



Kosovo's Agency for Environment Protection

A REPORT OF ENVIRONMENT SITUATION

2006-2007

Pristine 2008

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Dear readers, well-minded of the environment

Foto e
Ministrit

In your hand, there is a document, informing you about real environmental situation in Kosovo .The objective of this document is not, only information about the environmental situation, but through this, is presented commitment of Governmental and non-governmental institutions for implementation of the adequate environmental policies to improve the environmental situation.

This document has its importance, is published in the time when Kosovo is oriented on building of the modern state, and integrated in to European Union .In this approach, in addition to other challenges we will be faced even with fulfillment of environmental requirements and needs, where undoubtedly is the assessment of the situation in environment will be one of the fields of the highest priority.

Fulfillment of these obligations necessarily will require a bigger engagement, not only of Ministry of environment and Spatial Planning, but all of our society. Therefore, our zeal together with our institutions and other relevant organizations for environment protection will be involved on drafting appropriate environmental policies .Then, implementing these policies, to build effective mechanisms and instruments in protection of the environment quality.

We are aware that the priority of the Republic of Kosovo will be economical development, which will be accompanied with growth and exploitation of natural resources and increasing the new energetic capacities, which necessarily will increase the impact in the environment. Undoubtedly that impact in the environment will be increased by development of other sectors as well ,as are: transport,industry,urbanization ,agriculture ,etc.Having in regard these conditions ,MESP will try maximally to respect the main principle of environment protection ,in relation to economical development ,principle of sustainable development ,so "to fulfill current vital needs ,without prejudice of this right of future generations".

In this time, where world's attention is oriented in protection of the Globe from climatic changes, we will be engaged as well to give our contribution on prevention of the lawless utilization of the natural resources, forest protection, expansion of the green areas, improvement of the technology in power stations, favoring using alternative energy etc.

Therefore, we hope that this report will be a valuable contribution in advancing, improvement and anticipate the settlement of the environment protection in concern in the Republic of Kosovo.

Mahir Yagcilar
Minister of the Ministry
of environment and Spatial Planning

Speech of Chief Executive

Kosovo's Agency for Environment Protection, as a new institution, in a relatively short period of its functioning, has achieved evident results on monitoring of environment, increasing the environmental information system, and reporting about the situation in the environment.

As monitoring institution and national centre for environmental information, the KAEP, among other tasks, has prepared the general report of environmental protection.

Real and continuous reporting about the situation in the environment is a very important form of the public information, and a good instrument and a good course of the policies, strategies and priorities for the Country's future.

Also, in Kosovo there are acting some institutions dealing with the matter of the environment protection and, there is a considerable number of data about the situation of air, water, soil, and biodiversity, and these data have been distributed incompletely, unprocessed and often access has been difficult.

KESP has collected data about the situation in the environment, pressures made to the environment from sectors as are; transport, energy, industry, agriculture etc., from governmental and non governmental institutions, and from other sources. These data have been processed and now are presented in this report of the environmental situation.

To achieve results in environment protection, there is a need of cooperation and engagement of all.

Thanksgiving is not directed only to the staff of MESP, which has worked hard in this report, but it is directed to all individuals, governmental and non governmental institutions, who have given their contribution through offering appropriate data for drafting of this report.

I would like to use this opportunity to deepen the cooperation for the benefit of the environment protection of the Republic of Kosovo.

By increasing the cooperation and increasing of integrated monitoring system we hope that, reporting quality, collection and processing of environmental data, will be increased.

Building of these systems will offer more in our goals to be integrated in EU and in the democratic developed global countries.

With respect,
Ilir Morina

Chief Executive of KAEP

INTRODUCTION

Drafting of the report about the environmental situation in Kosovo, is based in Law of environment protection .Ministry of Environment and Spatial Planning and every two years reports to the Governmnet of Kosovo ,about the situation in the environment ,this report is presented to the Assambley of Kosovo.

In accordance with duties and responsibilities of governmental institutions, the Kosovo's Agency for environment protection is the institution drafting this report.

This report, presents the situation in the environment for the period 2006/2007, but previous informations are included as well with objective of comparison. This first official report about the situation in the environment is preceded officially but the Ministry of Environment and Spatial Planning.

Based on acceptable models of reporting and in the existing environmental circumstances in Kosovo, KAEP, has collected environmental data from monitoring institutions, companies, operators, and different establishments, publications, reports and other sources. To fulfill the requirements of the report, data collected are processed in qualitative environmental informations and now are presented through this publication these data are in form of text, tables, maps and graphic presentations.

The report offers data for instigators and pressures in environment, describes current situation of mediums in the environment and the impact of this form, treats followed policies for protection and

conservation of the environment and engagement of the governmental and non governmental institutions and society in general, to improve the situation. Such reporting, known as DPSIR model presents a concerns about all environmental problems in the country and it is a very suitable method for assessment of the situation in the environment.

Considerably drafting of this report is oriented by the selection of indicators which have been more suitable for assessment of the situation in the environment. We tried that selected indicators ,have scientific base and be available to all those who will use this report.

Contrary to maximal engagement, this report has its deficiencies, which in the first view are as a result of data deficiency for many important issues, lack of integrated monitopring of the environment, legal base and other institutional and managing laxness.

We should accept that the quality of reporting, implemented in a national level, and the level of organization of the environmental information system. Knowing that these two systems are not nor organized in an appropriate level, we can make a conclusion lack of completed data and their credibility is an important indicator of the environmental situation in Kosovo.

In the first instance ,the objective of this report is information of the opinion for environmental situation in Kosovo, however its details are as a good base for drafting of adequate environmental policies, and orientation of developments, planification and strategic investments in a sectors

which have an impact in the environment ,as are:economy ,energy ,transport and agriculture etc.

Through the reporting of the collected data in this document KAEP ,intents to fulfill conditions to establish the bases of the cooperation and reporting with European Agency for environment and EIONET-in ¹ , delivering the informations about the situation of the environment in kosovo, in these environmental institutions of the European union+-.

Redactors of this publication are greatful to all those who have given their contribution in completion of this document, even through offering appropriate informations, or giving their suggestions or remarks

Introduction

We do appreciate, and welcome all commitments, remarks and suggestions of the institutions, experts and well-minded of the environment, which will help us very much during drafting of future publications, and increasing quality and their credibility.

By publicatiuon of this document ,it is completed the process of preparation of report about the environmental situation in Kosovo for period of 2006-2007, but reporting process and commitment for environment protection is not ended. Environment protection is a right and responsibility of all, therefore each of us will give a maximum in realization of the responsibilities belonging to us, that certainly tomorrow we will have a healthier environment than today.

¹ Rrjeti ndërkombëtar i monitorimit mjedisor



REPORT REDACTORS AND PARTNERS

Preparation of basic material and processing of information on drafting of this report has been carried out by Kosovo's Agency for Environment Protection, in cooperation with institutions mentioned below:

Ministry of Environment and Spatial Planning
 Hydrometeorological Institute of Kosovo
 Department of Environment Protection

Ministry of Agriculture, Forestry and Rural Development
 Kosovo Forest Agency

National Institute of Public Health

Ministry of Mines and Energy
 Department of Energy
 Department of Mines
 Department of Strategy and Development
 Institute of Technological Research of Lignite and Mines

Ministry of Transport and Post Telecommunication
 Vehicle Department
 Department of Transport, Civil Aviation and Railways
 Department of Road Infrastructure
 Department of Information Technology and Telecommunication
 Department of Road Transport

Ministry of Trade and Industry
 Department of Industry
 Department of Meteorology
 Department of Tourism
 Department of Trade
 Agency for Standards and Accreditation

Ministry of Public Services
 Kosovo Statistical Institute

Regulatory Office for Waters and Waste

Independent Commission for Mines and Minerals

INKOS Institute

Plant New Co Ferronikeli

Plant Sharr-cem

EAR

USAID

UNDP

GTZ

SIDA

Regional Water Supply "Batllava"

Office of KPC Coordinator

Prishtina International Airport

Ibër- Lepenci

Institute of Labour Medicine

Sanitary Dumping Site in SHARR

KLMC

Kosovo Pharmaceutical Corporation

Kosovo Customs

ABBREVIATION INDEX

MESP-	Ministry of Environment and Spatial Planning Hapësinor
HIK -	Hydrometeorological Institute of Kosovo
MAFRD-	Ministry of Agriculture, Forestry and Rural Development
KFA -	Kosovo Fores Agency
NIPH-	National Institute of Public Health
MEM-	Ministry of Energy and Mines
MTPT-	Ministry of Transport and Post Telecommunication
MTI-	Ministry of Trade and Industry
MPS -	Ministry of Public Services
KSI -	Kosovo Statistical Institute
KLMC-	Regulatory office for Waters and Waste
Institute-	INKOS
AER	
UNDP	
SIDA	
UNEP-	
REC-	
AIR BP-	Prishtina International Airport
ETMM-	Enti i Teksteve dhe Mjeteve Mesimore
FMNS-	Faculty of Mathematics and Natural Science
ESTAI-	Energy Sector Technical Assiatance Project
PJ-	Peta Joule
GWh-	
EUROSTAT -	
KEK-	Kosovo Energy Cooprporation
MW-	Mega Wat
ISO 14001-	
NATO-	
UNMIK-	United Nations Mission in Kosovo kosovë
GDP -	Gross Domestic Production
AHS-	
KPAE -	Kosovo's Plan for Action in Environment
KIPN -	Kosovo's Institute for Protection of Nature
ISP -	Institute of Spational Planning
SRSG -	Special Representative of Secretary General
WHO -	World Health Organization
EU -	European Union
MVL -	Maximum Value Limit
MPC L-	Maximum Permitted Concentration
KTA-	Kosovo trust Agency
QDH -	Questionare of Domestic Husbandries
COOP-	
DANIDA-	
KFOR-	
PCB-	
PCT-	
PBB-	
MCFM -	Municipal Centre of Family Medicine
MEST-	Ministry of Education, Science and Technology
PU-	Prishtina University
NGO -	Non- Governmental Organizations.

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I. PRESSURES

Sectorial pressures are part of standard methodology ,applied as a typology to represent impacts in the environment of the certain economical sectors and other sectors ,through which the man ,satisfying his socio-economic needs causes a delicate impacts in the environment.Exploitation of the area ,exploitation of the natural resources and diffeent kinds of services which have impact in the environment ,are reflected in changing of natural equiliber ,draining of natural resources and in the human health. Dimensions of these impacts, the mechanism of actions and effects in environment are dependant by many factors. Failing to take adequate measures on their prevention and elimination in the majority of the cases, causes unrecoverable effects to environment.

With objective of easier assessment of the impacts in environment, its practiced that sectorial effects, to be grouped on the base of economic activities, which in reality are treated as specific sectors.

Some of the economic activities as are energy, industry, transport etc, undoubtedly are resources with emphatic impact in environment, whereas, agriculture, fishery, forestry etc are in other reports with environment and as such are rather dependant from situation in the environment. The study of their impacts in the environment, never should be left alongside .Whereas, tourism is an economical sector which effects in the environment are identified lately.

The study of the impacts in the environment of sectors has an advantage, particularly in developing plannings and drafting of respective strategies. Besides the discussion of sectorialefects one by one ,it is in interst to be discussed areas in which brings the impact of the joint actions of some different sectors .Chemicals belong to this group ,production and their use nowadays is increased by some sectors

1. Socio –Economic Aspects

THE MIGRATION OF OVERALL NUMBER OF POPULATION AND PROGNOSIS

Kosovo for a long period of time (over 25 years) is facing with lack of statistics about the population, so the determination of the number of population is done mainly on the base of assessments and prognosis.

The overall number of Kosovo's population, even against the pressures and displacements, continuously has been increased with different numbers in a period after the Second World War.

During 53 years period of time (1948-2001) Kosovo's population had an increase of 235.5%.

Year	No.Of habitants	Coments
1948	727820	Registration
1961	963988	Registration
1971	1243693	Registration
1981	1584440	Registration
1991	1956196	Assesment
2001	2345000	Asesment
2011	2890000	Prognosis
2021	3360000	Prognosis
2031	3800000	Prognosis
2041	4180000	Prognosis
2051	4500000	Prognosis

Tabela 1 The movement of overall number of population in Kosovo 1948-2051

On the base of the projections of Kosovo's population, the overall number will continue to be increased in the 50 years of this century, even with the slwer rythms, comparing to 60, 70, and 80 -ties of the last century.

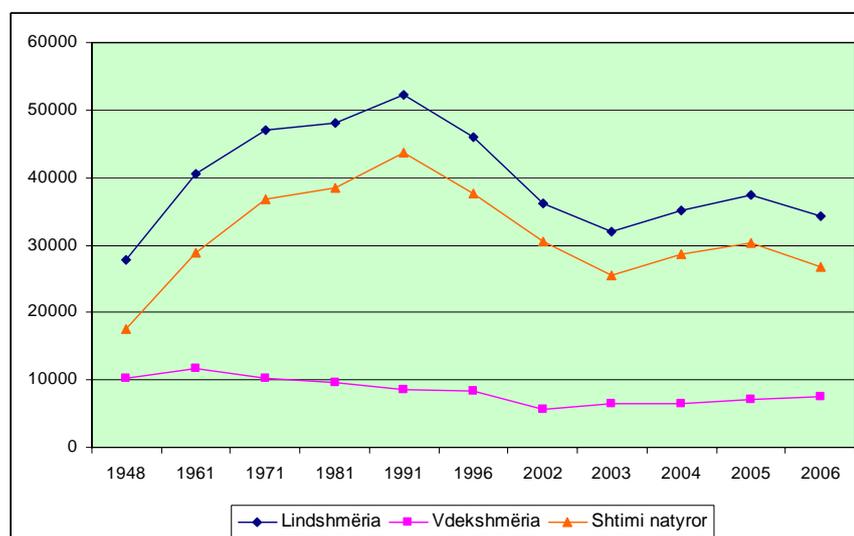
Growth of overall population has an impact in the environment in many aspects, from which the most important are: Impact in the production rate, utilization of natural resources, method of land utilization, as well as producing waste and pollution of environment.

The relation between population and impact in the environment in the first view is: more people spend more products, natural potential, cause more damages and produces more waste.

THE NATALITY OF POPULATION

The Kosovo's population has been rapidly grown during '60- ta, when the rate of natality was the highest in a period after the second world war ,with 29.9‰ (natality 44.1‰, whereas the mortality 14.2‰).

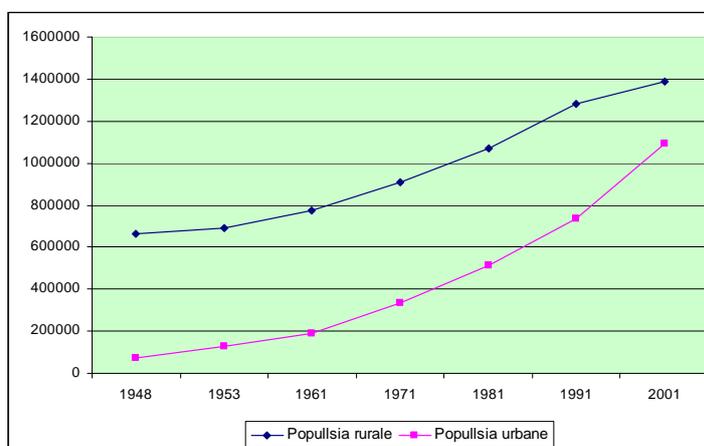
taking in to account data offered by Kosovo's Institute of Statistics ,in 2003 and 2006 ,in Kosovo has been registered the lowest level of natality in 1000 resident ,since the end of the second world war until nowadays.



Urbanization

In a period from 1948-2001 in Kosovo, there was a growth overall population, urban and rural, but trends of urban population has been more rapidly increased than overall ruralpopulation.

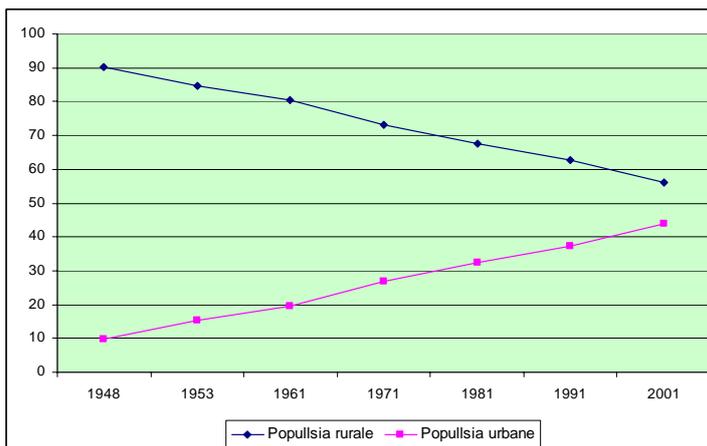
Comparing to 1948, in 2001 the Overall population indicates a growth for 235.5%, rural population 110.0%, whereas urban population indicates a growth of 1430.8%. As regards to the participation of overall population, the urban population achieves the highest level of growth in period of 1991/2001,



when the percentage of urban population is increased from 37% to 44%. This is related to the post conflict period, where there was a massive migration of the rural population towards urban locations, as a consequence of the destructions of the war.

