in mg/Nm3 durin 2015

Environmental projects carried out by SharrCem

- ✓ Construction of sewage treatment plant / WTTP
- ✓ Action Plan for reducing noise emissions at the plant
- ✓ Action Plan for Changing the Direction of Noise Spread in the Packaging Sector
- ✓ Three Year Plan of Action for the Reduction of Dust Emissions 2014 - 2016

Annual Report on the state of the Environment in Kosovo

- ✓ Reconstruction of the storage facility for temporary storage of solid and liquid waste that is generated.
- ✓ The annual plan for the rehabilitation of Dimsa quarry during 2015 as well as the five (5) year plan, 2016 – 2020

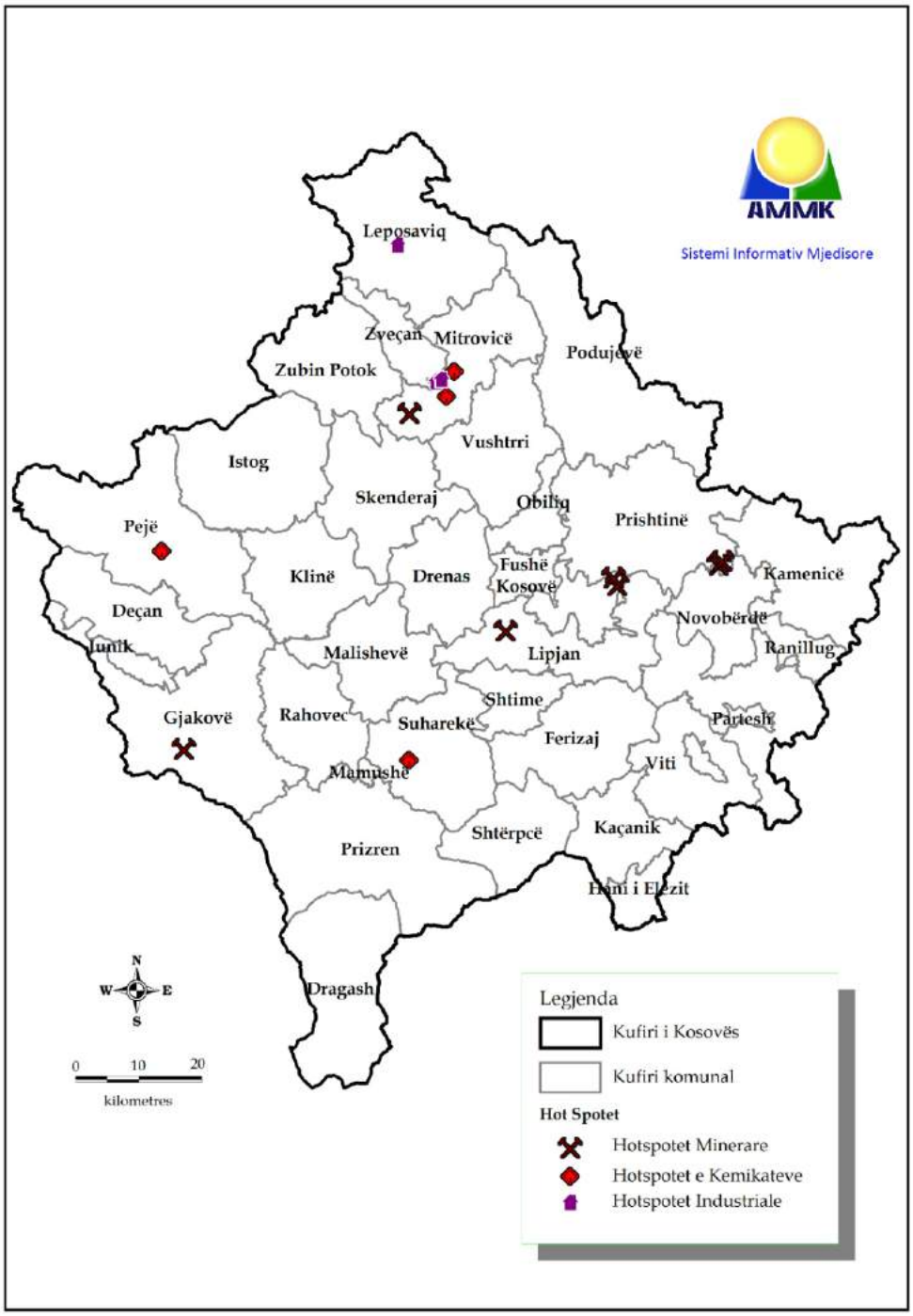
4.4. Other Endangered Areas (Environmental Hotspots)

In the country, as in recent decades and in recent years, hotspots originating from the metallurgical and mining, chemical, agricultural and urban industries have been inherited and created. According to the report of Hotspots published by AMKK, our country counts about 28 and most of them are distributed without criteria and without prior environmental impact assessments. Presently, the depots and waste dumps from metallurgical and mining industrial products take the lead in terms of impact on the environment. These stored wastes contain heavy metals which are environmentally sensitive to the environment. (Table 12).

Despite investments in environmental improvement either from institutions or from external financial support, one can not yet speak of a positive trend of eliminating or rehabilitating these hotspots. Within the framework of these can be mentioned the project on the elimination of phenols in KEK and the rehabilitation process of the ash dump in Mirash.

Tab.12: Industrial hotspots, mining and chemicals

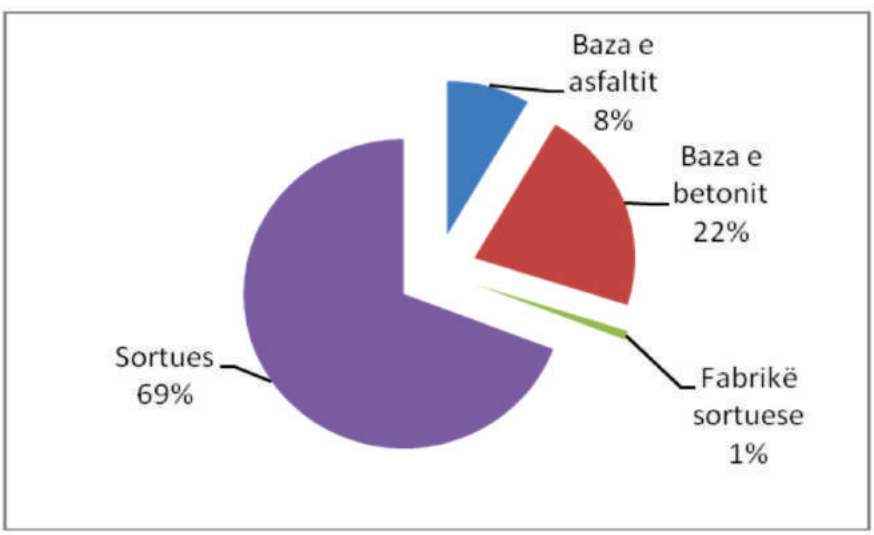
Location	Activity	Area
The mine landfill near the dam of Lake Badovc Kishnica, Gracanica	Content of Pb, Zn,	2.85 ha
Disposal of sterile material, mining waste of Kishnica, Gracanica	Content of Pb, Zn,	10.23 ha
Heavy Metals landfill, Gracanica (rehabilitated)	Content of Pb, Zn	70 ha
Mining landfills in Artanë / Mareci 1 and 2	Lead and Zinc deposits	2.38 ha
PIM-Mitrovicë	Waste of heavy metals from zinc metallurgy, jarosite process, artificial fertilizer plant, batteries, zinc electrolysis, pyrite burning	115.10 ha
	and gypsum phosphor residue	
PIM –Mitrovicë	Deposits with materials Radioactive materials of Nitrite Thorium	0.04 ha
"Tuneli i Parë" –Mitrovicë	Storage of radioactive materials: Strontium, Torium and Americium	0.03 ha
Industrial landfill in Zvecan	Heavy metal deposit	62.28 ha
Industrial landfill in Leposaviq	Heavy metal deposit	20.31 ha
Depot in Kelmend-Mitrovica	Heavy metal deposit	23.78 ha
Chromium mine flotation in Deve-Žakova	Chromium flotation	5.23 ha
Mine in Gollesh, Lipjan	Magnesia and Other heavy metals	15.13 ha
Facility of the former AgroCulture Enterprise in Shirokë - Theranda Municipality	Warehouse for garbage Pesticides and fertilizers	0.04 ha
Facility of the former Vehicle Factory in Peja	Warehouse for dangerous industrial chemicals	0.12 ha