By this level of urbanization, Kosovo is ranked among countries with lowest level of urbanization in Europe. But this level is quite enough debatable, because suburban parts of Kosovo's towns, mostly do not offer minimum conditions of urban life.

Even if urban environment ,in some aspects offer priorities ,comparing to rural environment they are more compact, have smaller areas per habitant, have efficacy in water and electricity supply ,better roads and better services etc, their negative impact in the environment is bigger than comparing to rural environment. Especially negative impact in the environment is increased



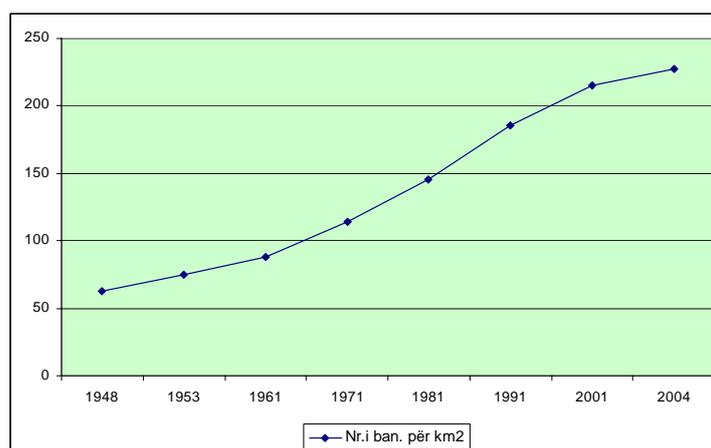
Grafikoni 4. Participation of rural and urban population in overall population of Kosovo 1948-2001

by uncontrolled migrations which are manifested through: density increase (overpopulation), of urban regions and depopulation of rural regions. Also constructions without any urban criteria in suburbs ,with deficit of infrastructure ,difficulties in accomodiation ,services of waste collection, uncontrolled disposal of rubbish from construction, upgrowth of sewage ,increase of quantity of sewage which are discharged untreated in the natural environment ,then socio-economic aspects as are: Increase of unemployment ,lack of qualitative health services ,hygiene status ,overload of educative institutions in towns and abandonment of those in villages , as it is the case with highland areas of Kosovo, reduction of the green surfaces in towns etc .

The traffic in urban environment is more densely and is a considerable source of environment pollution.

Density of population

By expansion of Kosovo's population, it has been expanded the level of average population per unit of area, from 62.7 (1948) in 227 (2004) people per km². This expansion, simultaneously presents the expansion of the impact of the population in the environment. The highest density of population is in the field lowlands (over 600 b/km²-fusha e Kosovës). In the highland regions is around the average of Kosovo, whereas in the montains there is a lower density than Kosovo's average.



Graphic 5. The density of population in Kosovo 1948-2004

In the lowlands, there is concentrated the highest number of population, industrial objects and urbanization, a factors which have a great impact in the environmental pollution.

Changes in the population's density in a geographic environment is related to some environmental problems ,as are :abandonment of rural environment (migrations toward citiesw) ,increased pressure in the environment in some regions 9 especially

urban and inability to satisfy accommodation desires ,employment ,infrastructure etc ,as well as other interventions through building in the agriculture areas ,interventions without any criteria in a water supply system ,increase of the waste quantity ,untreated sewage poured in the environment etc.

The structure of population per age

Kosovo's population is young. In 2006 age group from 0-19 years old is 38 %, age group from 20-64 is 56 %, whereas group age over 65 years old is 6 % of overall population.

Age group	1981	1991	2001	2006
0-19 old	52	48	41	38
20-64 old	43	47	54.1	56
Over 65 old	5	5	5.9	6

Tabela 2. The structure of population (%) on the base of age group, 1981-2006

The structure of population on the base of age group has an impact in the environment through production and consumption, because from this structure is developed work contingent and population contingent is represented as consumer.

Economic development

In a frame of economic development ,Kosovo has been characterized with unpractical structure of industrial departments ,because there were dominating extensive departments with low rate of finalizations ,which have produced few jobs ,as well as prices of the products were lower and controlled etc.

Until 50-ties Kosovo has been an unindustrialized region as in industry and mining were were employed only 3.1% of active population. In the midst of 1954/73, Kosovo was poorly industrialized with 5.1-12.5 %, whereas, from 1974, Kosovo enters in a in the phase of partially industrialization with 12.6-25% of active population in industry and mining.

In 1981, in mining and industry were employed 17.5% of active populations. After 1981, as a consequence of crisis the economic development of the industry fails, whereas after 1990, by dismissing of all Albanian employees, the economy and industry in Kosovo begins to be destroyed in large dimensions.

The low level of Kosovo's economic development will be treated through three main parameters, as are: unemployment, incomes per person and poverty.

Unemployment

Kosovo is characterized with highest level of unemployment in Europe as a result of dismiss of Albanian workers in 90-ties ,as a result of the conflict in 1998-99, where Kosovo's economy was destroyed in general. During all over post conflict period Kosovo was over 40%, with tendence of increasing of overall number of unemployed.

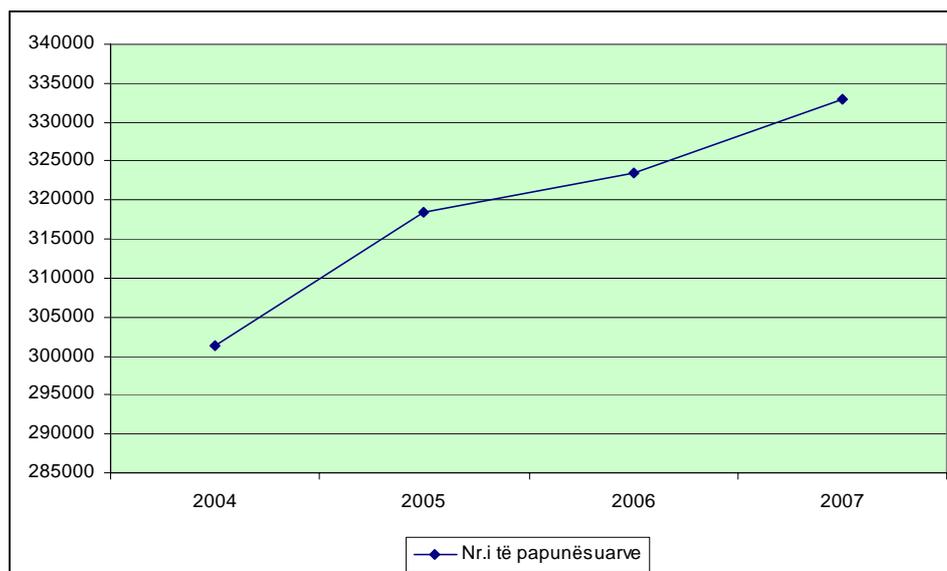


Table and Fig 7.the number of unemployed in 1988-2007 ¹

Notably, it is a concern the fact the highest level of unemployment includes the young age group from 15-24 years old (63.4%) and 25-34 years old (47.8%), as well as the highest level of unemployment of females over 60%.

Unemployment will be a serious problem for a long period of time for Kosovo's fragile economy.

Incomes per person

After '80-ties, degradation of Kosovo's economical situation is expressed by reduction of incomes per person. From 2000 the, incomes per person start to be increased, as a reason of assistance and different donations, rather than economic development of the country.

Years	1985	1990	1995	2000	2001	2002	2003
Incomes per person in €	1125	689	340	730	823	826	848

Table 3. Incomes in national level per person in Kosovë 1985-2003 ²

Kosovo has the lowest rate of the incomes per person in Balkan and Europe. Also it is among the countries with lowest incomes, also in a world dimensions.

Poverty

The low level of Kosovo's economic development and the highest level of unemployment, is a result of high level of poverty in Kosovo. If we take in to account the definition that: poor is considered a ménage with less than 2\$ per day, then we have that in 2004 in Kosovo there were living 60.6% of the population (12.9% in extreme poverty, with less than 1 \$ per person and 47.6% in a poverty with 2\$ per person, per day). Comparing to 2000 has not been noticed any improvement in respect of poverty in Kosovo, but the level of extreme poverty shows an increase from 11.9%(2000) to 12.9%(2004), whereas the level of total poverty is the same, including here more than half of population (50.3%).

Kosovo	%	Albania	Serbs	Ashkali	Others	Rural Places	Urban Places
		n					

² A report of human development in Kosovo 2002(p 106) and 2004 (pg 14)

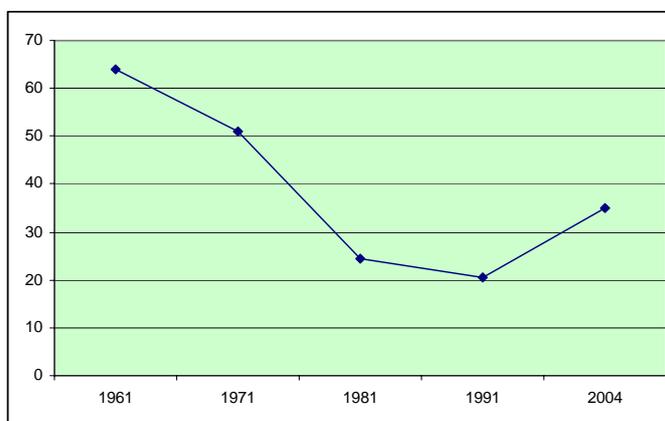
Poverty in national level	50.3	50.4	36.9	80.9	67.6	51.7	48.7
Extreme poverty	12.7	12.6	5.9	37.5	19.6	10.8	14.9
Persons with 1 dollar per day	12.9	12.8	3.9	36.7	16.8	10.6	15.1
Persons with 2 dollars per day	47.6	48.6	26.4	79.0	57.7	49.2	45.7

Tabela 4. General poverty on the base of nationalities and locations in Kosovo in 2004 ³

Based in the ethnic structure of the population and the level of poverty we may conclude a correlative relation between poverty and ethnic structure of the population. Municipalities with Albanian population are characterized with higher level of poverty, whereas the municipalities with Serb population have lower level of poverty. The spreading of the poverty per localities indicates a national poverty is higher in the rural localities, whereas the extreme poverty is in the urban localities.

Rural population

By increasing of the level of industrialization in Kosovo, the percentage of rural population has been continuously decreased until '90-ties of the last century. Consequently of the degradation of overall economic situation in Kosovo, in 2004 and comparing to 1991 we have an increase of participation of rural population within the overall



Grafikoni 10. Pjesëmarrja e popullsisë bujqësore në Kosovë 1961-2004

population. Rapid decrease of rural population after '90-ties was as a result, not only of economic development, but change of the methodology of registration of this population.

Localities

Kosovo has a relatively a large number of localities. In 2006 the overall number of the localities was 1466 of different types. The average number of residents per locality was 1600, belonging to an average of 7.4 km² of area, whereas the average distance between localities of 3 kilometres indicates the high density of Kosovo's localities. In 1991 from 1449 localities that Kosovo has had, 26 of them were urban localities whereas 1423 others were 9 mixed and rural). The average number of the residents per locality was 1350 residents, for urban localities 28073 residents, whereas for rural localities 1423 residents. The biggest localities in Kosovo are 7 regional centers (Urban localities) - Prishtina, Mitrovica, Ferizaj, Gjilani, Prizreni, Peja and Gjakova in which in the same year were living about 30% of overall population of Kosovo.

³ 2004 - Raporti i zhvillimit njerëzor në Kosovë 2004, UNDP, Prishtinë, 2004, fq. 126.

2. ENERGETICS

Energetics plays an important role in a modern human life. But its impacts in the environment are quite emphatic. Whatsoever, the method of energy production has a delicate impact in the environment due to operations following, providing of raw material transport of raw material to the production process and the consumption of energy.

Firstly are analysed overall emissions from energetic range, including here the pollution of air, water, land, waste management, noise and radioactivity. It is on the interest to be assessed possible accidents, happening during the production process, transport and consumption of energy. Achieving of an equilibration between the demand for energy and protection of the environment is a great challenge. Choosing types of energy sources and suitable technologies it is decreased the impact in the environment. For instance, if it has been chosen to be used natural gas, instead of coal, then emission of CO₂ will be decreased for 40 %. However, every energetic object in different forms and sizes has an impact in the environment. By constructing of water power station which will come to the disorder of the underground waters, and microclimate, and in that case will be disordered ecosystem of that area where the water power plant is constructed.

Production of the primary energy

Within the primary energy is included the energy obtained from resources of fossile origin (coal, wood, oil, gas etc.), the energy from water power stations, wind energy, solar energy, energy from wood firing, and energy from the waste t.

The structure of the consumed energy in Kosovo for 2005 and 2006 has not changed, comparing to the previous years. The natural gas does not contribute in balance of Kosovo's energy, because there is no gas production in Kosovo, while its import is estimated to be unconsiderable because of low participation in overall balance.

During 2005 Kosovo has consumed the quantity of energy of 2073 ktoe (similar to 2005)⁴. The contribution of oil import has been increased from 576 ktoe which was in 2005, in to 595 ktoe in 2006. The production of electricity is dominated by production of two power stations "Kosova A" and "Kosova B". The quantity of electricity, produced by these two power stations is calculated to be around 372 ktoe, whereas the quantity of electricity, produced by water power stations was, around 10 ktoe. The contribution of solar energy is still symbolic, but however it is registered a trend of increase of this form of production of energy from reiteration sources.

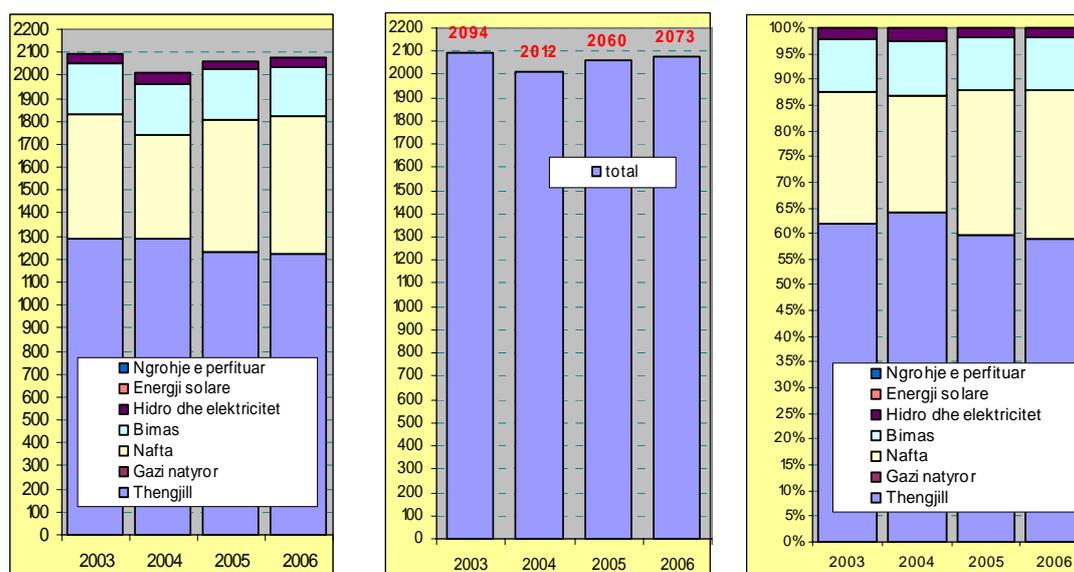


Figure 13: a) The total supply with primary energy sources (ktoe)
 b) The contribution in supply with primary energy resources (ktoe)
 c) Contribution in supply with primary energy resources (%)

⁴ MEM, The balance of Kosovo's energy for 2006, October 2007

World Bank Based on ESTAP (Energy Sector Technical Assistance Project) study, has presented the consumption of Kosovo's primary energy, calculating the participation of coal, oil and oil products and wood. The energy balance is figured in PJ (Peta Joule), but in GWh as well, as practiced and very popular unit in this field. A special presentation has been made for prognosis of energy demand until 2015, where it has been noticed a considerable increase. It is normal that covering the need for energy will be oriented in construction of new energy capacities, on the base of coal. It remains to initiate project to cover heating of the apartments, applying adequate methodology, to increase energetic efficacy. Prognosis to cover energy needs, base din waters, air, natural gas and solar, are not taken in to account, because of their low participation in total energy balance.

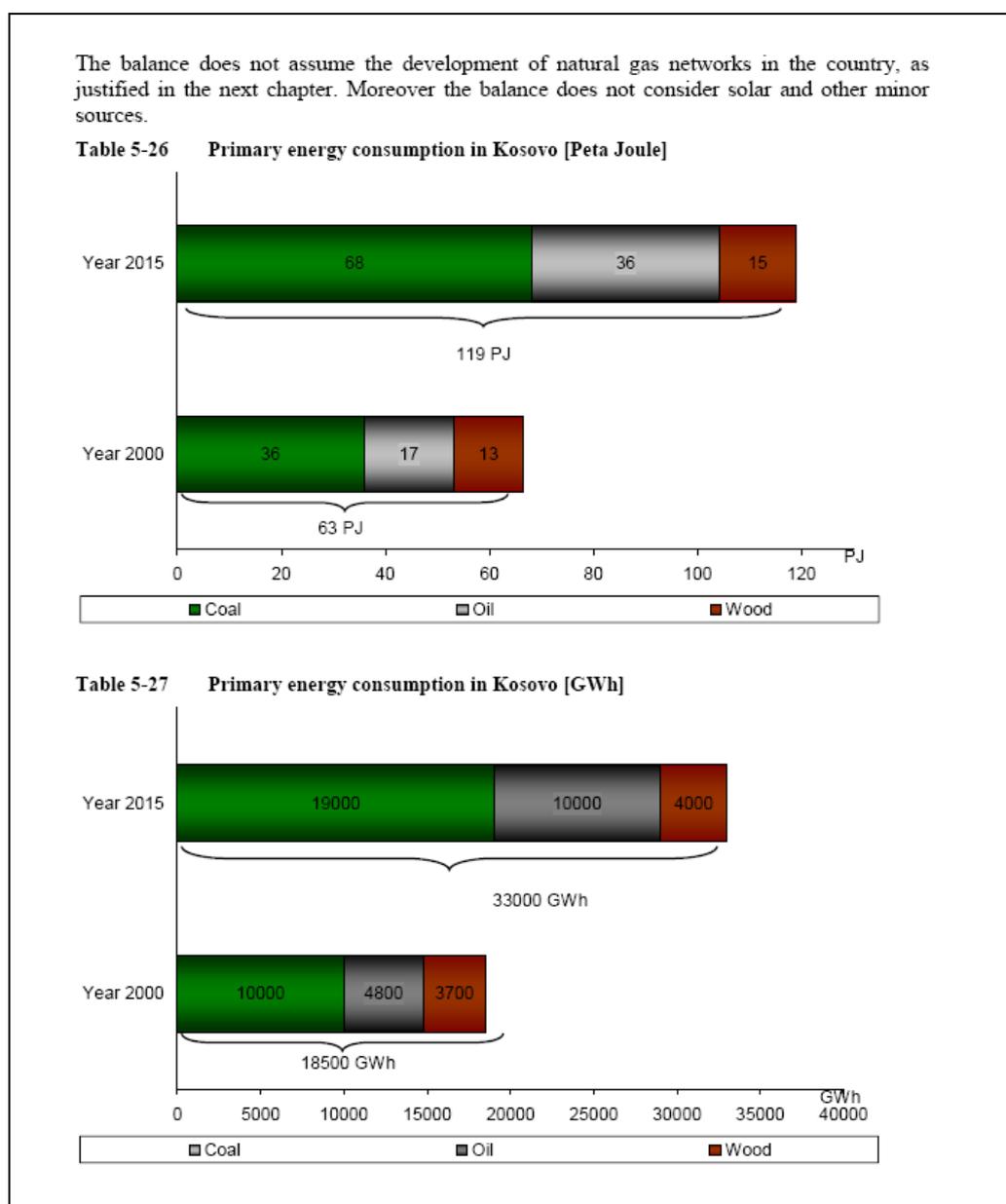
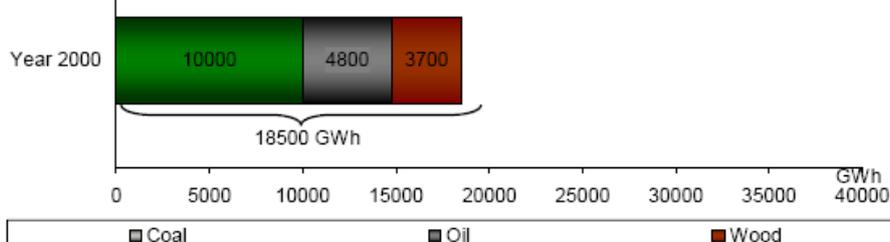
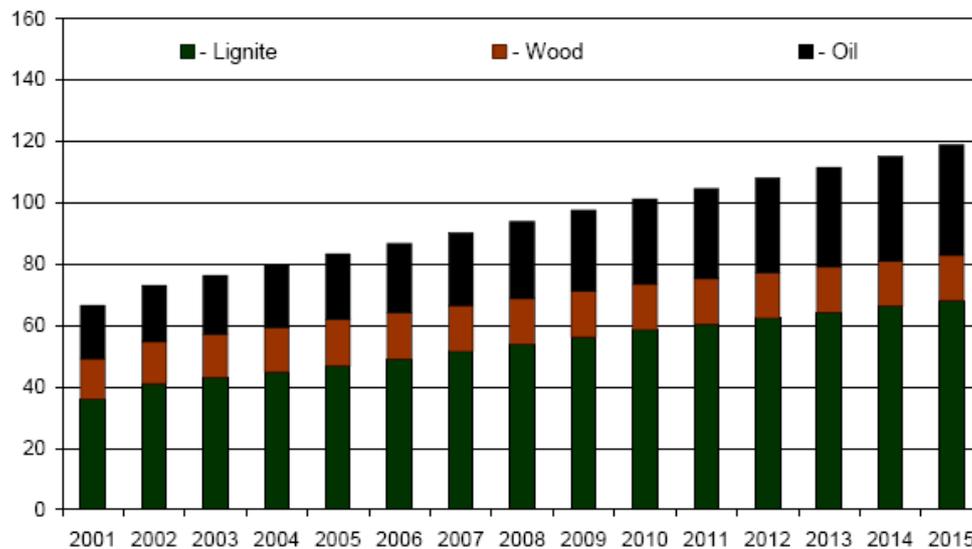


Fig.16. Primary energy consumption in Kosovo e, expressed in PJ (Peta Joule)





The main Problems, which have been identified and highlighted through analyses of historical development and possible trends in supply of energy sector in future, are:

- Increase of energy consumption by consumers during the transition period has brought in growth of the level of non technical losings (losings in the disatribution network) ,and reduction in providing supply;
- Lack of alternative resources of energy ,as well as low level of effective culture of consumers ,have made to be spent electricity in ineffective manner and without any criteria ,especially in the sectors of different services ,as are households ,and other sectors (traffic,heating ,etc.);
- Prices ,relatively high of other energy resources ,push consumers to be focused in using more the electricity;
- Increase of the level of interest in consumption of oil and petrol, particularly in transport, intensifies the need for import of these products By Kosovo suppliers.

The General consumption of energy - The consumption of energy is a key parameter for evaluation of the industrial development of the country. According to the determinations of the EUROSTAT-it, by consumption of energy is meant the final consumption of the resources for every sector separately. This definition includes energy consumed, but not the useful one.

Consumption of energy resources - In all sectors of economy in 2005 and 2006 (presented in figure 1), almost there is not evident in the structure of final consumption. But, comparing to 2004, the overall consumption of energy has been increased for 18 %. In 2006 the final consumption of energy in Kosovo has been 1113 ktoe. From fig. 1 we can see a domination of energy consumption by households (30-31%), transport (25-28%) and the trend of increase in energy consumption by different industry departments (18-21%). Alower participation indicate general services (13%) and agriculture (5 %)⁵.

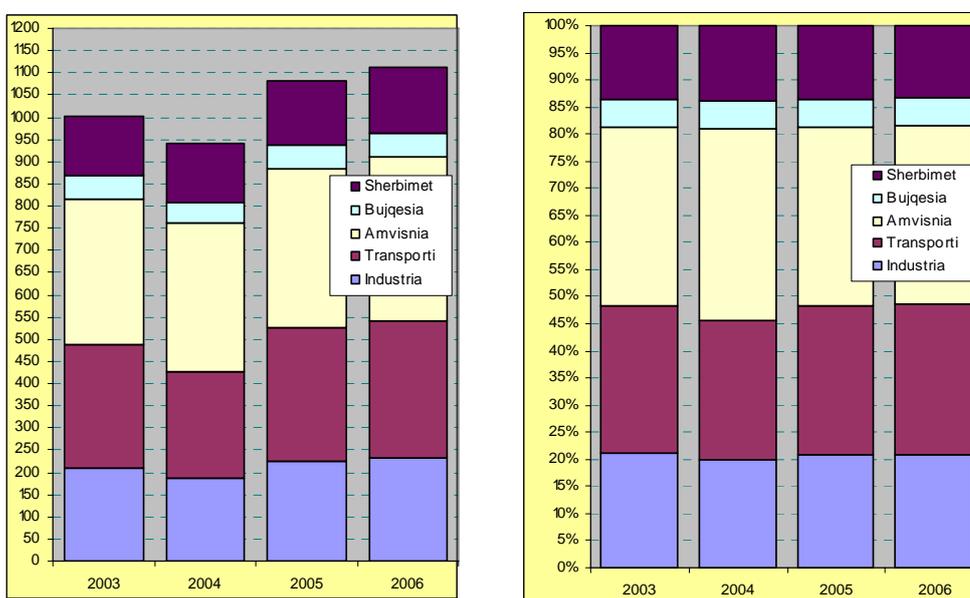
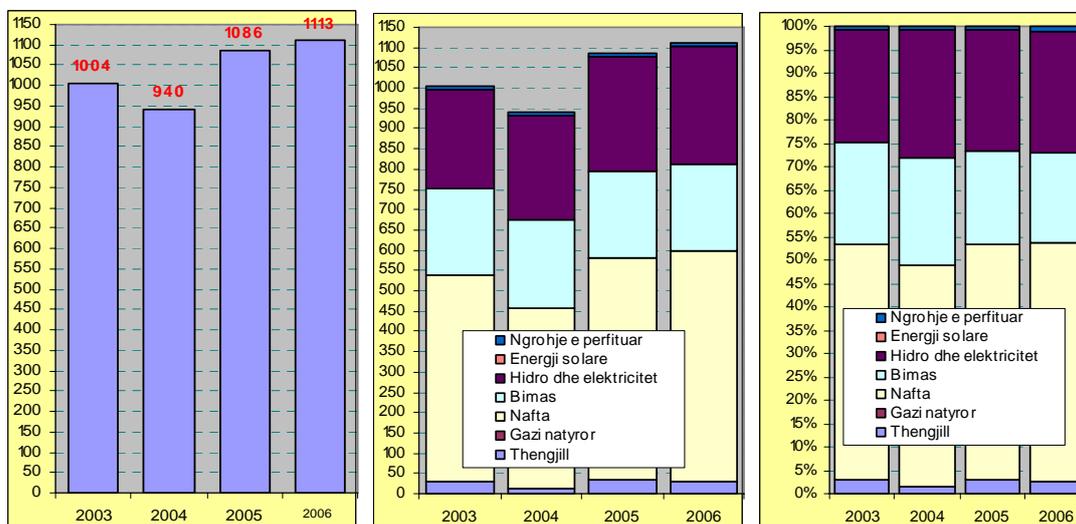


Figura 24: Energetic efficacy for Kosovo (%)

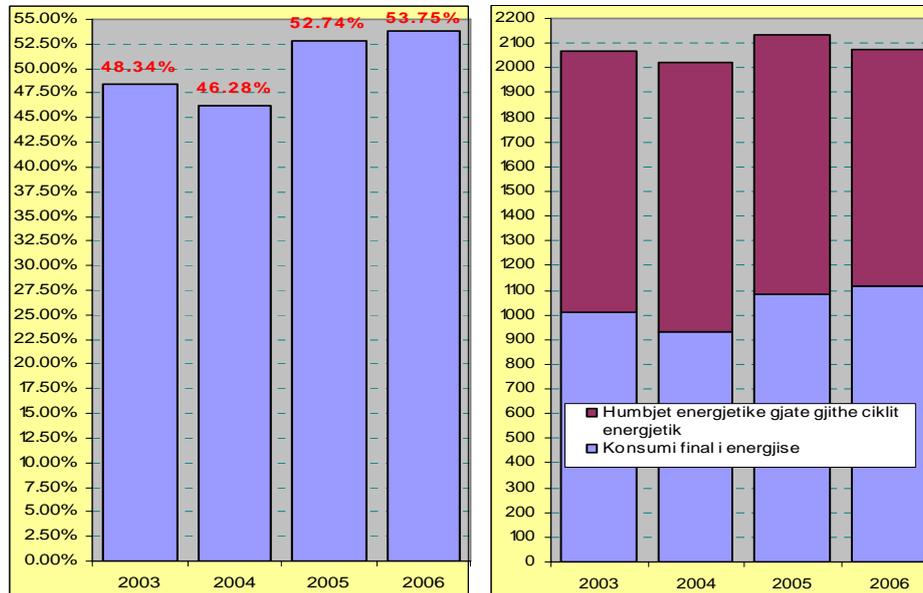
The general consumption of energy - In a period between 2003-2006 indicates that oil and oil by-products are the main contributors with about 60%, electricity with 25,87 %, fire wood with around 20 %, coal with 2,67 %, central heating around 1% and solar energy 0.1 %.



⁵ MEM, The energy balance in kosovo in 2006, and october 2007



Energy efficacy - is an important parameter to represent the situation in Kosovo's energy system. It is expressed through the report of final consumption of energy and overall consumption /bruto of it. Part of this report is presentation of energy losings.



Energetic Intensity - Energetic intensity represents a report between realized consumption of energy towards gross domestic production. Energetic intensity is treated for the first time in Kosovo, therefore in this report is represented as sectorial indicator, but not as total of energy. Completion with data will be done in cooperation with Institute of Statistics and Ministry of Energy and Mining.

Year	Services			Industry			Transport			Agriculture			Total GDP (Mil.€)
	BPV (Mil.€)	Intensity (ktoe/Mil.€)	Ktoe	GDP (Mil.€)	Intensity (ktoe/Mil.€)	Ktoe	GDP (Mil.€)	Intensity (ktoe/Mil.€)	Ktoe	GDP (Mil.€)	Intensity (ktoe/Mil.€)	Ktoe	
2003	430.44	0.319896	133.9 4	255.86	0.846099	210.5 8	351.94	0.9155447	342.3 5	1124.76	0.0480212	52.54	2163
2004	443.03	0.294902	118.9 9	267.44	0.696298	169.6 0	374.50	0.7444079	341.0 8	1175.374 2	0.0407741	43.65	2260
2005	462.80	0.315717	140.0 5	269.22	0.846297	218.3 9	407.19	0.8780696	390.2 9	1234.142 9	0.0451517	53.41	2373
2006	495.20	0.322031	152.0 1	285.37	0.837834	227.9 2	423.47	0.8605082	403.6 7	1299.840 4	0.0442486	54.83	2504

Tabela 5. Intensiteti energjetik sipas viteve dhe sektorëve shprehur ktoe/milion €

Production of electricity

The electricity sector in Kosovo is dominated by Kosovo Electricity Corporation⁶ – KEK Sh.A. The integrated system of electrical energy is consisted by two mines of lignite in Bardh and Mirash ,by two power stations using lignite “Kosova A” and “Kosova B”,with general effective capacity of 645 to 710 MË (from one installed capacity of 1478 MW), by transmission network (KOSTT Sh.A.) and dispatching, by distribution system and supply. Also, a modest quantity of electrica energy is produced by water power stations.

The main resources of energy (lignite) in Kosovo are situated in two biggest basins of lignite, named as “Kosova” and “Dukagjini” The estimated quantity of lignite is around 11.55- 14 miliard tons.

The only water power stations which are not incorporated in to a KEK are Gazivoda/Ujamn Water power stations17.5=35MW ,managed by watering companies (Ibër Lepenc Hydrosystem) ,and water power station “Lumëbardhi”, with installed capacity of 8,3 MW,managed by private investor.

98 % of electrical energy in Kosovo is produced using lignite as main resource of energy in power stations “Kosova A” and “Kosova B”. By such utilization of large quantities of lignite, the environment around KEK premises is pretty polluted.

Kosovo’s lignite ,except the consumption from power stations “Kosova A” and “Kosova B”, in 230 years it has been used for production of generatoric gas in departments of gasification ,in units of its dry out ,and in aother industrial capacities. Also the heating system with three stoves has been a considerable consumer of lignite.

After suspension in production of generatoric gas ,in 1988 KEK its production activities oriented mainly in production of electrical energy ,because energetical Complex and Chemistry (Gasification ,Azotic ,drying out system,and heating system) stopped the activity (Azotiku completely ,from gasification irregular work continued only air partition) , whereas the production capacities decreased drying up systems and heating system .The reason of suspension of production process in this chemical industrial complex was the pollution of the surface and underground waters with fenols,which were part production process of lignite gasification.

Year	Bruto production , GWh
2004	3885
2005	4946
2006	5143

Tabela 6. Bruto prodhimi i energjisë elektrike në Kosovë , GWh

In bruto production of elkectrical energy is included the production of electrical energy from power stations “Kosova A” , “Kosova B” and from Ujman water station⁷.

Consumption of electrical energy

According to the informations provided by KEK, the bruto consumption of electrical energy from 2001 to 2006 has been continouesly increased. Exceptionally there is an increase in consumption of electrical energy during the winter, because of its use for heating. This increase comes up to 20 % comparing to consumption during summer time. Besides the increase of consumption during winter pronouncedly are technical and non technical losings, charges in the transmission system. These factors have

⁶ Strategjia per sektorin e energjise 2007-2013, MEM-GTP i energjise ,2006

⁷ Zyra e Rregullatorit per energji, Raporte vjetore

influenced in deficit of electrical energy, even contrary to import from countries in region were not eliminated reductions in supply of consumers.