Map: Spatial coverage of industrial, mining and chemicals hotspots

5. Use of natural resources

One of the forms of direct impact on the environment is the exploitation of natural resources. The most common forms of utilization of natural resources are related to the use of water but also the utilization of inerts and minerals.
According to the data from the Water Department of MESP during the year three new water licenses were granted, 9 water permits were extended, 6 water permits and 38 water conditions were granted.
Another common form of exploitation of natural resources is the use of rock and other mineral resources through separations. According to the data from the Independent Commission for Mines and Minerals, in Kosovo there are licenses for separate sepaction activities of 107 economic operators.
Dominant operators classified as 69% or 74 sorters and classified as concrete base with about 24% or 23%, while those of the asphalt base type with about 8% or 9%. Viewed in terms of spatial extent, the municipalities of Prizren and Peja have the largest number of economic operators that as a major activity have the separation of stone or other minerals.



Viewed in terms of spatial extent, it is noticed that the municipalities of Prizren and Peja have the largest number of economic operators that as a major activity have the separation of stone or minerals

[15] *Independent Commission for Mines and Minerals (www.kosovo-mining.org)*

Another form of exploitation of natural resources is the use of inertes / gravel from rivers. This use has come as a result of the demand and the need for economic development and development. However, in many rivers of the country the use of inertia has become imperfect and has exceeded the capacity of river beds. This exploitation is accompanied by consequences not only on the river and bed ecosystem but also on the occurrence of floods and flooding of rivers.
Based on the data of the environmental inspectorate and the field visits conducted by the AMKK it is estimated that the environmental condition of the rivers continues to deteriorate by sand exploiters. The most degraded and still degrading rivers are: Drini i Bardhë, Lumëbardhi i Pejës, Ereniku, Lumi Desivojci, Krivareke River and Ibri. (Table 13).

Tab. 13: Degraded areas in rivers[16]

River	Area in ha
Drini i Bardhë	1011.75
Ibri	4.5
Morava e Binçit	4.79
Lumëbardhi i Pejës	134.5
Ereniku	19.48
Desivojca	18.95
Total	**1219.23**

6. Implementation of the Strategy and Action Plan for the Environment

6.1. Implementation of the Kosovo Environmental Strategy 2011-2021 and the National Environmental Action Plan 2011-2015

The Kosovo Environmental Strategy and the National Environmental Action Plan have been reviewed by MESP and other institutions involved in the process during

[16] *GFO2014, Degradation of rivers in Kosovo; Integrating ecological knowledge into nature conservation and ecosystem management, 44th annual meeting, Semptember 8-12 th, 2014, Hildesheim, Germany*

2010, and the project was supported by SIDA. In 2011, these documents were approved by the Government of Kosovo, but were not processed for approval in the Kosovo Assembly.

The main objectives deriving from the review of the Kosovo Environmental Strategy (CMS) 2011-2021 were:
• strengthening the environmental management system,
• Investing in areas with critical problems,
• raising awareness and awareness on the environment.

In support of the implementation of these strategic objectives, the National Environmental Action Plan 2011-2015 has been drafted so that these two documents will be a guide for all short-term and mid-term environmental investments (1-5 years) and Ensure that they are implemented in accordance with EU standards.

The overall objective of the NEAP (2011-2015) was to improve management and environmental protection in the Republic of Kosovo, creating a better quality of life for all citizens and sustainable economic, social and cultural development.

For the implementation of the objectives and objectives of CMS and NEAP 2011-2015, key actions have been defined and specific investments and deadlines are specified.
Table 14 shows the level of implementation of NEAP 2011-2015, based on priorities, projects and investment goals by environmental sectors.

Tab. 14: Level of implementation of priorities, projects and investment goals by environmental sectors foreseen in the NEAP 2011-2015

Priority	The purpose of investment	Implementing Institution	Timeframe	Level of implementation	Comment
Wastewater	Construction of infrastructure for large wastewater treatment plants (WWTPs) in seven main centers	MESP DKA, PSP Municipalities	2012- 2015+	Partly	It is in the process of construction of the sewage plant in Prizren, while procedures have been initiated for the plants in Prishtina, Peja, Mitrovica and Gjakova.
Water supply	Repair and expansion of water supply and sewerage networks in seven main centers	MESP DKA Municipalities	2011-2015	Partly	There has been ongoing investment in the expansion of water supply and sanitation networks in the seven main centers
Water management	Master Plan/Water strategy	MESP		Partly	A Water Strategy has been drafted and submitted for approval to the Government of Kosovo
Water management	River Basin Management Plan Project	MESP		Inception Phase	The River Basin Management Plan has not yet been drafted
Water Management	Rehabilitation of degraded areas of Drini i Bardhë River	MESP + Municipalities	2013-2015	Inception Phase	There have been no specific projects for the rehabilitation of the degraded areas of the Drini i Bardhë River
Water management	Rehabilitation of Sitnica river bed	MESP + Municipalities	2013-2015	Partly	Partly rehabilitated
Monitoring of waters	Increase of ground water monitoring points	MESP	2011-2013	Partly	A two-year pilot pilot program for surface water monitoring has been approved, a review of the plan is underway
Groundwater monitoring	Feasibility study for a groundwater network and creation of 30 monitoring points.	MESP	2012-2014	Inception Phase	A project that will start is designed Implemented during 2016, supported by SIDA
The legal framework for water	Drafting of relevant Administrative Instructions in the Water Sector	MESP	2011-2015	Partly	Some guidelines have been drafted, but no sub-legal basis has been completed with the relevant guidelines
Soil/Land	Preparation of cadastre for soil polluters	MESP	2013 - 2015	Partly	A cadastre was realized within the project "Monitoring of agricultural land pollution" Supported by the EU
Rehabilitation of contaminated areas	Rehabilitation of contaminated surfaces and regulation of KEK area	KEK	2011-2015	Completed	It was realized through a project for the rehabilitation of contaminated surfaces in Obiliq. And the project for the removal of hazardous wastes