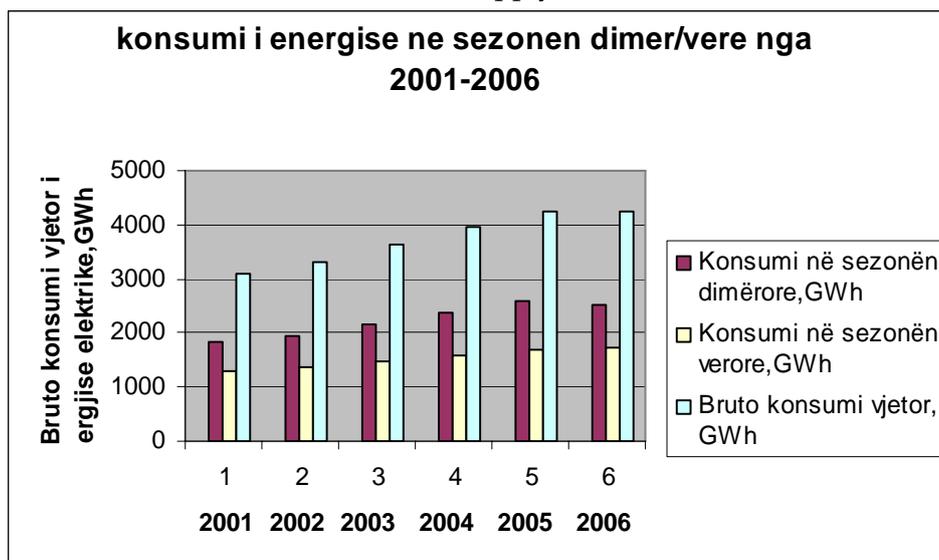


Fig.26. Konsumi i energjisë elektrike në sezonin verë/dimër nga viti 2001-2006

RELATIVE RESOURCES OF ENERGY

Kosovo's hydroenergetic potential - hydroenergetic potential of Kosovo is minimal and its use till nowadays is very modest. Kosovo characterizes of a number of rivers and streams with energetic potential which can be used for production of electrical energy.

Exploitation of hydroenergetic potential of Kosovo is 0.7 TWh/per year. In the western part of Kosovo there is available hydroenergetic potential of Drini I Bardhë, which makes up more than half of the hydroenergetic potential. Most important water power station which could be constructed is, water power station in Zhur, in the watercourse of Drini I Bardhë, with potential of 0.377 TWh/per year. Besides the Drini I Bardhë, the water course of Ibri, Morava, Lepenci and Llap River are characterized with important potentials for production of hydroenergy.

Currently in Kosovo is in function the water power station in Ujman with production capacity of energy of 2 x 17 MW, and five smaller water stations in the distribution system with capacity of 11.82 MW. Other small water power stations are that one in Kozhnjer, Deçan, which is given by concession which produces a small quantity of electricity. According to the Ministry of Mining and Energy in Kosovo have been identified another 18 potential resources for production of electrical energy.

Water power stations	Power MW	Energy Gwh
Existing WPS in a distribution system	11.82	38
New WPS ,to be built	63.7	294
WPS of Ujman	35.0	101
WPS Zhur	292.8	398
Total	403.32	831

Table 7. Kosovo's hydroenergetic potential ⁸

Should be mentioned that Kosovo which has signed the Treaty of energy community, has an obligation that until 2015 to fulfil 10-12 % of the needs from

⁸ Burimi, MEM

recycling resources. As a form of energy production, except the water power stations, are solar energy, wind energy, and energy from biomass.

Solar Energy (Insolation) - It is a climatic element which has its importance in different economical activities (agriculture,tourism ,medicine) etc Lasting of insolation depends form astronomic ,meteorological,and relief factors .The insolation is less in the valleys and outfalls ,as well as in the highlands because of the cloudiness ,because of sea level . On the base of the observations of insolation in four meteorological observation points (Prishtinë, Ferizaj, Prizren, Pejë), In Kosovo there are approximately 2066 hours with sun in the year which means approximately 5.7 hours per day. The biggest value of insolation is in prishtina with 2140 hours per year, Peja with1958 hours, Ferizaj 2067 hours and Prizreni with 2099 sunny hours, during the year. During the year thereis the highest insolation in july, whereas there is less in December⁹.

Stations, Months	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XIII	Annual rate
Prishtinë	79.8	90.8	123.4	188.4	236.5	248.9	320.2	298.8	230.2	174.7	100	61.3	2153.2
Pejë	67.3	82.2	127.7	178.6	222.6	222.6	293.6	289.4	215.8	147.2	80.2	45.7	1974
Prizreni	66	84.3	121.9	188	235.6	251.9	322.1	305.2	232.2	172.8	95	56.8	2131.8
Avarage value	71	85.7	124.3	146	231.9	241	311.9	297.8	226	164.9	91.8	54.6	2086.3

Table 8. The average sum of insolation per hour in the main meteorological situations (Prishtinë, Pejë dhe Prizren) for period 1951 - 2007 ¹⁰

Winds - In Kosovo there are common meteorological phenomena. In the winds noserose ((annual average and seasonal), there is an impact of the lands topography in the winds span. In to all meteorological stations, where the winds are measured it is observed a high occurrence of the quietness, and the highest value there is in Peja (62% of theoverall number of the cases). Winds of dominating wings usually are of higher inesity.The average speed of the winds in Kosovo is from 1, 3 m/ sec.⁹ (in Pejë) to 2, 4 m/sec (in Ferizaj). Extreme phenomena of the wind speed come over 31m/sec, whereas the highest occurrence there is in March and April and are qualified as elementary disaster with different consequences. In many localities, winds have local names¹¹

⁹ Burimi: prof. Dr, Ruzhdi Pllana, Gjeografia e Kosove 8

¹⁰ IHMNK, 2007

¹¹ Burimi: prof. Dr, Ruzhdi Pllana, Gjeografia e Kosove 8



3. INDUSTRY

Industry is the key of economic development of a country, but at the same time has the major impact in the environment. Through industrial development are spent resources as are: energetic resources, water and other resources. From industrial activities are released emissions in water, air and ground. Industrial accidents represent another continuous threat to environment and human health. Whereas the production of waste by most of industries is another segment of this sector which impacts in the environment.

Assessment of the situation

Before 2000, In Kosovo there were not in function most of the heavy industrial establishments, as are: Trepça, Ferronikeli, Ballkani and most of other industrial establishments of public sector. During this period of time ,the impact of industry in the environment was less ,however ,even if the malfunctioning of large industrial establishments in Kosovo ,they have had a highlighted impact in the environment ,because they have left a pollution from many harmful chemicals. Contrary to the fact, even if Trepça is not working Mitrovica region suffers consequences of the pollution in the past.

After 2000 ,except the Kosovo Energetic Cooperation which has been continuously in function ,have started their activities some of heavy processing industries as are (Ferronikeli, Llamkosi, Sharr-Cemi Fabrika e Amortizatorëve, Energoinvest etc), at the same time have been activated many other industrial activities. Kosovo Energetic Cooperation, even if have been made investments in its rehabilitation, still remains the major contaminat of the environment in Kosovo, whether by realizing of emissions in atmosphere, ash waste, and other contaminations. Even if chemical industry in Obiliq is out of its functioning, the problem of phenols and other industrial remnants is not solved. The Llamkos factory, The Factory of bumpers and Energoinvest are potential contaminants of surface waters, through their realiseing of industrial waters without previous treating.

Currently the development of industry in Kosovo is still in a low level and oriented mainly in food industry, and other activities of smaller capacity.

Industrial production

According to register of businesses¹², Mine and industry , extractors and processing industry form around 10% of total number of businesses registered ,or 5531 businesses ,from a total number of the businesses (54412).

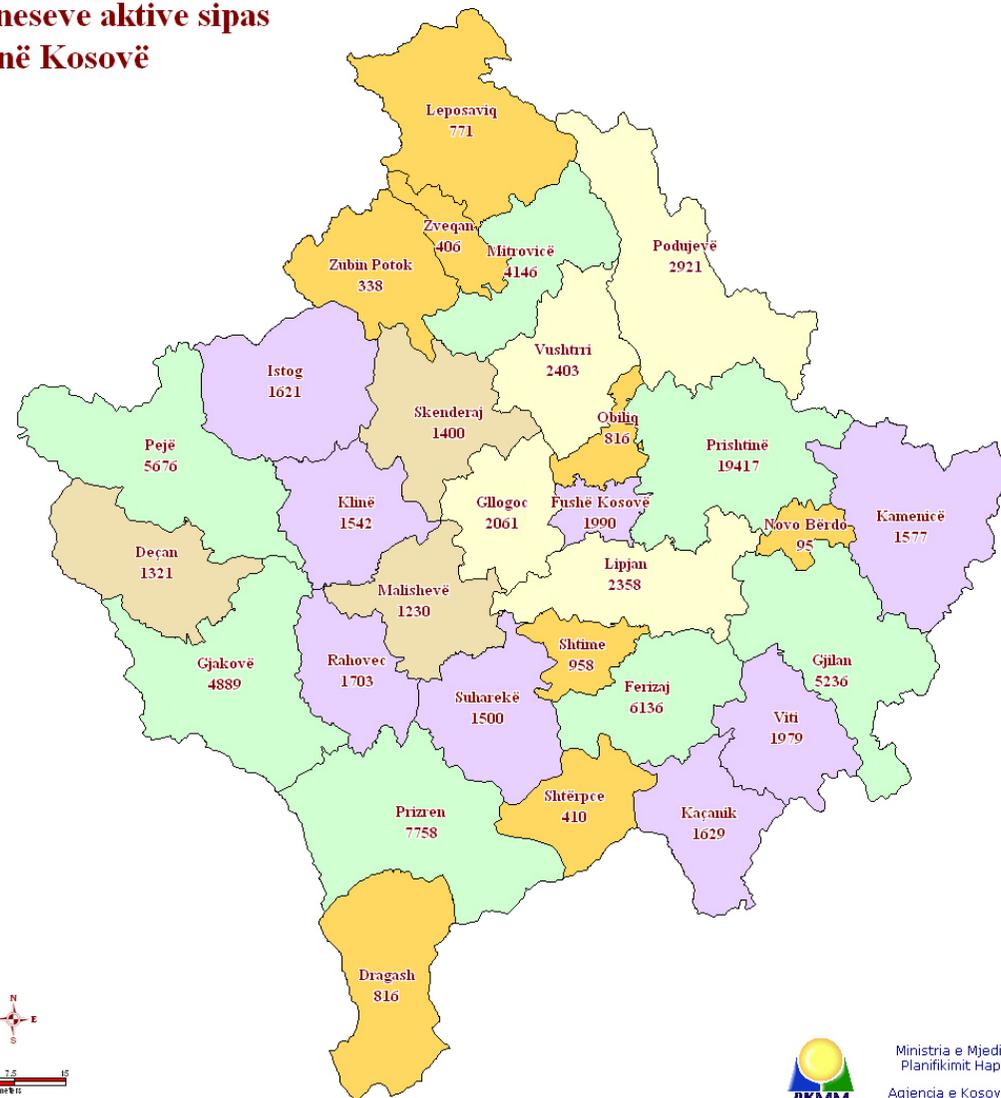
Table 9: The number of businesses, registered according to categories, number of employees and economic activity

Category	Total Business operators registered	Establishments			Individual businesses		
		Total	1-4	Over 5	Total	1-4	Over 5
total	54412	31220	27178	4042	23192	21806	1286
Agriculture,hunting and forestry	743	470	353	117	273	180	93
Peshkimi	10	6	4	2	4	4	0
Mine industry and extractors	326	221	145	76	105	75	30
Processing industry	5205	3227	2366	861	1978	1790	188
Supply with electrical energy,water and gas	28	22	1	21	6	2	4
Ndërtimtaria	3617	3305	1993	1312	312	213	99
Wholesale and retail trade ,vehicle and motorbike servicing and outfits	27805	15914	15429	485	11891	11438	453
Hotels and Restaurants	4699	1379	1182	197	3320	3142	178
Transport,storage and traffic	7120	4231	3629	602	2889	2800	89
Financial agencies	93	48	38	10	45	22	23
Real estate business ,demise ,and business services	1383	824	706	118	559	517	42
Education	476	358	309	49	118	91	27
Health and welfare services	582	419	352	67	163	150	13
Other social services and personal activities	2325	796	671	125	1529	1482	47

Regions with highest concentration of industrial companies are : Prishtina and Prizren with ,864 respectively 880 companies. Still there are no exact details about the number of industrial companies ,applying ISO 14001 rules . Also there are no details about the industrial companies pure products

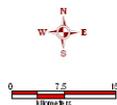
¹² Enti i Statistikave te Kosovës, 2003

Numri i bizneseve aktive sipas komunave në Kosovë



Sistemi Informativ Mjedisor / GIS
 Emri i Hartës:
 Numri i bizneseve aktive sipas komunave
 Burimi i të dhënave: MTI / AKMM
 Projektioni :UTM-WGS 84
 Zona: 34 HV
 Data: nëntor, 2007
 Prishtinë
 Adresa: Rr. Nazim Gafurri nr.31
 infogis_sim@ks-gov.net

LEGJENDA
Numri i Bizneseve
 0 deri 1000 (8)
 1000 deri 1500 (3)
 1500 deri 2000 (8)
 2000 deri 4100 (4)
 4100 deri 19500 (7)



Ministria e Mjedisit dhe Planifikimit Hapësinor
 Agjencia e Kosovës për Mbrojtjen e Mjedisit

Map xx Distribution of overall number of businesses in municipalities



Industrial accidents

From industrial accidents that have happened in a period 1999-2007, has to be mentioned the fire in Power station of Kosovo energetic Coorpaoration, in Obilic, in 2002? According to official informations the premises of "Kosova B" were struck by thunder, which caused a big fire and in this occasion had died one person and 32 were injured. The assessment has not been made for the impact in the environment from this industrial accident.

Mines and minerals

Lignite has an extraordinary importance for Kosovo. He contributes with 97 % total electrical energy production. With 14.7 miliard ton, Kosovo holds the fifth place with industrial resources of lignite in Europe. Lignite is diffused throughout Kosovo's basins as are basin in Kosovo, Dukagjin and Drenica basin. Historically the exploitation of lignite dates since 1922 where has been started the exploitation with superficial works in small rates in Kosovo's basin. The exploitation in a wide range started by first production in a surface, Mirash (1958) and Bardh (1966) ,using modern bulldozers and transporters. The cumulative exploitation, since the opening of the mine 1922, until at the end of 2004 has reached 265 milion ton. Geologically expoloitation of the lignite mines is one of the most favourable resources of the lignite in Europe. The average report of of uncovering is 1.7 m³ per 1 ton coal, and in total it has been estimated, economically exploitable resource, represents one of the richest in Europe which will allow ambitious production electrical energy and expansion of schemes for future decades¹³.

Reserves of minerals	In milion tons
Manganese	1,36
Chrome	89,00
Bauxite	13,20
Lead and Zinc	42,00
Nickel	20,10
Magnezium	9,70
Argile	15,10

Tabela 10 : Reserves of Kosovo 's minerals s¹⁴

Lead ,Zinc and Silver - the exploitation of mineral resources of Pb,Zn,and Ag in Kosovo has started in 1930 ,When British company Selection Trust ltd, reconstructed the Trepça Complex including factory for production of batteries ,using lead. The active exploitation of five mines has been suspended during NATO bombing campaign.Mine places of Trepça define the mineral borderline of Trepça. There are mineralization zones indirection NNW-SSE and contain mineral resources.

- ✓ Zone I, includes the mine of Artana (Novo Berda) and follows the border ,between Zone of Vardar and Kosovo's sector,characterized by vulcanic - calcium extensive alkalines cliffs of Neogen and intrusive.

¹³ Komisioni i pavarur i minierave dhe mineraleve, www.kosovo-mining.org

¹⁴ Sipas Riinvest



- ✓ Zone II, includes mines Belo Brdo, Stan Terg and Hajvalia. This zone follows major glissade which indicates the borderland of Prishtina Miocenic basin and its expansion in N-NW and intrusive and volcanic complexes in North Kosovo.
- ✓ Zone III includes the mine of Crnait and inside has a number of ore-bodies of lead and zinc along the western borderland, where it is in contact with structural block of Dinaride.

For the five mines and reserves have been undertaken assessments, but the deepness and lengths of the spreading are unsafe, because there is a lack of systematic research and determination by drillings. During the exploitation of lead-zinc and silver in Përroi i ngjyrosur (Artana-Novo Brdo), have been discovered around 3 Mt of $Al_2SiO_5(OH)_z$ ¹⁵.

Mine	Ton	Pb%	Zn%	Ag g/t
Belo Brdo	1,340,000	6.59	5.74	97.4
Crnac	1,648,000	7.57	2.93	102.0
Stan Terg	432,000	5.10	2.21	80.5
Hajvalia	723,000	9.65	18.26	126.4
Artana-Novo Brdo	2,700,000	4.43	5.42	140.6
Total	6,843,000	6.20	6.04	117.6

Table 11. Reserves of Pb, Zn and Ag, in some Kosovo mines¹⁶

Nickel – The superficial mining in previous years has been undertaken in Çikatovë (Dushkaja and Sukë) and Gllavicë. The exploitable reserves have been calculated in 13.2 Mt with 1.42 % Ni and 0.05 % Co on the average. The production has restarted in 2006.