Rehabilitation of contaminated areas	Rehabilitation of waste-littered areas	MESP + Municipalities	2015	Partly	There have been several projects in the municipalities supported by GIZ and within the campaign "Let's Clean Up Kosovo".
Energy Efficiency	Use of heat energy with the co-generating process Kosovo B power plant and network expansion	KEK Termokos, Pristina municipality	2010 – 2015	Completed	One part was realized during 2015, the second phase is in the process of being realized
Energy Efficiency	Implementation of energy efficiency measurement for households and industry	MESP MED KEK	2011-2014	Inception phase	No energy efficiency measurement program for households and industry has yet been implemented
Renewable Energy	Activities and capacity building measures for the use of renewable energy sources	MESP DKA	2012-2015	Partly	There have been several activities on the implementation of capacity building measures for the use of renewable energy sources (small hydropower plants, wind turbines, solar panels and photo valleys etc.)
Alternative energy sources	Promoting the use of gas, alternative energy sources	MESP MEI	2011-2015	Inception Phase	There has been no specific project to promote the use of gas as an alternative energy source
Energy production	Construction of new power plants with clean technology	DKA	20122015+	Inception phase	Construction of new power plants has not yet started
Energy Efficiency	Increased use of central heating systems	MLGA Municipalities: Kacanik, Peja	2012-2015	Partly	There are data that we talk about increasing the use of the district heating system
Energy	Stimulations and subsidies for Energy efficiency and the development of new technologies and alternative energy sources	DKA MESP	2012-2015	Partly	There have been bank credit facilities related to energy efficiency and MED facilitations for alternative energy use projects
Reducing pollution from energy production	Installing Desulfurization Equipment (KEK) and Installing New Filtering Equipment for Kosovo B	KEK, DKA	2012-2015	Inception Phase	There is no information on the realization of these projects at KEK

Mines	Rehabilitation of mines and exploited areas (abandoned quarries).	MESP MED	2012-2015	Not implemented	There is no data on the implementation of any specific project or program for the rehabilitation of quarries used
Mines	Rehabilitation of landfill sites (historical).	DKA	2012-2015	Partly	There is no information on any specific project for this issue
Mines	Treatment of acid mining waters (Pb, Zn).	MESP Trepca	2012-2015	Partly	For the treatment of acid waters of the Artana mine, feasibility study is carried out, with the support of UNDP and a detailed technical project for the construction of the treatment plant for this water is prepared. In the framework of Infrastructure Investment Projects for the period 2014-2020 - EU WBIF support, the project in question is on the priority list of projects.
Waste management	Construction of facilities and equipment for waste treatment	Government MESP Municipalities	2015	Partly	In the Regional Hospitals, seven (7) centers for the treatment of infectious diseases are constructed. The project is fully implemented and all centers are functioning well.
Waste management	Improve the management of municipal waste landfills	DKA MESP	2011-2013	Partly	The management of municipal waste landfills is not in the right level.
					The World Bank supported the Preparation of Pre-Admissibility for the modernization and extension of the municipal waste landfill in Dragash / Dragaš.
Waste management	Increase billing for waste collection	Municipalities ERO	2014	Partly	There was an increase in billing, especially with the implementation of new practices in some municipalities, for example. in Prizren
Management of construction waste	Strategies for the use of materials for construction and recycling of used building materials	MESP MED Municipalities	2012-2014	Inception Phase	There were activities mainly in the designation of municipal locations for construction waste. Municipalities Prizren, Rahovec, Pristina, Drenas.
Management of industrial waste	Developing a program for treating Trepca industrial waste landfill	Kosovo Privatisation Agency, Trepca	2015	Inception Phase	There is no specific data on the implementation of any Trepca industrial waste disposal project.
Recycling waste	Support for recycling waste through subsidies	MESP, PSP	2015	Inception Phase	There have been small initiatives but there is no specific program at the national level
Climate change	Inventory of greenhouse gas emissions (GHGs)	MESP	2011-2013	Completed	Kosovo through KEPA has completed the inventory of greenhouse gases for the period 2008-2014

Climate change	Drafting the Climate Change Strategy	MESP	2012-2013	Completed	The Climate Change Strategy has been revised. The Climate Change Action Plan is also prepared. These two documents together will be sent for approval to the Government of the Republic of Kosovo
Climate change	Capacity Building for Climate Change	MESP	2012-2014	Partly	Training was carried out within the various programs, especially within the framework of the ECRAN program and within the projects supported by UNDP and ADA
Industrial pollution	Defining mechanisms for the effective implementation of IPPC	MESP	2011-2015	Completed	The Law on Integrated Pollution Prevention and Control has established mechanisms for its implementation. So far, 2 Integrated Environmental Permits have been issued.
Chemical	Prepare a chemistry floor register which is prohibited and restricted for use	MESP	2013	Completed	A register has been prepared which is an integral part of AO no. 23/2015 for import of export and transit of certain floor chemistry - PIC procedure
Chemicals	Mechanisms for protection against harmful effects of hazardous chemistry floors.	Government MESP	2015	Inception	There are no specific mechanisms for protecting against harmful effects of hazardous chemistry.
Chemicals	Monitoring and control of hazardous chemistry manufacturers, importers and users	MESP Municipalities	2015	Partly	There is no program for monitoring and controlling hazardous chemistry manufacturers, importers and users
Chemicals	Creation of a competent body for the administration of chemistry floors	Government MESP	2014	Completed	With Law no. 04 / L-197, it is determined that the competent authority for the administration of chemicals is the Ministry of Environment and Spatial Planning
Transport	Improve the quality of public transport services	Ministry of Infrastructure Municipalities	2011-2013	Partly	There was no specific program or project in this area except the public transport project in the Municipality of Prishtina
Transport	Reduction of air pollution by using catalytic converters for old vehicles	MI	2012-2015	Inception Phase	An administrative instruction on mobile air pollution sources has been approved and its implementation is expected
Transport	Development of road concept for heavy vehicles in urban areas	MI MESP	2012-2015	Inception Phase	For the implementation of the Noise Protection Plans, Strategic Maps should initially be prepared

					Noise that will begin to be prepared after the adoption of the Law on Noise Protection which has been submitted to the Assembly for approval.
Transport	Development and implementation of noise and traffic vibration plan	MESP MI	2012-2015	Inception Phase	There is still no approved blueprint for noise and traffic vibration. There have been some activities related to the drafting of strategic noise mapping
Transport	Development Plan for improving the public transport system	MESP, MoF, Municipalities	2012-2015	Partly	A Multimodal Transport Plan has been drafted
Industry	Projects with Institutional Support based on Clean Technology and Renewable Resources	MESP DKA MoF	2012-2015	Partly	There have been a small number of projects with institutional support based on clean technology and renewable resources. Projects are mainly related to the requirements for operators applying for Integrated Environmental Permits.
Environmental Emergency	Emergency plan in case of accidents caused by hazardous chemistry floors	MESP	2012	Not implemented	There is no specific emergency plan in case of accidents caused by hazardous chemicals, although there is a plan
Environmental legislation	Completion, updating and drafting Of the new legislation and bylaws for all sectors involved in environmental protection in line with the EU acquis	MESP	2011-2015	Completed	MESP has drafted the legal basis and is in the process of completing by-laws, which to some extent is harmonized with the requirements of the EU acquis.
Supporting NGOs	Support for NGOs with regard to non-formal education	MESP	2011-2015	Inception Phase	So far the support of environmental NGOs by MESP and municipalities has been symbolic
Economic Instruments	Feasibility study for designing and creating economic instruments	MESP MLGA Municipalities	2011-2015	Partly	A preliminary study was conducted on the possibilities of creating environmental economic instruments;
Economic Instruments	Development of Ec-Fund	MESP MoF	2011-2013	Partly	MESP has prepared a draft law on the Environmental Protection Fund, and the Concept Paper for this draft law. The document has not been processed for approval with the justification that this does not allow the Law on Public Finances.
Economic Instruments	Draft Regulations on the Application of Economic Instruments	MESP	2011-2015	Partly	Analyzes for other opportunities are being made creating environmental economic instruments

Environmental education	Development of environmental education programs for all levels (kindergartens, schools, colleges, universities)	MESP MEST	2011-2015	Partly	The number of environmental education programs for all levels is still small. However, MESP has held continuous lectures on the environment in lower secondary schools, and has continuously cooperated with the teachers of these schools and distributed educational materials for the environment.
Public awareness	Raising public awareness of energy efficiency (production and use)	MESP DKA	2011-2016	Completed	There have been several projects from governmental institutions and NGOs to raise public awareness of energy efficiency
Public awareness	Raising public awareness and companies about hazardous chemicals	MESP Municipalities MEST + UP	2015	Inception phase	No concrete project to raise public awareness of hazardous chemicals has yet been implemented
Public awareness	Raise awareness about environmental protection from waste	MESP Municipalities MEST + UP	2015	Partly	Several campaigns and awareness-raising campaigns on environmental protection from waste have been implemented, especially on waste management and recycling
Biodiversity	Implementation of the Biodiversity Action Plan 2011-2015.	MESP Municipalities + UP	2012-2015	Partly	Several planned projects have been implemented within this plan
Biodiversity	Preparation of spatial and management plans for protected areas.	MESP	2012 -2015	Completed	A Spatial Plan and Management Plan for the NP Sharri was prepared, a Spatial Plan for MN Mirusha Waterfalls was prepared, the Spatial Plan for the NP "Bjeshkët e Nemuna" has been prepared.
Biodiversity	Protection of the Alps (Alps) as Ornithological Reserves (IBA regions) in accordance with international standards for the protection of birds	MESP	2012-2013	Completed	The Bjeshket e Nemuna are declared a National Park and enjoy protection under the applicable legislation as the second category of IUCN. This category means more strict protection of important bird areas that extend to this territory
Biodiversity	Preparing the Red Book for flora and fauna	MESP	2013-2014	Partly	The Red Book of Flora has been prepared, while the preparation of the Red Fauna Book begins in 2016 within the framework of the SIDA-supported program
Biodiversity	Protection of Sharr Mountains, such as Ornithological Reserves (IBA regions) in accordance with international standards for bird protection	MESP	2012-2013	Completed	Sharr Mountains have been declared National Park and have protection under applicable legislation as the second category of IUCN. This category means more strict protection of the important bird areas that lie in this area

Biodiversity	Growth of protected areas and their efficient management	MESP, Parliament, Municipalities	2012-2015	Completed	The number of protected areas has increased significantly, although there are still problems with their management in the absence of management bodies for some areas
Environmental information system	Develop a complete EIS related to EIONET for water, waste, air, soil and biodiversity.	MESP KEPA	2012-2015	Partly	Several subsystems and databases have been created for water, waste and biodiversity. There are regular reports on EIONET for some sectors
Cross-border cooperation	Regional cooperation for the fulfillment of the obligations deriving from EU legislation	MESP (Kosovo) MESP (Macedonia) MESP (Albania)	2013-2015	Partly	There are cooperation projects in the water sector (Drin River Basin), and in the Sector of Nature and Biodiversity Protection in the Sharri Mountains area and that of the Bjeshket e Nemuna

7. Measures taken to protect the environment

7.1. Approximation of National Environmental Legislation with the Directives of EU

The Kosovo National General Policy also includes the European integration process. Among the main challenges in this process is the environment, the fulfillment of European environmental standards and the approximation of the national environmental legislation with the European legislation.

The European Commission has monitored the progress of harmonizing Kosovo's environmental legislation with that of the EU and its implementation. The following table presents a summary of the EU's main environmental directives and their level of transposition into national environmental legislation. (tab 15)

Tab 15: Transposition of national environmental legislation with European Union directives

Scope	EU Directive	Level of transposition[17]
Horizontal legislation	Directive for EIA (85/337/EEC)	100%
	Directive on SEA (2001/42/EC)	100%
	Environmental Information Directive (2003/4/EC)	65%
	Directive on Public Participation (2003/35/EC)	100%
	INSPIRE Directive (2007/2/EC)	78%
	Environmental Crime Directive (2008/99/EC)	53%
	Environmental Liability Directive (2004/35/EC)	84%
Air quality	Air Quality Directive (2008/50/EC)	91%
	Directive 2004/107/EC of the European Parliament and of the Council of 15 December 2004 relating to arsenic, cadmium, mercury, nickel and polycyclic aromatic hydrocarbons in ambient air (4th Daughter Directive)	98%
	(2001/81/EC NEC Directive	11%
	Directive 1999/32/EC Sulphur Cont. Liquid Fuels	27%
	Directive 94/63/EC VOCs Petrol	98%
	Directive 2009/126/EU Stage II VOCs petrol	30%
Waste management	Framework directive on waste (2008/98/EC)	80%
	Waste battery directive (2006/66/EC)	40%
	Waste packaging directive (94/62/EC)	87%
	Directive 96/59/EC PCB/PCT	66%

[17] *Monitoring transposition and implementation of the EU environmental acquis, Year 17 , Progress Report 9 , Kosovo, Human Dynamics 2015*

	Directive 2000/53/EC End-of-Life Vehicles	100%
	Directive 99/31/EC / Landfill	100%
	Directive on the Limitation of Use of Certain Hazardous Substances in Electrical and Electronic Equipment (2011/65/EU RoHS)	50%
	EU WEEE Directive (2012/19/EC)	46%
	Directive 2006/21/EC Mining Waste	91%
Water Quality	Framework Directive on Waters (2000/60/EC)	49%
	Directive (91/271/EEC) UWWT	44%
	Directive (2006/118/EC Groundwater)	36%
	Drinking Water Directive (98/83/EC)	87%
	Nitrate Directive (91/676/EEC)	25%
	Directive (2006/7/EC Bathing Water)	0%
	Water Quality Standards Directive (2008/105/EC)	4%
	Directive (2007/60/EC Floods)	12%
	Directive (2009/90/EC Quality Assurance/Quality Control)	7%
Nature Protection	Directive (79/409/EEC)	100%
	The habitats directive (92/43/EC)	100%
	Directive (1999/22/EC Zoos)	80%
Industrial pollution control	Industrial Emissions Directive (2010/75/EU)	69%
	Direktiva Seveso III (2012/18/EU)	27%
	Directive VOC (2004/42/EC -VOCs from Paints, Varnishes and Vehicle Refinishing Products)	25%
Chemicals	CLP Directive (67/548/EEC)	65%
	Asbestos Directive (87/217/EEC)	82%
	Biocide Directive (98/8/EC)	84%
Noises	Environmental noise directive (2002/49/EC)	74%

7.2. Inspection and enforcement of the law

In the framework of the inspection carried out by MESP during the year 2015, 606 inspections with minutes, 130 decisions, 4 mandatory punishments, 59 initiations in the minor offense court and 558 orders, recommendations and remarks were carried out. Viewed in terms of sectors, most of the inspections and other legal procedures are carried out within the environmental sector. (Table 16).

Tab. 16: Inspections and other legal procedures by sectors

Sector	Actions
Environment	✓ 300 inspections with minutes ✓ 12 decisions ✓ 4 Mandatory Penalties ✓ 15 judicial initiations ✓ 287 Orders, Recommendations, Remarks, etc.
Waters	✓ 136 inspections with minutes ✓ 106 decisions ✓ 40 initiations ✓ 101 orders, recommendations, remarks, etc.
Spatial Planning	✓ 170 inspections with minutes ✓ 12 decisions ✓ 4 initiations ✓ 170 Orders, Recommendations, Remarks, etc.