Place	Ton	Ni%	Co%	Fe ₂ O ₃	SiO ₂	MgO
<i>Dushkaja</i>	6,350,000	1.29	0.05	24.29	44.09	9.33
<i>Suke</i>	630,000	1.36	0.06	30.56	49.17	9.48
<i>Gllavica</i>	6,240,000	1.55	0.05	21.53	50.89	13.52
Total	13,220,000	1.42	0.05	23.29	47.54	11.32

Table 12. Reserves of Nickel in Kosovo mines¹⁷

Chrome By the end of II world war and until 1956, chrome mines were exploited at the beginning Gjakova mine, by "Deva Holding Company" and directly was transported in to Albania for processing. When the mineral was reduced, Kosovo started to import from Albania 30 000 – 50 000 t/vit of chrome. This was stopped when the plant was closed in 1991, and for many decades have not been taken researches¹⁸.

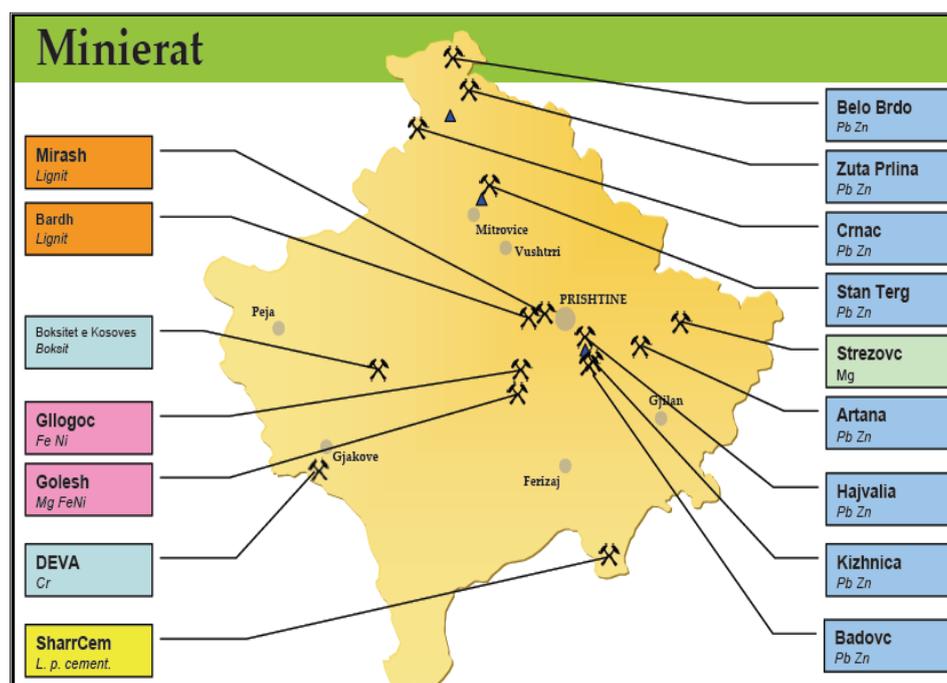
¹⁵ The independent Commission for mines and minerals, ëëë.kosovo-mining.org

¹⁶ The UNMIK administration February 2005

¹⁷ Archive of Feronikelit

¹⁸Source : Independant commission for mines and minerals, www.kosovo-mining.org



The mine map of Kosovo ¹⁹

Bauxites -Resources of bauxite in Kosovo are in the limestones and have been exploited by a serie of mineral works which the mine of Grebnik is consisted. Calcareous which bauxites has, been exploited too.Also as construction material and limy refuse .The mineral exploitation has begun in 1966 and has been stopped in 1999²⁰.

Magnezium In Kosovo there are two mines of magnesium ($MgCO_3$), in Golesh and Strezovc, which have performed under ground works for exploitation of magnesium until in its closure in 1999. Before 1990 in Golesh was produced 110 000 tons of magnesium, 22 000 tons of magnezium and 10000 tons of calcified caustic magnesium per year. The Golesh mine has been exploited with one minerl pit, whereas the mine in Strezovc was exploited by a gallery in the side of hill.

Mine	tons	MgO%	SiO ₂ %	CaO%
Golesh	1,740,000	46.23	2.66	0.95
Strezovc	3,660,000	40.49	6.29	5.45
Total	5,400,000	42.34	5.12	4.00

Table 13.Reserves of magnesium in Kosovo mines

Iron Iron mineral in Kosovo are known in a region of Çar - Sadllarë and Tërstenik-Carralevë - Ivajë, in a form of average ore-bodies, or distributed minerals. By geological resources in Carralevë- Sadllarë have been verified iron reserves about 750.000 tons, with 40 % Fe, whereas in the area of Tërstenik - Carralevë -Ivajë, the reserves of iron -nickel are about 2.500.000 tons, composed of Fe 45/55 %, Cr_2O_3 = 3% and Ni = 069 %. In Carralevë until 1940 have been exploited about 20.000 tons of minerals for smelting in the Jasencia foundry. Caraleva mines except iron the do contain Nickel and Chrom which by direct smelting we can produce alloyes of steels.

¹⁹ MEM²⁰Independent Commission of mines and minerals, www.kosovo-mining.org

Uranium In Stubovaqë locality (15 km ,south of Gjilanit) in trohite is is found a a vein with uranium.It has bewen estimated that in this locality may be exploiatetd around 20/ tons of uranium ,composed of 0.0263%.

Kosovo is rich with construction materials of high quality as are granites, limestonesmarbles etc. In the table below are presented informations about for main resources and reserves for these minerals.

Resource	Type	Reserves
Karaçeve (Dardane)	Kaolin	3.000.000 t
Hani i Elezit (Ivaje + Terpeze)	Melting + lime +tufa	7.500.000 t
Hani i Elezit (Mullinjet e palit)	Melting	2.500.000 (m ³)
Ferizaj (Mirosalc) Lypjan (Sllovi)	Quartz sand	13.000.000 t
Gjakove, Dardane Landovice, Skenderaj, Kline, Ferizaj, Peje, Viti, Prishtine, Podujeve	Argil	2.500.000 (m ³)
Viti (Gushice, Sadovine e Jerlive)	Benton	36.000.000 t
Glame, Çikatove, Kroi i mbretit, Grebnik, babush i Muhaxhereve, Shale e Drenices, Lipoglave et	Lime and dolomite	42.000.000 (m ³)
Volljak, Leshan, Piranë, Krushë, Pejë	Sand and gravel	>10.000.000 (m ³)

Table 14.Reserves of some Kosovo's mineral resources²¹

²¹ KPMM



4. Agriculture

The assessment of situation

Agriculture in Kosovo was one of the main sectors of the employment and economic development. Comparing to 1990-ies, after 2000 has been emphatic the increase of agricultural production and also the tendency on changing of agricultural development. It has been increased the number of farms and husbandries. It has been increased the utilization of chemicals and other products which have negative impact in the environment. In Kosovo there still does not exist any interest in production of ecological products.

Even if 53 % of the Kosovo's land is qualified as agricultural land, only 3.9 % of the working force is employed in agriculture. From the total of agricultural land about 73% is cultivable land, whereas the other part is forests and yards.

Kosovo does not fulfill the population's needs in a food production, so the import of the food is needful. For lack of certified laboratories, are imported foods of suspicious quality and very often without any authentic inspection in border points?

Agricultural areas

Agriculture land in a private property is 88,6 %, whereas the other part is under public. The agricultural land area per person is estimated to be around 15 ari.

	Area ('000 ha)	Area (%)
Agricultural companies	76	13
Co-operative	7	1
Husbandries	494 ¹⁴	86
Total	577 ¹⁵	100

Table 15. Type of land property ²²

Agriculture contributes with 30% of Gross Domestic production (GDP) of Kosovo and actually supports over 60 % of population, while together with forestry, give 35% of GDP.

Only 6% of the harvest are sold, others are used for human consumption or as animal feed. Products of animal origin are sold till the value of € 20.3. Agroeconomical Costs in Kosovo are €20, whereas the total costs in agriculture are € 89.7.

Based in the statistical data, Kosovo residents around 55 % of the family budget spent in foods, which is higher than average of EU countries (22%). As the density of population in Kosovo is around 204 residents /km², the average agricultural land per

²² MBPZHR, Libri i gjelbër i Kosovës, 2003

resident is around 0.15-0.18 ha of land. Comparing to EU average (0.52 ha/resident), this figure is less than half.²³

Approximately 87% of agricultural land, including here 90% to 95 % of cultivated land, 30% of pastures and 38 % of forest lands is under private property. Plant production in Kosovo is dominated by production of corns, which includes 33.5 % of agricultural area.

Cultures	Ha	%
Corn	193.078	33.46
Oil Plants	2.520	0.44
Vegetables	21.500	3.73
Potates	7.500	1.30
Vineyards	4.944	0.85
Fruits	4.542	0.80
Pastures	166.769	28.90
Medows	86.000	14.90
Fodders	38.000	6.59
EUcultivated (wasteland)	52.200	9.03
Total	577.200	100

Table 16: Partition of agricultural land on the base of cultures ²⁴

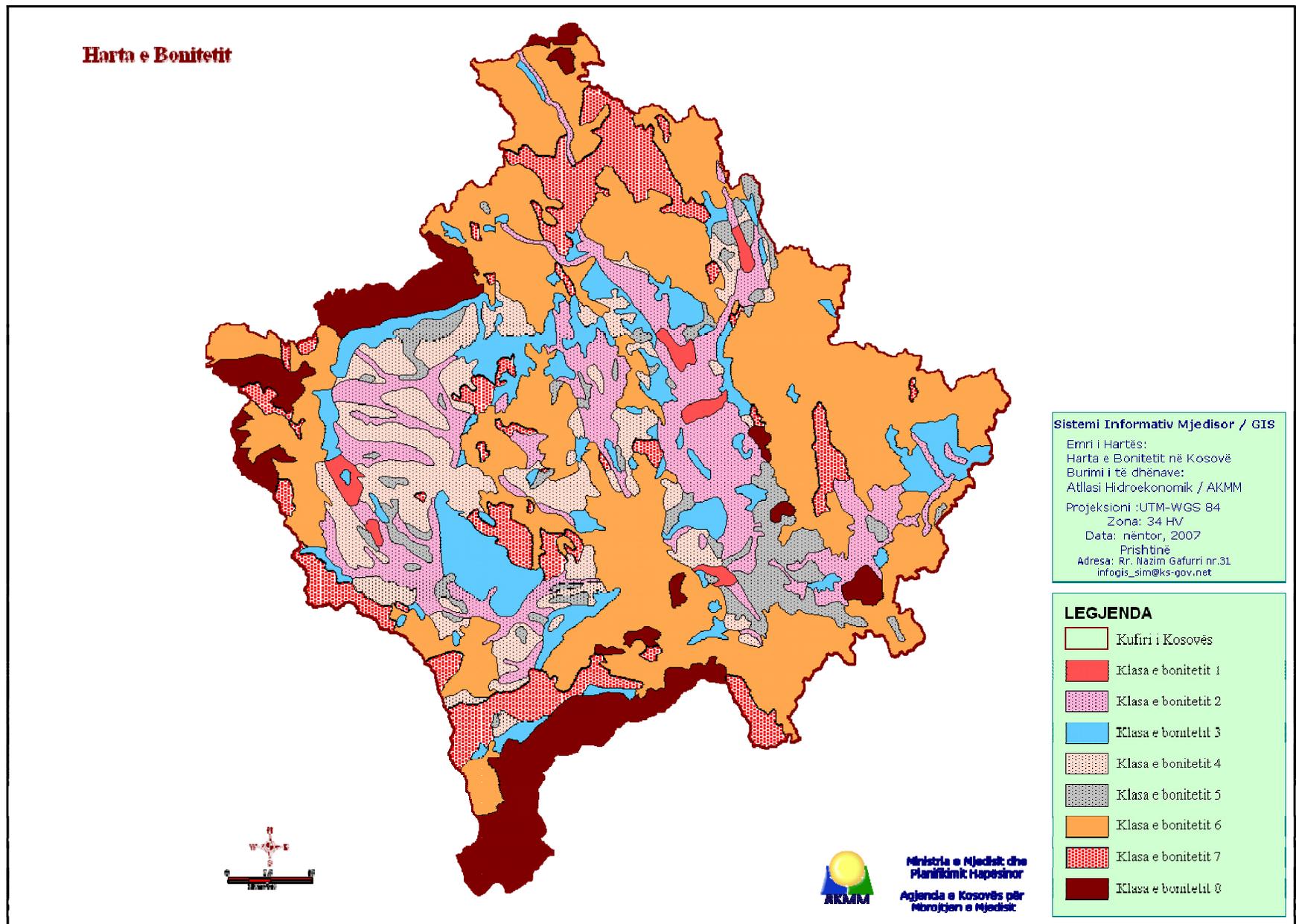
Land quality in Kosovo is estimated to be changeful as a result of impact of many factors during geological history. Infield is classified in 8 classes of bonitet .First 5 classes are used in agricultural production. Lands of I and II class, with 91,900 ha are in those with highest fertility, with high production capability. The land of class III, with 96,000 ha are still good lands for cultivation, but by the fertility are after the first two. Lands of this group require some improvements to be turned up in in lands with high productivity. Lands of IV class, with 208,000 ha, are characterized with limited fertility capability, as superficial lands and with high content of sand.

In the absence of institutional protection, a part of fertile land is used for other purposes. This has resulted in a continuous reduction of fertile land .Agricultural lands can be lost in two methods:

- Permanent lost of the land (localities ,commercial activity ,industry ,traffic water accumulations ,airports etc);
- Temporary losts of agricultural land (diggings ,sand exploitation ,gravel and argile ,scrap ,deposit of industrial waste ,utilities ,process of erosion ,degradation ,river erosions ,etc.).

²³ Mujori Makroekonomik, 2003

²⁴ MBPZHR



Animal fond

Animal fond in Kosovo has been increased evidently during these years .According to the informations from Department of Livestock, within MAFRD, cattle and poultry are the animals dominating, and in a less number there are horses and goats.

According to the data from the general registration of livestock population, made in 2004, only 2 % of the bovine belong to commercial farms, which mean that they mostly are distributed in husbandries (small farms). The average number of cattle per husbandry is 1.12 heads per husbandry, and 15 heads per large farms. The average number of dairy cows per husbandry is 1.57 in small farms, respectively 8.5 in large farms.

Animal Species	Number of heads
Cattle	256.007
Sheep	120.102
Goats	13.154
Swine	48.000
Horses	5.672
Poultry – Commercial farms	493.900
Poultry –Backyard farms	1.500.000
Bee hives	43.000

Table 17. Livestock fond¹²⁵

Farms

Farms in Kosovo are mainly small and half commercial .According to the registration ,made in 2005 ,in Kosovo there are 171.179 farms F.About 80% of the farms are smaller than 5 ha. This meanss that development of agriculture is in a small level.

Farm size	Number of farms	Area in ha	% of farms
0.0-0.5 ha	33.662	10.476	19.6
0.51-1.0 ha	46.154	34.901	26.9
1.01-1.5 ha	39.133	49.044	22.8
1.51-2.0 ha	14.524	25.958	8.5
2.01-3.0 ha	21.641	53.561	12.6
3.01-4.0 ha	6.788	23.231	4.0
4.01-5.0 ha	3.896	17.573	2.3
5.01-6.0 ha	2.424	13.305	1.4
6.01-8.0 ha	1.743	11.981	1.0
8.01-10.0 ha	726	6.401	0.4
Over 10 ha	1.048	18.833	0.6
Total	171.739	265.265	100

Table 18.Number and farm²⁶

²⁵MAFRD-Livestock Department

²⁶ESK-Kosova në shifra 2005



Based in statistical data, average size of the farms per family is 2, 2 - 2, 4 ha divided in to 6 - 8 parcels.

The farm size in Kosovo is several times smaller than farms in European Union. The average property in EU, in 1997 was 18.4 ha, with variations between 4.3 ha in Greece and 69.3 ha United Kingdom.

Use of pesticides and fertilizers

There is a tendence of increase in Kosovo's agricultural sector ,and in this case it is increased the use of pesticides .Pesticides through natural cycle may enter in the ground waters and superficial waters ,having an impact at humans and wild animals.

Approximately 4,757,500 kilograms of pesticides have been imported in Kosovo for 2005. So fonly total quantity of pesticides .By reason of no export, this is approximately the same with quantity of pesticides, used per year. On the avarage 2.6% of the farm costs, are spent in agricultural chemicals²⁷.

There is no specific monitoring programe of pesticides, but according to informations of partially monitoring, mostly are used insecticides, and then fungicides, etc.