Whereas in the nature protection sector in the framework of the requests for initiation of offense proceedings based on the Law on Nature and the Law on National Parks, during year 2015, KEPA on behalf of the Directorate for Administration of National Park Bjeshkët e Nemuna initiated 51 requests and 12 Other on behalf of the Directorate for Administration of Sharri National Park. Also KEPA on behalf of DAPK Bjeshkët e Nemuna has prepared 100 criminal reports, while on behalf of DAPK Sharri 48 other criminal reports, as well 74 requests were made for initiating civil lawsuit proposal for compensation of damages

7.3. Permits

According to MESP data, about 185 environmental approvals were issued in 2015, 11 licenses for waste management were issued and procedures for issuance of integrated environmental permits for 10 operators were initiated. While during the year 3 new water permits were granted, 9 water permits were granted, 6 water permits and 38 water conditions

7.4. Rehabilitation of soils, contaminated surfaces and monitoring theirs

During the year 2015, the Ministry of Environment and Spatial Planning has implemented several projects aimed at rehabilitating the soils, contaminated surfaces and their monitoring. Table 17 presents data for these projects

Tab. 17: Investments from MESP for rehabilitation of lands, contaminated surfaces and their monitoring 2015

Titel of the Project	**Project value €**
Cleaning and re-cultivating land in Obiliq	570,000.00
Project "Environment and You"	50,000.00
Greening and rehabilitation of a part of the Industrial Park in Mitrovica	20,000.00
Monitoring of Soil Pollution	35,000.00

7.5. Adjusting the river beds and cleaning them

The Ministry of Environment and Spatial Planning during 2015 has carried out several projects in cleaning the rivers and arranging their beds. Data on these projects and their amount are presented in Table 18

Tab. 18: Investments from MESP for the regulation of river beds and their cleaning during 2015

Title of the project	**Project value €**
Cleaning the Lepenc River from the Asbestos Remnants	250,000.00
Rehabilitation of Mirusha river bed in Gjilan	150,000.00
Rehabilitation of Krena River bed in Gjakova	190,000.00
Rehabilitation of the Erenik River bed in Junik	30,000.00
Rehabilitation of the Lepenc River bed in Kaçanik	100,000.00
Rehabilitation of Drenica river bed in Drenas	400,000.00
Improvement of infrastructure in the Bistrica River in Prizren	500,000.00

7.6. Developments and stagnations in strengthening environmental institutions

Among the main developments in the strengthening, affirmation and enhancement of technical capacities of environmental institutions should be distinguished:

- Establishment of the National Council for Climate Change,
- Capacity building of KEPA for the preparation of the Greenhouse Gas Inventory,
- Increase the number of licensed natural persons for drafting the Environmental Impact Assessment reports.
- Initiation of the laboratory accreditation process and staff of the Institute
- Hydrometeorology of Kosovo,
- Establish KHMI capacities for real-time flood and flood reporting and membership in the European Flood Awarens System (EFAS),
- Establishment of a Waste Management Information System,
- Initiative for the establishment of river basin regulatory authority,
- Start of subsidies of NGOs by MESP,

While, within the stalemate and obstacles in the strengthening of environmental institutions during this period are singled out:

- Lack of network for monitoring of groundwater,
- Lack of monitoring of the biological / ecological aspects of surface water.
- The small number of officials in the air monitoring sector,
- In MESP, there is no specific section on Climate Change,
- There is no special institution for the monitoring of chemistry floors,
- The small number of bachelor and master level programs in the field of environment,
- The small number of staff in the sector of nature, especially the Institute of Nature Protection,
- Limited capacity of municipalities in the environmental sector, Limited budget in the environmental sector.

8. Investments in environmental protection

Investing in the environment is one of the direct forms of environmental protection, improving the state of the environment and preventing adverse environmental impacts. The Kosovo Government, the largest share of environmental investments, has been directed through the budget for the Ministry of Environment and Spatial Planning. But also, municipalities and other institutions orient a part of the budget on environmental projects.

Analyzing the budget of the Ministry of Environment and Spatial Planning for the period 2014-2015, we notice that there has been a significant decrease both for the total budget and capital investments in the environment. While capital investments in the environment in 2014 were over 45 million euros, in 2015 they fell to around 35 million euros (table19)

Tab.19: Total budget and budget for capital expenditures of MESP 2014-2016[18]

	2014	2015	2016
Capital expenditures	44,957,255	34,901,813	**35,903,684**
Total budget	47,785,028	38,043,185	**39,357,027**

According to the donor activities report for the period 2012-2013, drafted by the Ministry of European Integration, most of the capital projects in the environmental sector were supported by the Central Budget of Kosovo by about 67% or € 103,730.00, while the community Of donors contributed by 33% or by € 50.292.397.
Donor investments have been oriented to different environmental sectors such as waste, biodiversity, land status assessment, spatial planning, climate change, capacity building, etc. The following table presents data on some of the important donor supported projects.

[18] *Ministry of Finance: www.mf.rks-gov.net*

Tab.20: Some of the environmental projects supported by donors 2012-2015

Name of the project	**Donor**	**Value of the project**	**Implementation period**
The third phase of the program Support Municipal Spatial Planning (MuSPP)	SIDA	7.8 million euro	2014-2015
Support in Water Management and Water Resources Monitoring	EU (IPA)	1.2 million euro	2012-2015
Support to Waste management	EU (IPA)	1.5 million euro	2014-2016
Study of pollution of agricultural land in Kosovo (Support to MESP and MAFRD)	EU (IPA)	1.8 million euro	2013-2015
Project for cleaning and recultivation of lands from the impact of the Energy sector	World Bank	3.7 million euro	2013-2015
Support for low emission developments	ADA and UNDP	0.5 million euro	2013-2015
Initiative to reduce the risk of natural disasters	UNDP	0.8 million euro	2013-2016
Cross-border cooperation for integrated management of water resources in the Drini i Bardhë basin	GEF (Global Environmental Fascilities)	1 million USD	2015-2018

Environmental projects during 2015 are also implemented by municipalities. Some of these projects are presented in Table 21.

Tab. 21: Municipal environment project

Name of the project	Value	Municipality
Extending the garbage collection service in rural areas	250.000,00	Mitrovicë
Cleaning the Iber River, Sitnica, Lushta and Trepça	45.000,00	Mitrovicë
Rehabilitation of illegal landfills in the Municipality of Podujeva	10.000,00	Podujevë
Expanding and cleaning the river bed in Bellopojë, Tërnava, Halabak and Bellopojë-Gërdofc-Batllavë	34,800,00	Podujevë
Rehabilitation of the Krusevo River bed	30.000,00	Dragash
Rehabilitation of the Brod river bed	45.000,00	Dragash
Rehabilitation of the Nerodime river bed	70.000,00	Ferizaj
Rehabilitation of the Gadime river bed	240.000,00	Lipjan
Rehabilitation of the Dobrajë river bed	155.000,00	Lipjan
Rehabilitation of the Llapllasellë and Gracanicë river beds	60.000,00	Graçanicë
Rehabilitation of the Sitnica river bed and construction of cascade	120.000,00	Fushë Kosovë
Elimination of illegal landfills and clean up the environment	200.000,00	Fushë Kosovë
Elimination of illegal waste landfills	30.000,00	Suharekë
Elimination of illegal waste landfills	15.000,00	Drenas
Waste management	800.000,00	Prizren
Waste management	35.000,00	Gajkovë
Solid Waste management	25.000,00	Rahovec
Development of awareness activities according to the environmental calendar	30.000,00	Prishtinë