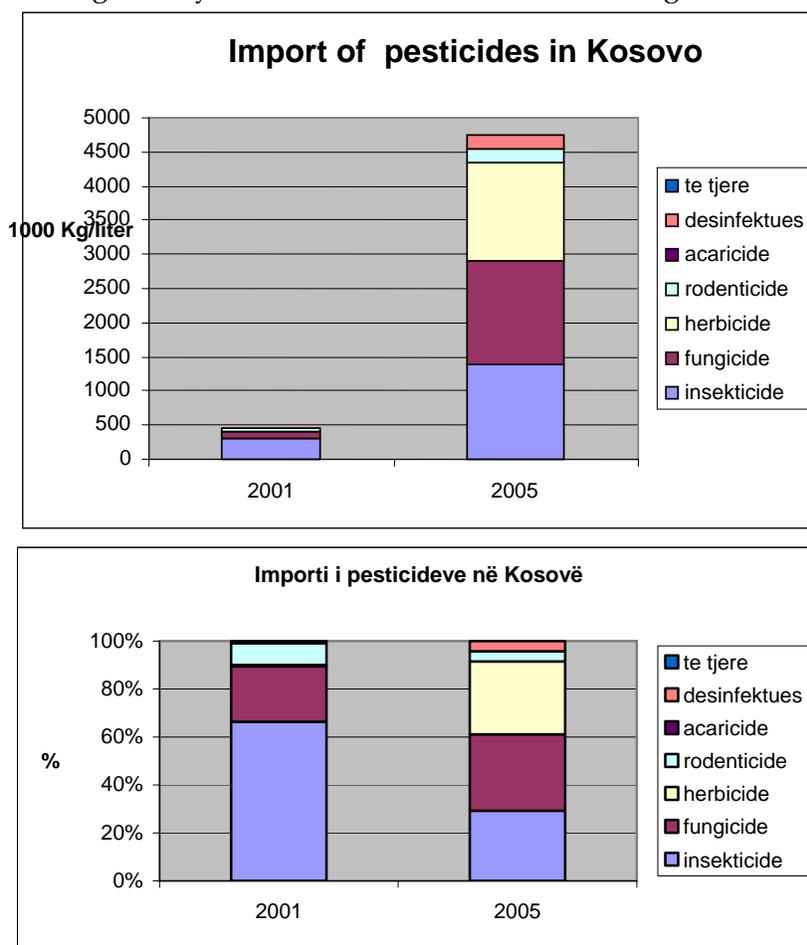


Figure 27: Import of pesticides in Kosovë during period 2001-2005, imported kg/l and %

²⁷ AHS 2005



Sector	%
Agriculture	88.8
Livestock and Veterinary	3.4
Sanitation	3.3
Industry and Food processing	2.9
Others	1.6

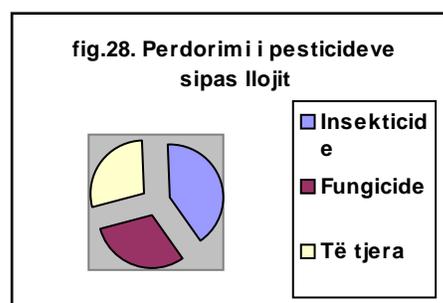
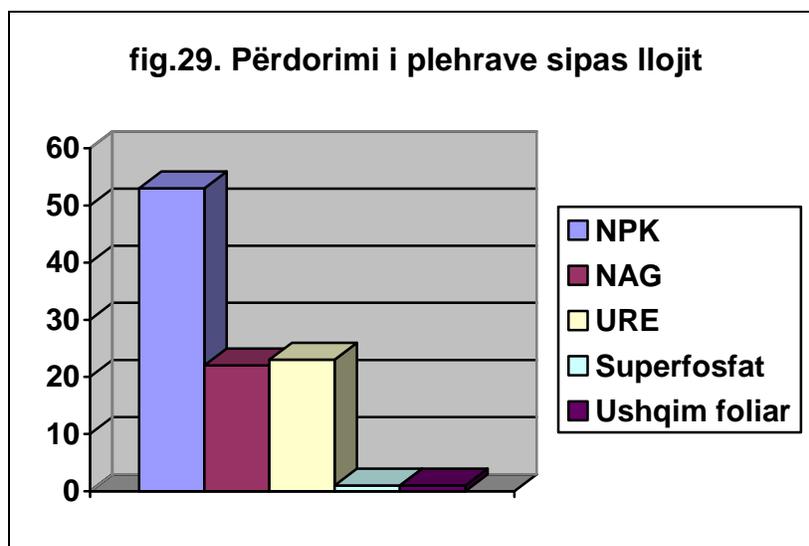


Table 19. Use of pesticides in sectors ²⁸

Distribution and use of fertilizers by regions in Kosovo is not uniform. The higher levels of use, over 50 kg/ha of solvable organized matter for plants ($N+ P_2O_5$ dhe K_2O) is observed in regions where corns and vegetables are cultivated, whereas in vineyards and groves this quantity is very small. Fertilizers during its circulation mostly do not remain in their elementary form. Therefore they form reactions and we have more toxic matters (substances) or secondary compounds, so if there is an unprofessional use or baseless soil requirements it will cause environment contamination. Fertilizers ,containing nitrogen and potassium are toxic ,whereas excessive quantity in soil are contaminous to environment, while quantities used in Kosovo are up to 600 kg/ha, with a variation of more or less quantity and depends from type of culture and requirement. In the market, usually can be found fertilizers as: NPK, NAG, URE and less MAP, DAP, or superphosphate and fertilizers in a fluid form as foliar food.



Fishery and aquaculture

There is only recreative fishing in Kosovo - (*anglers in English*) which means fishing by fishhook for sport and recreation.

There is no commercial fishing, because there are no resources to carry out this kind of fishing, which means fishing for profit-seeking. This fishing activity has less chance to happen in the near future.

There is no protected area by law for fishing so far, regarding to the fishing.

Sporti –recreational fishery in a way is organized through fishing which carries out inspection through 14 local fishing associations.

It is a concern illegal fishing. This activity of illegal anglers very often is in a period of fish reproduction, having an impact in reduction of their fond, which is strictly unlawful by Law for fishery and aquaculture.

Currently, in Kosovo are produced about 500 to 600 tons of fish of Californian trout (*Oncorhynchus mykiss*)

In total, there are 13 farms cultivating trout and carp. This means that approximately 600 tons of food with proteins (as contaminants of environment with N and P) in a trout farms. Other contaminants are different medications as are: antibiotics, disinfectants and antiparasitics.

Fish in the farms is modified genetically; this may have an impact in a fish living in free environment, there where is trout living in rivers.

Another potential problem may be transmission of disease from farm fish in a fish living in a free environment. The disease can be transmitted from other countries, because of fish and fish eggs are imported.

Also, are produced about 40 tons of carp which is, a smaller contaminant of the environment because of food stuffs used for their feeding (corns).

5. Forestry

Forests are the most advanced natural ecosystems, and have a great importance, because they are ecosystems with a very rich biodiversity. Forests are natural controllers of climate, they keep water and air quality, protect ground from erosion and rinsing, napping of soil products. Also, forests are the major accumulators of CO₂ quantity in earth and they are main suppliers of atmosphere with oxygen. They are natural renovatory resources, products of which may be used in industry, as a fire wood and for other purposes. Forests are ecosystems in which are grown a large number of flora and fauna with nutrition and medicinal importance to humans. Besides that they resist strong winds, they are recreative for humans as well.

Although, the human impact in forests is very emphatic. Especially they are sensitive in air pollution. Uncontrolled cutting of woods impacts in presentation of many environmental changes, as are, climatic changes, floods etc..

The assessment of situation

Around 47% of all Kosovo's territory is consisted by forests, forestlands and wastelands, or around 512.400 ha of overall area. From this area, forests are 460.800, or 89.93%, other forestlands are 28.200 ha or 5.50%, and wastelands 23.400 ha or 4.57%.

Forests in Kosovo represent very important resources. However, because of inadequate management of the forests in the past, it has come to their degradation. Around 284.000 ha (61.63%) forest area is public property, the other part 176.800 ha (38.37%) is in private property. Annually, around 222.000m³ of technical wood and fire wood are exploited by two sectors. The total wood volume is around 54 milion m³. The average volume per ha is around 90m³, and annual average growth is around 3m³ per ha²⁹.

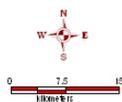
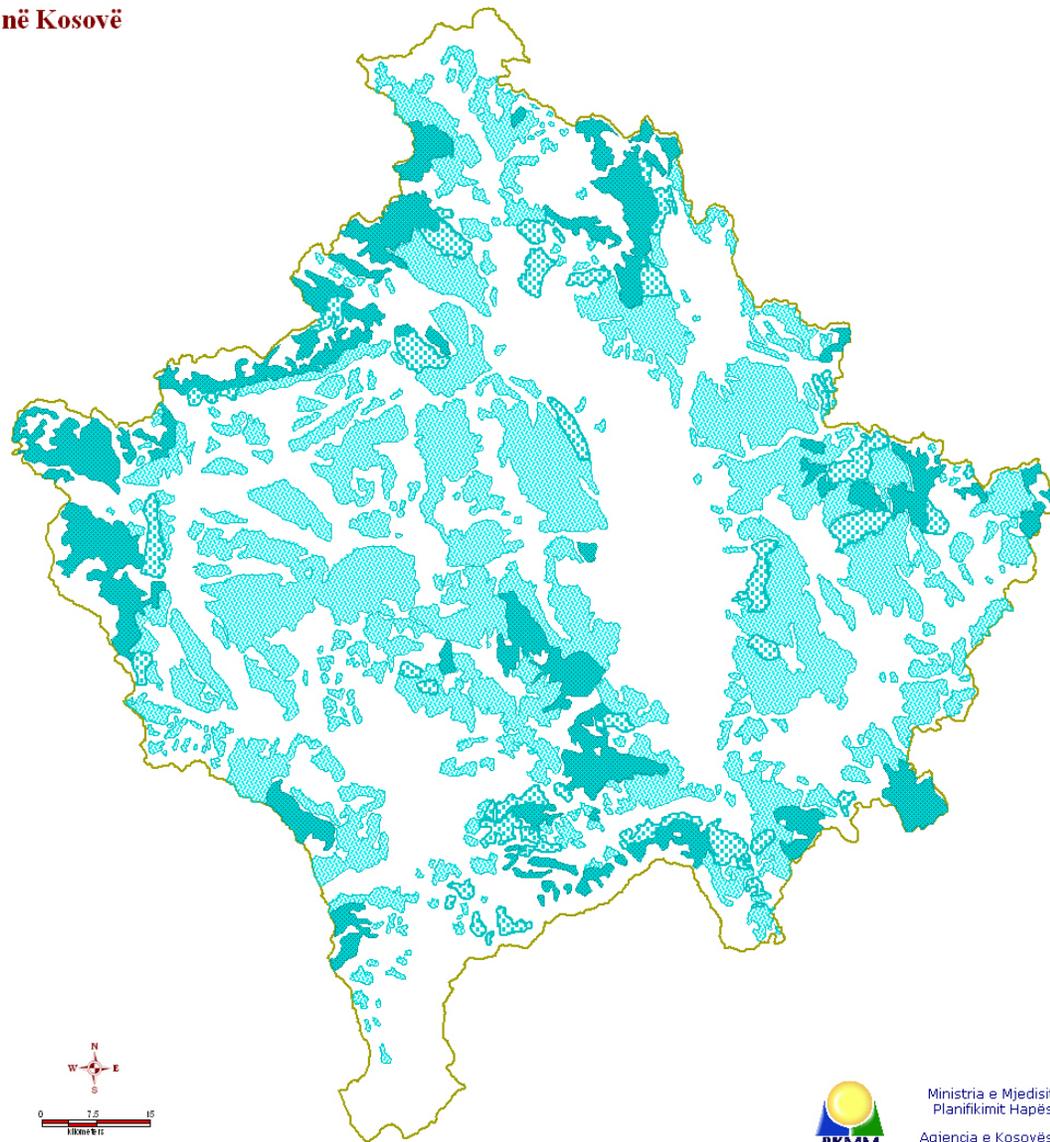
Large needs for wood in a post conflict period set a large pressure in forest sustainability and Kosovo's ecosystems. Wood, mainly is used as a fire wood and in construction. Illegal exploitation of the forests is a major problem and there is no other alternative solution for heating. Illegal and uncontrolled cuttings have caused erosions in highland areas. Also, forests have been destroyed by fires. According to, Forestry Department within the Ministry of Agriculture, Forestry and Rural Development, 3.263 ha of the forests have been destroyed by fires, only in 2000.³⁰

²⁹ Agjensioni Pyjor i Kosovës

³⁰ PKVM, 2006



Shtrirja e Pyjevë në Kosovë



Ministria e Mjedisit dhe
Planifikimit Hapësinor
Agjencia e Kosovës për
Mbrojtjen e Mjedisit

Sistemi Informativ Mjedisor / GIS
 Emri i Hartës:
 Shtrirja e pyjeve në Kosovë
 Burimi i të dhënave:
 Atlasi Hidroekonomik / AKMM
 Projektioni :UTM-WGS 84
 Zona: 34 HV
 Data: nëntor, 2007
 Prishtinë
 Adresa: Rr. Nazim Gafurri nr.31
 infogis_sim@ks-gov.net

LEGJENDA

- Kufiri i Kosovës
- Pyje të ulëta
- Pyje të larëta
- Shkurre



Sustainable utilization of the forestry resources

Exploitation and management of the forests is regulated by Forest Protection Law. Kosovo forests are under the management of kosov forest Agency.

In 2006 has started to be implemented a two year project funded by EAR, the objective of which is sustainable utilization of forests, including here forest management within National Parks.

According to national forest inventarization, by natural forestation are included around 82.000 ha of the forests in a public sector and 74.000 ha forests of private sector, whereas by artificial forestation 1.800 ha of forests in a public sector and 400 ha forests of private sector. Forestland, temporarily without includes around 21.200 ha of the forests in a public sector and 7.600 ha forests of private sector.

Type of afforestation	Public forests	Private	Unknown	Total
Temporarily without timbers	21.200	7.600	3.400	32.200
Natural afforestation	82.000	74.000	15.200	171.200
Artificial afforestation	1.800	400	---	36.600
Mixed afforestation	64.000	54.000	19.000	137.000

Table 20. Afforestation according to type and ownership ³¹

Kosov forests are divided in: High forests, low forests, bushes and and degraded forests. The major part of Kosovo forests is consisted by low forests (42 %), whereas the smallest part is consisted by high forests (15 %).

Type of forestss	Ownership			%
	State /public property	Private	Total	
High forests	51000	15000	66000	15
Low forests	116000	63000	179000	42
Degraded forests	34000	48000	82000	20
Bushes	67000	36000	103000	23
Total	268000	162000	430000	100

Table 21. Kosovo forests on the base of ownership in ha and % ³²

Over 50.000 ha of the forests are outstretched in protected areas (zones). Their major part belongs to National park "Mali Sharr" (18.884 ha) and "Gërmisë "(885 ha) ³³

There is a tendence of increase of forest areas.

³¹ Source : National inventarization of forests (MAFRD,2003)

³² KFA

³³ IKMN



Forest production

According to the informations (data) from Kosovo Forest Agency, the annual increase of the wood volume of Kosovo forests is 1.16500 m³/per year. Average volume of the forests is 114 m³/ha, whereas the possibility of exploitation is calculated to be around 900.000 m³. The average volume of the wood in Kosovo forests is 53 milion m³. The wood volume in public forests is 33.5 milion m³, whereas in private forests wood volume is around 19.5 milion m³. According to forest inventarization, realized in 2003, proposed quantity for cutting is 935.00 m³ per year. Whereas, on the base to the annual forest management plan, quantity of forest cutting for both sectors is 255.000 m³/per year. (KFA, 2006)

The major part of Kosovo's forests ,around 50 %, are 0-20 years old ,whereas the smallest part of the forests ,around 17 % are 60-80 years old.

Class of seniority	Public Forests	Private Forests
0-20	29 %	23 %
20-40	18 %	32 %
40-60	11 %	23 %
60-80	9 %	8 %

Table 22. The class of seniority of the forests on the base of ownership in %³⁴

Damnification of forests

Fires - According to the presented data in a published report by a commission for assessment of the situation in damaged forests by fire, during 2007, around 6.682 ha of Kosovo forests, have been under the fire. From this area, 4.142 ha are under public ownership, whereas 2.548 ha are private property. About 1.439 ha of the damaged area by fire is pasture. The lost volume in m³ of fire wood, calculated in euro is around 29.645, whereas the volume in m³ of technical wood is 17.170. The damaged value of the trees is 2.942.338.

Wood cutting - According to Kosovo's Forest Agency in both sectors (public and private ,within one year are cut 185.890 m³ of technical and fire wood. The average annual cut of technical wood is around 30.200 m³, whereas fire wood 146.000 m³. There is no correct informations about illegal wood cutting, but according to KFA assessment that is higher than legal cutting. Based in the report of Kosovo's Forest Agency for 2003, only illegal cutts ahev been identified 10. 471 m³ of wwood, expressd in money is 1.713.132, 00 €.

Other harms - Other harms of Kosovo Forests are insects, mushrooms, animals, acidic rains etc, However there are no details about the area and species of harmed forests.