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Appendix 1: Air quality data

*PM10/PM2.5-Annual average for 2015 (*No data available)*

	Month	January	February	March	April	May	June	July	August	September	October	November	December	2015	2015
	Monitoring locations	Monthly avg.	Monthly avg	Monthly avg	Monthly avg	Monthly avg	Monthly avg	Monthly avg	Monthly avg	Monthly avg	Monthly avg	Monthly avg	Monthly avg	**Annual avg**	**Daily exceeds**
VML,110-VML µg/m³ /40 50 monthly/annual), allowed 35 days	IHMK	74.93	45.3	31.48	31.25	27.8	23.37	24.7	26.9	25.3	30.6	62.68	79.0	40.27	74
	Rilindje	51.72	54.4	38.95	26.99	24.38	20.81	35.03	37.10	32.9	36.2	65.12	83.21	60.58	66
	Drenas	50.9	52,1	30.12	*	*	*	*	*	45.76	38.7	108.63	67.39	54.82	61
	Mitrovicë	62.1	60.58	*	*	*	*	*	*	*	*	*	*	60.58	13
	Pejë	73.95	48.78	25.25	19.18	13.67	12.20	12.76	7.97	*	*	*	*	23.56	7
	Prizren	79.77	67.1	*	*	9.06	8.95	11.34	*	*	*	*	*	35.24	22
	Brezovicë	*	*	*	*	*	*	*	*	*	*	*	*	*	*
	Hani i Elezit	124	64.69	*	23.22	*	17.7	26.14	18.5	*	61.4	44.3	56.7	47.49	45
	Gjilan	165.7	63.58	66.34	74.35	54.21	42.04	44.00	40.0	*	*	*	*	68.77	75
	Obiliq	87.83	46.7	49.74	*	*	*	*	*	*	44.8	93.36	100.7	58.65	90
	Dardhishtë	*	*	*	*	*	*	*	*	*	*	*	*		4
	Palaj	*	*	31.41	32.7	29.0	28.5	38.8	39.12	*	*	*	*	33.25	17
VM L2.5-µg/m³ annual, 25	IHMK	70.15	34	21.81	15.42	11.49	10.79	11.4	12.0	25.3	30.6	47.2	72.0	30.18	
	Rilindje	44.62	34.3	25.66	16.86	9.63	10.23	13.14	22.55	14.58	21.86	54.14	68.42	27.99	
	Drenas	*	20,1	20.81	*	*	*	*	*	20.16	23.81	71.62	67.39	40.75	
	Mitrovicë	*	49.4	*	*	*	*	*	*	*	*	*	*	49.4	
	Pejë	33,6	3,1	20.89	15.30	5.92	5.68	6.69	6.41	*	*	*	*	10.14	
	Prizren	85.63	5,1	*	*	*	*	**5.63**	2.9	*	*	*	*	31.38	
	Brezovicë	*	*	*	*	*	*	*	*	*	*	*	*	*	
	Hani i Elezit	7.9	4.47	*	1.66	*	1.30	1.38	1.12	*	9.52	10.5	13.5	5.70	
	Gjilan	173.2	60.4	40.76	28.0	*	*	15.6	23.4	*	*	*	*	56.89	
	Obiliq	155.9	50.2	41.56	*		*	*	*	*	33.7	70.9	92.33	74.09	
	Dardhishtë	*	*	*	*	*	*	*	*	*	*	*	*		
	Palaj	64,0	*	20.63	15.21	12.61	12.48	18.0	17.95	*	*	*	*	16.14	

SO_2, $\mu g/m^3$ -

	Month	January	Feb.	March	April	May	June	July	August	Sept.	October	Nov.	Dec.	**2015**
	Monitoring locations	Monthly avg.	Monthly avg.	Monthly avg.	Monthly avg	Monthly avg	Monthly avg	Monthly avg	Monthly avg	Monthly avg	Monthly avg	Monthly avg	Monthly avg.	**Annual avg.**
VML 125 µg/m³ për 24 orë, Lejohen 3 ditë me tejkalime brenda vitit	IHMK	5.86	1.07	1.08	1.34	1.75	1.08	3.12	2.9	4.34	4.7	8.3	10.9	3.87
	Rilindje	*	*	*	*	*	*	*	*	*	*	*	*	
	Drenas	55.39	57.8	58.9	*	*	*	52.7	*	3.06	6.23	17.18	14.67	33.24
	Mitrovicë	*	*	*	*	*	*	*	*	*	*	*	*	
	Pejë	3.01	3.01	*	*	*	*	*	*	*	*	*	*	3.01
	Prizren	4.27	4.27	*	*	5.05	3.06	9.61	6.62	*	*	*	*	5.48
	Brezovicë	*	*	*	*	*	*	*	*	*	*	*	*	
	Hani i Elezit	14.4	5.59	*	15.73	*	29.08	32.22	32.22	*	38.5	40.3	42.9	27.88
	Gjilan	125.1	12.6	*	*	*	*	*	*	*	*	*	*	68.85
	Obiliq	55.9	78.8	9.68	*	*	*	*	*	*	*	*	*	44.24
	Dardhishtë	30.6	21.7	7.59	12.4	2.78	1.70	*	*	*	*	*	*	9.23
	Palaj	56.9	48.6	5.37	3.13	1.73	1.60	8.85	8.85	7.59	5.48	4.63	7.28	9.37

CO mg/m³ Mesatarja vjetore për vitin 2015

	Muaji	Janar	Shkurt	Mars	Prill	Maj	Qershor	Korrik	Gusht	Shtator	Tetor	Nentor	Dhjetor	2015
	Lokac. e monitorimit	Mes. mujore	Mes. mujore	Mes. mujore	Mes. mujore	Mes. mujore	Mes. mujore	Mes. mujore	Mes. mujore	Mes. mujore	Mes. mujore	Mes. mujore	Mes. mujore	**Mes. vjetore**
VML mg/m³ 10„ për mesatarën ditore, brenda vitit	IHMK	3,09	3.08	4.18	3.40	3.34	3.23	3.29	3.89	7.2	4.58	5.5	6.65	4.39
	Rilindje	*	*	*	*	*	*	*	*	*	*	*	*	*
	Drenas	*	*	*	*	*	*	*	*	0.45	0.65	1.14	1.45	0.92
	Mitrovicë	*	2.1	*	*	*	*	*	*	*	*	*	*	2.1
	Pejë	3.5	0.9	3.99	4.49	5.43	4.76	*	*	*	*	*	*	3.84
	Prizren	4.95	1.3	*	*	2.95	2.79	4.13	3.85	*	5.0	6.7	*	3.95
	Brezovicë	*	*	*	*	*	*	*	*	*	*	*	*	*
	Hani i Elezit	0.27	0.38	*	1.04	*	0.79	1.30	1.3	*	1.13	0.9	1.05	0.90
	Gjilan	5.32	1.94	1.37	1.15	1.16	1.80	1.49	1.53	*	*	4.08	4.5	2.43
	Obiliq	*	2.33	1.71	*	*	*	*	*	*	*	*	*	2.02
	Dardhishtë	1.61	1.01	0.85	0.39	0.27	0.23	*	*	*	*	*	*	0.55
	Palaj	1.54	1.15	1.21	0.33	0.32	0.31	0.41	0.41	*	*	*	*	0.71