³⁴ APK 2006

Municipality	Forests							Damages in Agriculture	Other damages Houses, premises, telegraphs	Total in € (8+9+10)	Revitalization of the situation	Total losts in forests (8+12)	Total (11+12)
	Area in ha with forests	Public property	Private property	Pastures (ha)	Volume lost in m3 of fire wood	Volume lost in m3 of technical wood	Lost value of wood volume in €						
Vushtri	311	175	136	0	22116	0	165832	14493	0	180325	637550	803382	817875
Dragash	24	0	0	0	167.86	0	6189	0	0	6189	49200	55389	55389
Podujevë	147	73	74	0	0	0	205722	24083	47413	277218	301350	507072	578568
Ferizaj	37	18	19	0	0	0	53200	750	17890	71840	75850	129050	147690
Kastriot	0	0	0	0	0	0	0	1300	1381	2681	0	0	2681
Skenderaj	125	50	75	0	0	0	33000	0	27000	60000	256250	289250	316250
Suharekë	346	131	215	0	0	0	37636	11085	33950	82671	709300	746936	791971
Drenas	421	164	257	0	0	0	126300	37600	38967	202867	863050	989350	1065917
Gjilani	253	183	70	0	0	0	99639	18720	26770	145129	518650	618289	663779
Shtime	45	15	30	0	0	0	23040	0	0	23040	92250	115290	115290
Kaçanik	37	37	0	0	0	0	78741	0	0	78741	75850	154591	154591
Deçan	72	35	37	0	0	0	32484	20000	50200	102684	147600	180084	250284
Malishevë	128	65	62	0	0	0	38400	2000	42300	82700	262400	300800	345100
Lipjan	231	183	48	0	0	0	91020	1995	15470	108485	473550	564570	582035
Peja	101	99	2	0	0	0	207508	0	10400	217908	207050	414558	424958
Kamenicë	644.5	283.5	361	0	0	0	224690	5400	27625	257715	1321225	1545915	1578940
Hani i Elezit	11	0	11	0	0	0	10900	400	0	11300	22550	33450	33850
Rahoveci	142	139	3	0	0	0	30791	0	0	30791	291100	321891	321891
Viti	140	130	10	0	0	0	58060	15000	56700	129760	287000	345060	416760
Novo Bërda	2.45	0.95	1.5	0	0	0	1880	0	0	1880	5022.5	6903	6903
Istogu	607	207	400	683	5125	14980	480150	0	0	480150	1244350	1724500	1724500
Gjakovë	659	473	216	0	0	0	82352	0	0	82352	1350950	1433302	1433302
Mitrovica	197.5	139.5	58	100	0	0	281024	20700	139450	441174	404875	685899	846049
Klina	496.81	82.81	414	0	0	0	229119	0	0	229119	1018460.5	1247580	1247580
Fushë Kosova	69	24	45	0	0	0	27600	0	0	27600	141450	169050	169050
Prizren	1405	1401.5	3.5	206	1871	2190	295161	62560	0	357721	2880250	3175411	3237971
Zubin Potok	15	15	0	203	160	0	9600	0	0	9600	30750	40350	40350
Leposaviq	15	15	0	247	205	0	12300	0	0	12300	30750	43050	43050
Shtërpçë													
Zveqan													
Total	6682	4142	2548	1439	29645	17170	2942338	236086	535516	3713940	13698633	16640971	17412573

6. Transport

Transport has impact in overall quality of the environment, especially in urban environments. Most of the vehicles use oil, which means a release of emissions in air, water, and land. Also, during road construction are made changes of landscapes and lands, including here possible degradation of habitats. Unusable vehicles, also present a serious risk to environment. From transport of dangerous substances it may come to accidents with fatal consequences to environment.

The assessment of situation

Kosovo has a road network of 1925.10 km, of roads, 330km of rail, and International Prishtina airport.

Based on these data, the density of the road system is relatively low, approximately 0.18 km/km². The major part of the main and regional road network is maintained with very low standards, 25% of the road network needs to be re-established.

Most of the vehicles are older than 20 years, and a considerable number of them are not technically in order. Use of low quality fuels and vehicles with no suitable catalyst are very present.

Transport sector is very specific in report to environment, because, it presents a serious negative impact during operation and construction. Transport impacts in overall Kosovo's environment quality, especially in urban environment, contaminating air, water, and land. Also, transport contributes in climatic changes, landscape changes and land utilization, including here degradation of habitats and cultural heritage, during construction phases.

The scrap vehicles, also present a problem to environment.³⁵

Road category	Type of traffic surface (Consume)				
	Tabela 24. Llojet e rrugëve dhe gjatësia e tyre në km				
	Paved roads		Dust roads		Total
	Km.	%	Km.	%	Km.
Inter-urban	625.50	99.2	4.9	0.78	630.40
Regional	1013.70	78.3	281.0	21.70	1294.70
Total	1639.20	85.15	285.9	14.85	1925.10

Road infrastructure

Kosovo has **7425.10** kilometres of public roads, without taking in to account those roads in urban places and those in rural areas. Inter-urban roads are **630.40 km**, regional roads **1294.70 km** and local roads around **5500 km**. Inter-urban roads and those regional ones are managed by MTPT, whereas local ones are managed by municipalities.³⁶

³⁵ PKVM

³⁶ Departamenti i Infrastrukturës Rrugore- MTPT

RRJETI I RRUGËVE NË KOSOVË



Sistemi Informativ Mjedisor / GIS
 Emri i Hartës:
 Rrjeti i Rrugëve në Kosovë
 Burimi i të dhënave: MTPT / AKMM
 Projektioni :UTM-WGS 84
 Zona: 34 HV
 Data: nëntor, 2007
 Prishtinë
 Adresa: Rr. Nazim Gafurri nr.31
 info@sim@ks-gov.net

LEGJENDA

-  Kufiri i Kosovës
-  Rrugë të rendit të parë
-  Rrugë të rendit të dytë
-  Pikat kufitare



On the base of the evidence of vehicle registration (year 2000 -2006) in the department of vehicle registration ,within Ministry of Internal Affairs ,in Kosovo roads run ,in total **332375** vehicles of different v=categories, excluding here KFOR and UNMIK Military vehicles ,vehicles of international organizations which are carrying out their activity in Kosovo ,and thyose vehicles which are using as a transit road infrastructure of Kosovo.The vehicle impact in the environment depends very much from the type and vehicle category, so in the following table we will present types of vehicles registered in Kosovo in 2006.

Months / 2006													
VEHICLE TYPE	1	2	3	4	5	6	7	8	9	10	11	12	total
Cars	1832	1789	2384	2514	2937	3002	3469	4173	5055	5213	4920	4658	41946
Vans	254	253	355	330	475	355	369	483	630	644	538	497	5183
Trucks under 3.5 t	98	115	178	205	226	193	160	230	273	234	189	199	2300
Heavy trucks over 3.5 t	64	94	181	225	265	179	138	203	259	248	226	158	2240
Minibuses less than 14 persons	4	/	3	5	4	5	3	3	2	4	2	4	39
Buses ,more than 14 persons	7	13	13	19	36	25	12	23	80	84	77	59	448
Tractors	12	24	29	32	38	26	13	14	21	15	14	21	259
Trailers	14	34	58	62	80	63	43	41	74	58	37	32	596
Motor bikes	6	3	27	83	126	110	133	110	46	15	6	10	675
Total	2291	2325	3228	3475	4187	3958	4340	5280	6440	6515	6009	5638	53686

Table 25. Types of vehicles registered in 2006

Rehabilitation and construction of roads and bridges

In 2006 have been realized 18 projects. 4 of them are ongoing projects from previous year (2005), whereas 14 other projects have been contracted this year. During 2006 have been asphalted **61.80 km**, whereas have been prepared to be asphalted another **41.18 km**. Also, during this year, MTPT has realized 7 projects for construction and renovation of bridges, mainly in inter-urban roads. Also, there have been constructed 4100 km of pavements, along the roads, mainly by schools.

Air transport

Air transport in the territory of Kosovo is proceeded by two airports, Prishtina International Airport (civil and military flights) and Gjakova Airport (military flights).

In Kosovo's Air -space do not realize transit flights), which is related to Kosovo's political status.

Beginning of the flights over Kosovo's air-space is expected to increase the level of air contamination, particularly in the higher gildings of atmosphere.

Air traffic has a great impact in the environment by the noise and emissions which releases, especially in air passages. Areas with intensive noise of airplanes are almost twice bigger than airport area.

Through air transport it mney come to the reduction of the ozone. Air transport is characterized for the consumption of oxygen which is needful for burning in turbomotors, example a 707 for 8 hours flight consumes the quantity of oxygen, producing 25 thousand ha of forests. In the last years, Prishtina International Airport has had an intensive development in all aspects. In 2007 the number of passangers has exceeded 1 million.



Details of fuel consumption in Prishtina International Airport

From the details taken from Prishtina International Airport we can see that fuel consumption for the needs of Prishtina Airport for 2006 have been 18 916 413 liters whereas for period of time January-June 2007 are 9 213 625 litres . This figure shows that the consumption at the end of the year 2007 will be approximately the same as those in 2006.

BP Aircraft fueling	Liters	Year	Antifreeze (litres)
2006	18 916 413	2005	
2007	9 213 625	2006	54.383
		2007	30.203

Table 26. Fuel consumption by Prishtina International Airport 2006 and 2007³⁷

Types of antifreeze, used in these years are: Clariant MPII 1951 air
Kilfrost ABC - 3

Rail transport

In a ecological aspect, railway is a sustainable form of transport Railway is the most safely transport of passengers and goods. The railway releases roads, protects nature, reduces the number of accidents and ecological disasters. However the railway traffic has an impact through steaming components released by engines, railway coaches and oils etc. which can be seen in every junction. Railway coaches and junctions are sprayed by different herbicides in a manner to stop different plants to grow. Herbicides which are for these purposes have defined doses of toxic impact in the environment.

Kosovo railways are operating with 6 lines and 333 km of the rails, without including here industrial tracks.

YEAR 2004	YEAR 2005	YEAR 2006
416.996	265.533	401.487

Table 27 Public transport of passengers

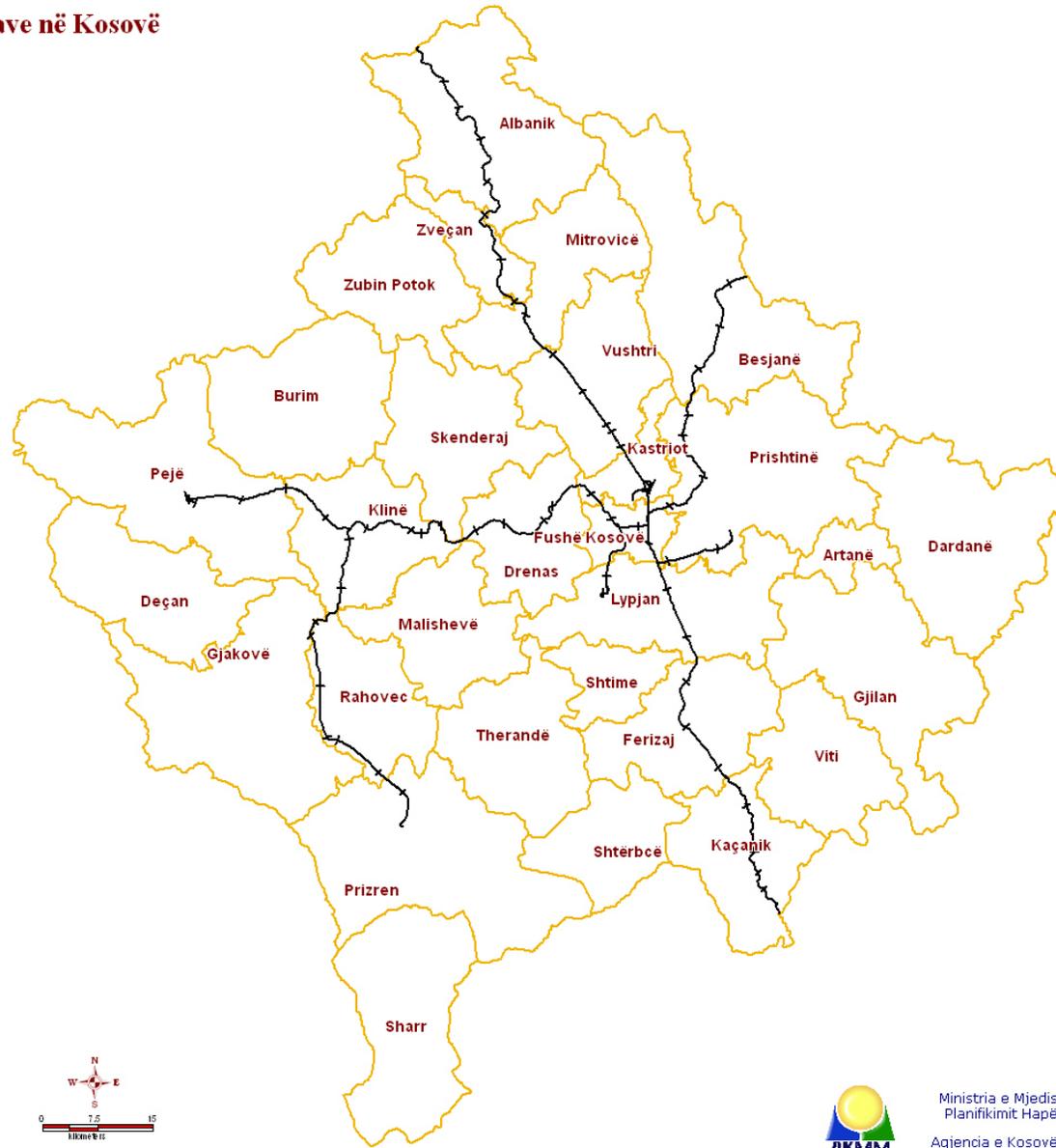
Transport of goods -in 2006 there was a falling in compare with previous years, whereas in a period January-August 2007 is 278,248 neto ton, of material goods, where 47% of this quantity are different kinds of fuel.

YEAR 2004	YEAR 2005	YEAR 2006	January -August 2007
383.531	359.659	345.287	278 248

Table 28. Transport of goods neto-ton

³⁷ Raporti i AIR BP

Rrjeti i Hekurudhave në Kosovë



Ministria e Mjedisit dhe
Planifikimit Hapësinor
Agjencia e Kosovës për
Mbrojtjen e Mjedisit

Sistemi Informativ Mjedisor / GIS

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Prishtinë

Adresa: Rr. Nazim Gafurri nr.31
infogis_sim@ks-gov.net

LEGJENDA

-  Kufiri komunal
-  Hekurudhë



7. Tourism

Tourism presents one of the main fields of development in one country. Its development has an impact in the environment, and, especially if are not taken in to account, principles of sustainable development. Tourist resources there are almost in all Kosovo regions, “Malet e Sharri” and “Bjeshkët e Nemuna” are most important zones. Untouchable values of nature as well as biodiversity of cultural and historical monuments make good chances for the development of tourism.

The assessment of situation

According to the informations that we have, the Kosovo’s tourism industry, realizes 8-10 % of gross domestic production.³⁸

After 2000 the tourism sector in Kosovo is characterized with an intensive development and in a major part spontaneously and uncontrolled, which is accompanied with the consequences of losing the balance for environment. If we do see this from touristic aspect, Kosovo is a country in development.

Currently the tourism sector in Kosovo is facing the problem of touristic offer and which is behind the international development in this field. This sector should define its position, to increase incomes and keep the potential and natural resources. Touristic requirements in Kosovo are related to domestic and foreign guests. There are no exact details for the structure and countries from these tourists come from.

Tourism in Kosovo is regulated by tourism Law, which is approved by Kosovo’s Assembly. On procedure is drafting of the Strategy for the development of tourism.

Tourist register

Even that the trend of increase of the number of tourists in Kosovo, since 2000 until nowadays, still there is no exact details about the number of tourists, duration of their stay, and other parameters related to tourist register. According to the data, Kosovo’s tourists, rather prefer mountain tourism, which is represented by a touristic region of “Bjeshkët e Nemuna” and touristic area of “Sharri”, whereas other touristic products, which offers Kosovo and which are less preferred are: winter – recreational tourism, cultural tourism, business tourism, transit tourism, health tourism.³⁹

Accommodation capacities

Hotels of public sector which have about 70 % of beds in Kosovo are old and there is a lack of appropriate facilities and for this reason there is a small number of guest accommodation in hotels of public sector (IPH 2004- sectorial report of spatial planning of the tourism development). According to the informations from the department of tourism in Ministry of Trade and Industry, since 2000, until nowadays sensitively have been increased the capacities of tourist accommodation. So far have been licensed 87 hotels for accommodation, but there is no informations about the accommodation capacities of these hotels and there is no categorization of these hotels. Also have been licensed 33 tourist Agencies⁴⁰.