CO mg/m³--

	Month	Jan.	Feb.	March	April	May	June	July	August	Sept.	October	Nov.	Dec	**2015**
	Monitoring locations	Monthly avg.	Monthly avg.	Monthly avg.	Monthly avg.	Monthly avg.	Monthly avg.	Monthly avg.	Monthly avg.	Monthly avg.	Monthly avg.	Monthly avg.	Monthly avg.	**Annual avg.**
VML mg/m³ „ për mesatarën ditore, brenda vitit	IHMK	3,09	3.08	4.18	3.40	3.34	3.23	3.29	3.89	7.2	4.58	5.5	6.65	4.39
	Rilindje	*	*	*	*	*	*	*	*	*	*	*	*	*
	Drenas	*	*	*	*	*	*	*	*	0.45	0.65	1.14	1.45	0.92
	Mitrovicë	*	2.1	*	*	*	*	*	*	*	*	*	*	2.1
	Pejë	3.5	0.9	3.99	4.49	5.43	4.76	*	*	*	*	*	*	3.84
	Prizren	4.95	1.3	*	*	2.95	2.79	4.13	3.85	*	5.0	6.7	*	3.95
	Brezovicë	*	*	*	*	*	*	*	*	*	*	*	*	*
	Hani i Elezit	0.27	0.38	*	1.04	*	0.79	1.30	1.3	*	1.13	0.9	1.05	0.90
	Gjilan	5.32	1.94	1.37	1.15	1.16	1.80	1.49	1.53	*	*	4.08	4.5	2.43
	Obiliq	*	2.33	1.71	*	*	*	*	*	*	*	*	*	2.02
	Dardhishtë	1.61	1.01	0.85	0.39	0.27	0.23	*	*	*	*	*	*	0.55
	Palaj	1.54	1.15	1.21	0.33	0.32	0.31	0.41	0.41	*	*	*	*	0.71

NO_2 µg/m³--

	Month	January	Feb.	March	April	May	June	July	August	Sept.	October	Nov.	Dec.	**2015**
	Monitoring location	Monthly avg.	Monthly avg.	Monthly avg.	Monthly avg.	Monthly avg.	Monthky avg.	Monthly avg.	Monthly avg.	Monthly avg.	Monthly avg.	Monthly avg.	Monthly avg.	**Annual avg.**
VML µg/m³ , vlerë mesatare vjetore	IHMK	25.5	18.1	16.41	16.92	15.64	15.45	32.31	34.78	31.9	31.9	43.2	45.1	27.26
	Rilindje	27.65	28.27	24.2	19.67	22.68	17.93	21.61	37.80	53.3	37.6	41.3	51.1	31.92
	Drenas	*	*	*	*	*	*	6.69	8.49	19.23	18.81	31.56	26.3	18.51
	Mitrovicë	*	8.1	*	*	*	*	*	*	*	*	*	*	8.1
	Pejë	19.1	5,4	5.2	4.88	4.47	3.12	*	*	*	*	*	*	7.354
	Prizren	43.2	12,2	*	*	14.36	15.64	24.25	18.25	*	3.85	31.9	*	21.63
	Brezovicë	*	*	*	*	*	*	*	*	*	*	*	*	*
	Hani i Elezit	*	*	*	*	*	*	*	*	*	*	*	*	*
	Gjilan	60.3	20.1	29.53	33.55	27.8	*	45.68	37.6	*	*	31.3	32.3	35.35
	Obiliq	46.3	20.3	11.78	*	*	*	*	*	*	*	*	*	29.04
	Dardhishtë	28.3	13.1	10.73	9.97	8.07	6.96	*	*	*	*	*	*	12.85
	Palaj	18.3	7.7	3.33	2.36	4.44	3.96	8.91	8.91	*	17.6	10.49	17.9	9.44

O3 µg/m3--

	Month	January	Feb.	March	April	May	June	July	August	Sept.	October	Nov.	Dec.	**2015**
	Monitoring locations	Monthly avg.	Monthly avg.	Monthly avg.	Monthly avg.	Monthly avg	Mes. mujore	Monthly avg.	Monthly avg.	Monthly avg.	Monthly avg.	Monthly avg.	Monthly avg.	**Annual avg.**
VML µg/m3 120, vlerë mestare vjetore	IHMK	*	*	*	35.8	31.8	35.05	77	74.2	36.1	37.6	26.4	13.1	40.78333
	Rilindje	*	*	*	*	*	*	*	*	*	*	*	*	*
	Drenas	*	*	*	*	*	*	93.6	81.02	49.72	33.4	17.26	12	47.83333
	Mitrovicë	*	18.2	*	*	*	*	*	*	*	*	*	*	18.2
	Pejë	6.1	15,1	77.84	44.56	*	*	*	*	*	*	*	*	42.83333
	Prizren	10.4	20,1	*	*	66.8	75	*	10.32			*	*	40.63
	Brezovicë	*	*	*	*	*	*	*	*	*	*	*	*	*
	Hani i Elezit	50.8	32.7	*	73.6	*	103.34	126	100.6		50.4	52	55.2	71.62667
	Gjilan	4.78	*	*	*	*	*	*	*	*	*	*	*	4.78
	Obiliq	23.8	23.3	23.51	*	*	*	*	*	*	*	*	*	23.51
	Dardhishtë	35.1	47.1	51.91	51.7	56	60.9	*	*	*	*	*	*	53.522
	Palaj	30.4	38.2	42.78	46.28	45.11	48.59	27.9	49.17	51.34	35.24	24.24	11.79	38.19096

0-Days with exceedance in 2015

Muaji	Janar	Shkurt	Mars	Prill	Maj	Qershor	Korrik	Gusht	Shtator	Tetor	Nentor	Dhjetor	**2015**
Lokac. e monitorimit	Mes. mujore	Mes. mujore	Mes. mujore	Mes. mujore	Mes. mujore	Mes. mujore	Mes. mujore	Mes. mujore	Mes. mujore	Mes. mujore	Mes. mujore	Mes. mujore	**Tejkalime Ditë**
IHMK	8	10	**3**	**2**	1	1			1	5	20	23	74
Rilindje	3	8	**4**	0	**0**	0		1		5	21	24	66
Drenas	4	5	**2**	*		*			8	6	18	18	61
Mitrovicë	5	8	*	*	*							*	13
Pejë	3	4	**0**	**0**	**0**	**0**						*	7
Prizren	16	6	*	*	0	0						*	22
Brezovicë	*	*	*	*	*	*						*	*
Hani i Elezit	6	13	*	0	*	0				6	7	13	45
Gjilan	7	11	**21**	28	8	3	2	2				*	75
Obiliq	17	8	**10**	*	*	*				6	22	27	90
Dardhishtë	*		**4**	*	*	*						*	4
Palaj	*		*	4	1	**1**	6	5				*	17
	68	77	44	34	10	5	8	8	9	28	88	105	484

Appendix 2: Physical, chemical and heavy metals parameters monitored by IHMK[19]

Indicators	Symbol	Unit	Frequency of measurements / year
PARAMETRAT FIZIK			
Time	h	0:00	11
Weather	M	vrojtim	11
Water temprature	Wt	0C	11
Air temprature	At	0C	11
Scent	Sc	Smelling	11
Color	Col	Co/Pt	11
The blur	Bl	NTU	11
Electrical conductivity	χ	µScm-1	11
Water soluble matter	M.tert.	mg/l	11
Concentration of hydrogen ion	pH	0-14	11
CHEMICAL PARAMETERS			
Dissolved oxygen	DO	mg/l O2	11
Oxygen saturation	Os	%	11
Chemical exhaustion of oxygen	CEO	mg/l O2	11
Chemical exhaustion of oxygen with dycromat	CEO dkr	mg/l O2	11
Biochemical Oxygen Exhaustion	BOE5	mg/l O2	11
Biochemical Oxygen Exhaustion	BOE7	mg/l O2	11
Total Organic Carbon	TOC	mg/l C	11
Total suspended matter	TSM	mg/l	11
Detergents	DET	mg/l	11
Ion Nitrates	NO3-	mg/l	11
Nitrates azot	N-NO3-	mg/l N	11
Ionization of nitrates	NO2-	mg/l	11
Nitrates	N-NO2-	mg/l N	11
Ion amonium	NH4+	mg/l	11
Amonium nitrate	N-NH4+	mg/l N	11
Total inorganic nitrate	TIN	mg/l N	11

[19] *Only blue marked rows have been evaluated and presented in this report.*

Non-ionized amonium	NH3	mg/l	11
Non-ionized nitrate amonium	N-NH3	mg/l N	11
Total organic + inorganic nitrate	AT	mg/l N	11
Total organic nitrate	ATO	mg/l N	11
Ortophosphate	PO43-	mg/l	11
Phosphorus orthophosphate	P - PO43-	mg/l P	11
Total phosphorus (poli + orto)	Ptot.	mg/l	11
sulphate Ion	SO42-	mg/l	11
Total hardness	Th	0dH	11
Calcium solidity	Fca	mg/l	11
Magnesium solidity	FMg	mg/l	11
Calcium ion	Ca+	mg/l	11
Magnesium ion	Mg+	mg/l	11
P-Alkalinity	Pa	ml 0.1 e HCl	11
M-Alkalinity	Ma	ml 0.1 e HCl	11
Total alkalinity	AT	mmol/l HCl	11
Bicarbonates	HCO3-	mg/l	11
Free chlorine	Cl2	mg/l	11
chlorides	Cl-	mg/l	11
silicate	SiO32-	mg/l	11
Silicon on silicate	Si - SiO32-	mg/l Si	11
Chlorophyll a	Chlorophyll a	µg/l	11
Phenol	C6H5OH	mg/l	11
HEAVY METALS			
chromium	Cr3+	µg/l	2
cadmium	Cd2+	µg/l	2
nickel	Ni2+	µg/l	2
Zinc	Zn2+	µg/l	2
Manganese	Mn2+	µg/l	2
copper	Cu2+	µg/l	2
iron	Fe2+	µg/l	2
Lead	Pb2+	µg/l	2

Shtojca 3: Kodet e stacioneve të monitorimit të kualitetit fiziko -kimik të ujërave sipërfaqësore- lumenjtë

Code	Location	River	Emptying
RV01_011	Radavc	Drini i Bardhë	Mediterrenean Sea/Adriatic Sea
RV01_012	Klinë	Drini i Bardhë	Mediterrenean Sea/Adriatic Sea
RV01_013	Gjonaj	Drini i Bardhë	Mediterrenean Sea/Adriatic Sea
RV01_014	Vermicë	Drini i Bardhë	Mediterrenean Sea/Adriatic Sea
RV01_021	Istog	Istogu	Mediterrenean Sea/Adriatic Sea
RV01_022	Zllakuçan	Istogu	Mediterrenean Sea/Adriatic Sea
RV01_031	Stërnac i ulët	Klina	Mediterrenean Sea/Adriatic Sea
RV01_032	Klinë	Klina	Mediterrenean Sea/Adriatic Sea
RV01_041	Drelaj	Lumbardhi i Pejës	Mediterrenean Sea/Adriatic Sea
RV01_042	Pejë dalje	Lumbardhi i Pejës	Mediterrenean Sea/Adriatic Sea
RV01_043	Grabanicë	Lumbardhi i Pejës	Mediterrenean Sea/Adriatic Sea
RV01_051	Banjë e Malishevës	Mirusha	Mediterrenean Sea/Adriatic Sea
RV01_052	Volljakë	Mirusha	Mediterrenean Sea/Adriatic Sea
RV01_061	Deçan Hyrje	Lumbardhi i Deçanit	Mediterrenean Sea/Adriatic Sea
RV01_062	Kralan	Lumbardhi i Deçanit	Mediterrenean Sea/Adriatic Sea
RV01_071	Jasiq	Ereniku	Mediterrenean Sea/Adriatic Sea
RV01_072	Ura e Terzive	Ereniku	Mediterrenean Sea/Adriatic Sea
RV01_081	Zhdrellë	Rimniku	Mediterrenean Sea/Adriatic Sea
RV01_082	Xërxë	Rimniku	Mediterrenean Sea/Adriatic Sea
RV01_091	Buqallë	Toplluha	Mediterrenean Sea/Adriatic Sea
RV01_092	Piranë	Toplluha	Mediterrenean Sea/Adriatic Sea
RV01_101	Prevallë	Lumbardhi i Prizrenit	Mediterrenean Sea/Adriatic Sea
RV01_102	Vllashnje	Lumbardhi i Prizrenit	Mediterrenean Sea/Adriatic Sea
RV02_011	Kushtovë	Ibri	Black sea
RV02_012	Mitrovicë	Ibri	Black sea
RV02_013	Kelmend	Ibri	Black sea
RV02_021	Bablak	Sitnica	Black sea

RV02_022	Lipjan	Sitnica	Black sea
RV02_023	Vragoli	Sitnica	Black sea
RV02_024	Plemetin	Sitnica	Black sea
RV02_025	Nedakovc	Sitnica	Black sea
RV02_026	Mitrovicë	Sitnica	Black sea
RV02_031	Marincë	Llapi	Black sea
RV02_032	Podujevë	Llapi	Black sea
RV02_033	Milloshevë	Llapi	Black sea
RV02_041	Bresje	Prishtevka	Black sea
RV02_051	Vragoli	Graqanka	Black sea
RV02_061	Pjetërshticë	Drenica	Black sea
RV02_062	Vragoli	Drenica	Black sea
RV02_071	Devetak	Shtime	Black sea
RV02_072	Vojnovc	Shtime	Black sea
RV03_011	Korbuliq	Morava e Binçës	Black sea
RV03_012	Kllokot	Morava e Binçës	Black sea
RV03_013	Ranillugë	Morava e Binçës	Black sea
RV03_014	Domoroc	Morava e Binçës	Black sea
RV03_021	Marec	Kriva reka	Black sea
RV03_022	Domoroc	Kriva reka	Black sea
RV04_011	Prevallë Subain	Lepenci	Mediterranean Sea / Aegean Sea
RV04_012	Kaçanik	Lepenci	Mediterranean Sea / Aegean Sea
RV04_013	Hani i Elezit	Lepenci	Mediterranean Sea / Aegean Sea
RV04_021	Jezerc	Nerodimja	Mediterranean Sea / Aegean Sea
RV04_022	Bifurkacioni	Nerodimja	Mediterranean Sea / Aegean Sea
RV04_023	Gërlicë	Nerodimja	Mediterranean Sea / Aegean Sea
RV04_024	Kaçanik	Nerodimja	Mediterranean Sea / Aegean Sea

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