Visits to protected areas

Except “Maleve të Sharrit” and “Bjeshkëve të Nemuna”, in Kosovo are visited other protected areas of nature are: “Canyon” and “Mirusha waterfalls”; “Rugova canyon”; “The source of Drini i Bardhë”; “Bifurkacini i Nerodime”; “Marble cave” etc. Protected areas in Kosovo do not have

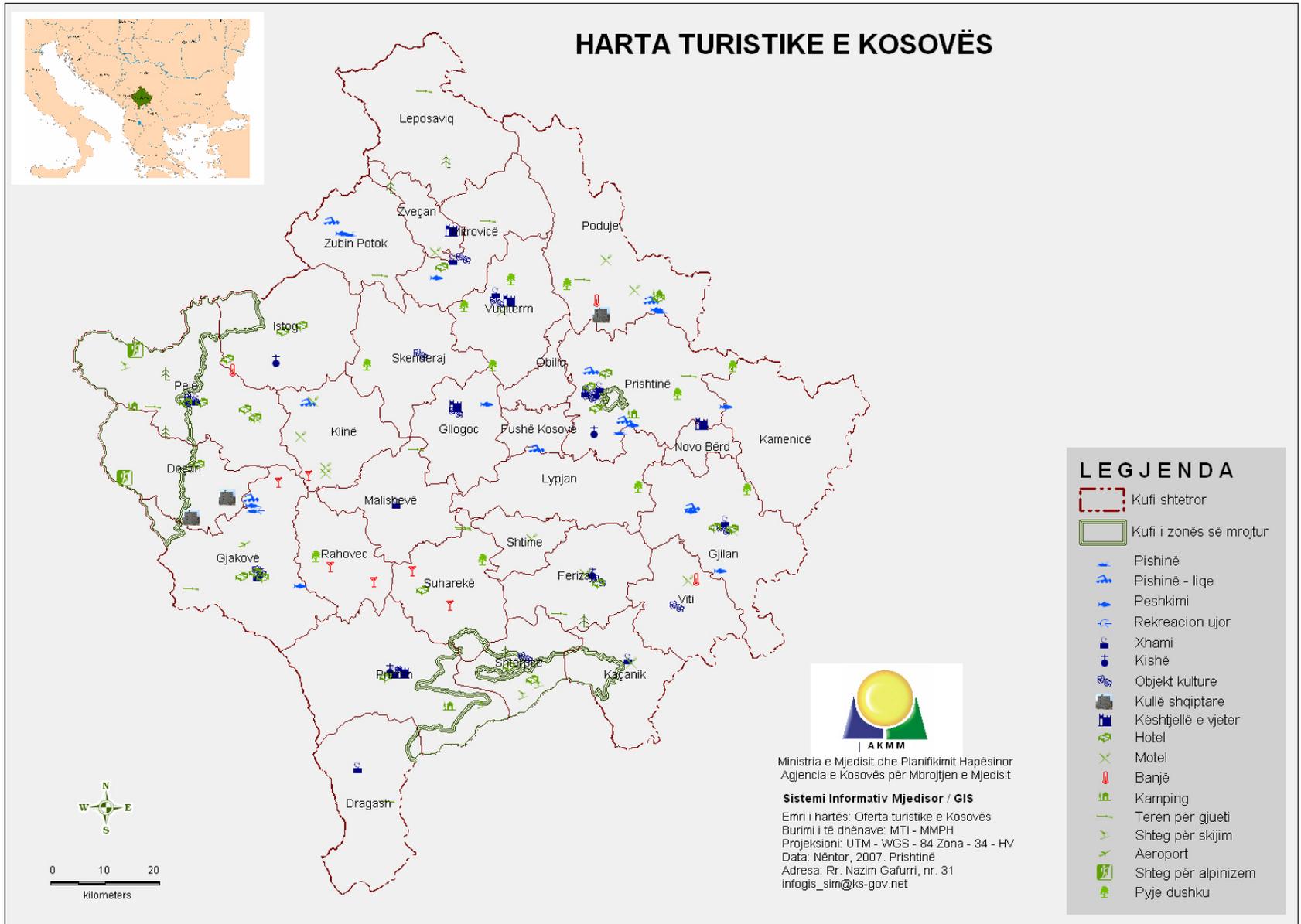
³⁸ IPH 2004 –Sectorial report of spatial development for tourism sector

³⁹ IPH 2004 – Sectorial report of spatial development for tourism sector

⁴⁰ Department of tourism, 2007

informative offices, through which will be able to get informations about the number and structure of tourists, visiting these areas.





8. Chemicals

The assessment of situation

The chemical industry has been one of the most important discipline of the industry in Kosovo. Currently there is no domestic production of harmful chemicals, but they are imported. In the areas where have been plants have left a large quantities of chemicals.

System for managing of chemicals has not been implemented in Kosovo .Currently there is no strategy for management of chemicals, and either legislative framework which regulates the general manage, ment of chemicals in accordance with EU legislation .However, there are two existing laws in force, covering two specific issues of the management of chemicals.

Import supervision and use of harmful chemical elements is not implemented yet. Competencies in this field belong to Ministry of Environment and Spatial Planning, Ministry of Health, Ministry of Labour and Social Welfare, Ministry of Public Services, Ministry of Transport and Post-Telecommunicationetc.

Kosovo is not included in International programe for chemical safety (International Program for Chemical Safety - IFCS). Monitoring system, System of public information and that one for data exchange between different governmental bodies has not been developed.

- There is a lack of educatiuonal system of individual producers about the use of chemicals;
- There is a lack of strategy for management oif chemicals;
- There is a lack of legal base ,procedures and directives for chemical management;
- There is a lack of general monitoring system;
- There is a lack of system for registration ,assessment and authorization of chemicals;
- It is not functioning the public information system;
- There is a lack of procedures for supervision and and interboundary transport of chemicals and data exchange. These shall be drafted in accordance with requirements of the Convention for interboundary transport and supervision of banned chemicals and chemicals of limited use (PIC Convention);
- In a process of restructuration and privatization ,there are no obligations to present informations regarding to chemicals ,hazardous waste and other elements impacting in human health and in environment;
- There is no program for sustainable organic contaminants (POPs).

Beginning from action plan for monitoring of environment in Kosovo, is presented an immediate need in drafting of Law for chemicals because oit has been presented as a priority in the tasks of the Ministry of Environment and Spatial Planning and the Governemnt of Kosovo.

This law is drafted by MESP and approved by kosovo's Assambley and shall be promulgated by SRSG.



II. SITUATION

The environment contamination is one of the major problems of the XXI century. Industrialization, the natality of population, urbanization, waste,

radioactivity and chemicals are some of the main factors, which contribute in environment contamination.



1. Air

The atmosphere can be influenced by many solid, liquid, and gaseous substances. Air is one of the main environmental mediums in spreading of contamination, effect of which can be direct and indirect in humans and other environmental components. Therefore it is necessary that prevention measures of air contamination shall be issues of priority.

Air contamination has negative effect and puts in danger human health, biodiversity and economy. As after-effect of air contamination, comes to the damage of the ozone, constitution of acidic rains and the effect of gases.

The environmental levels of air indicators can be divided in to three aspects:

- Emissions (pressure indicators);
- Air quality (The status of indicators); and
- Measures taken and their efficacy (responsible indicators).

Air emissions

Main sources of contamination emissions are:

- Static industrial sources: usually concentrated in industrial areas and localities with density of population;
- Traffic;
- Construction areas, stonebreakers, cement factories; etc.
- Sources with large burns;
- Others

As contamination emissions are: NO_x , CO_2 , CO , O_3 , SO_2 , smoke-black, dust, smoke etc. Monitoring of contamination emissions is necessarily to know their value and to define the level of environmental contamination.

Air quality

The main objectives of environmental policies in Kosovo are designed to guarantee a pure environment to population, to decrease the level of the environment degradation, regenerate the economic base, based in a principle of sustainable development and harmonization of international environmental standards.

The air quality may be assessed only on the base of informations taken by air monitoring system, through operators, or adequate institutions, dealing with monitoring.

Monitoring of air quality includes:

- Sources and emissions of contamination of environment;
- Transmissions of contaminants in atmosphere;
- The level, concentration and distribution of contaminants in space and time;
- Impact of contaminants in populations' health.

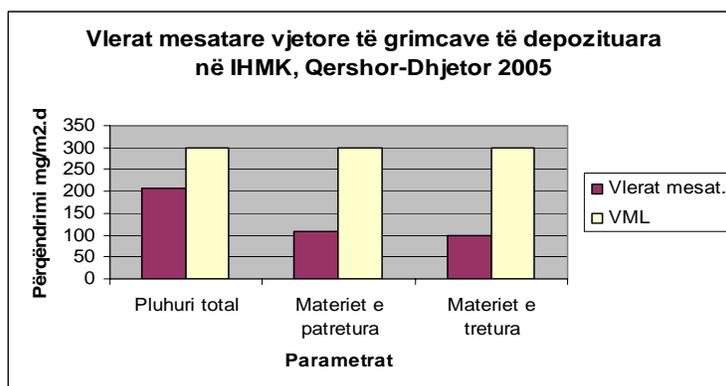
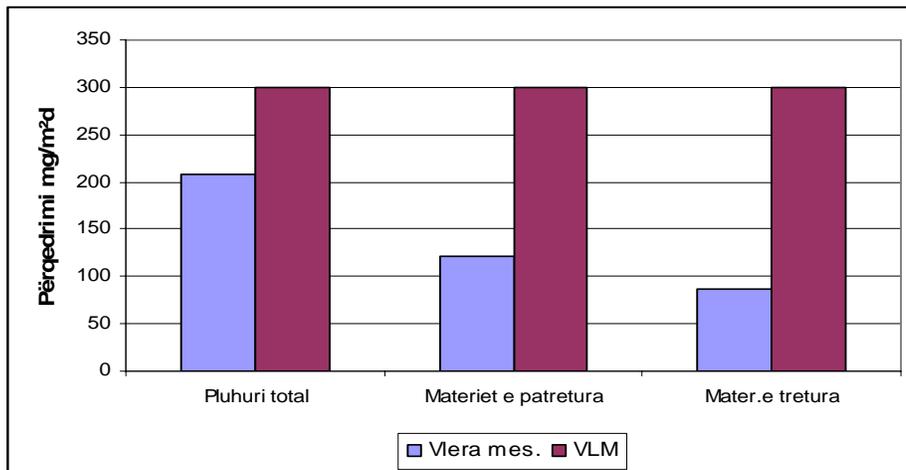


Monitoring of air quality in Kosovo

Monitoring of air quality in Kosovo is very deficient, because of the lack of facilities and monitoring stations. It is monitored only the concentration of: SO₂, black-smoke and dust. The same parameters with the same methodology are monitored by HMIK, INKOS-i and IPH. In this report will be represented results of HMIK of Kosovo (a part of some results from a program with whom realized in Mitrovica and INKOS. Undoubtedly that by these results can not be given a complete assessment of contamination level, neither the identification of the discharge sources of certain contaminants.

Monitoring of air quality in Prishtina⁴¹

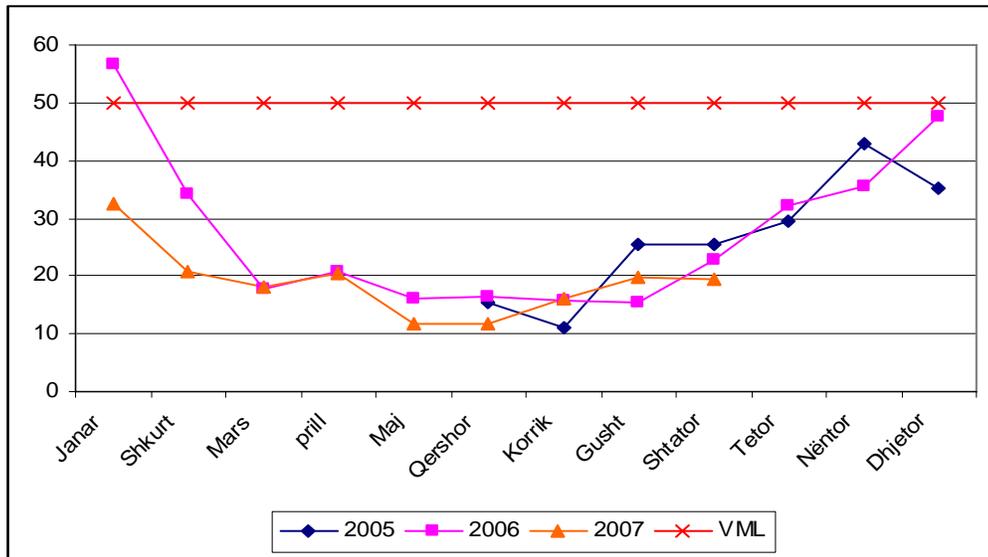
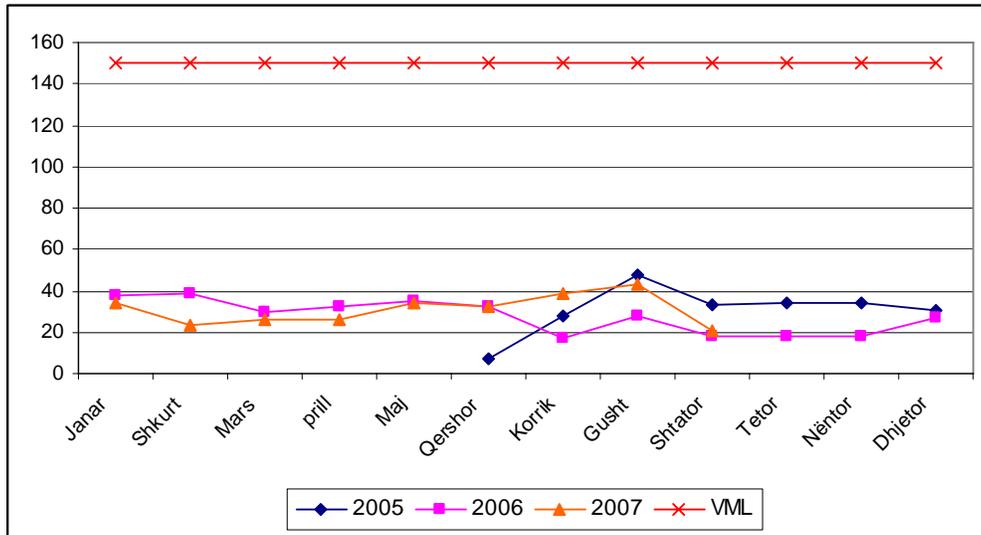
Prishtina as administrative center and capital of Kosovo, and with a large number of population, overloaded traffic, and economic activities which have impact in the environment, it is necessarily to have a comprehensive monitoring of environment and, in particular, monitoring of air quality. This monitoring shall be designed to include all parameters, required by EU and WHO, according to the criteria of covering territory and respecting of other performances.



MPV Maximum permitted -Value (concentration), according to WHO

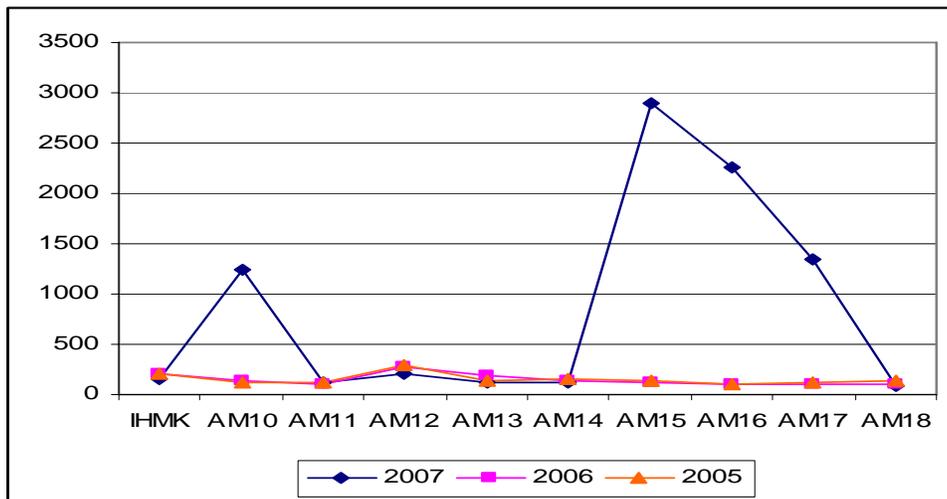
⁴¹ Report by HMIK)





MONITORING OF AIR QUALITY IN MITROVICA ⁴²

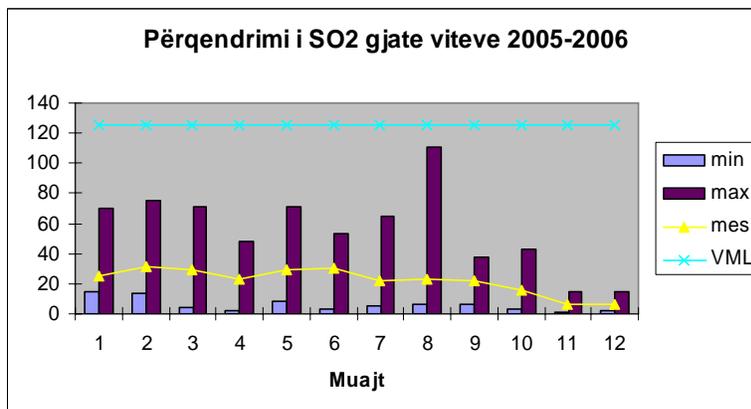
Monitoring of air quality in Mitrovica ,according to WHO and IHMNK program ,has been performed in these points: AM1-School “Bedri Gjinaj”, AM11/AMP7-School “Migjeni”, AM12-ALBA Park-Shupkocv, AM13-Vëllezërit Kuqi, AM14-School “Elena Gjika”, AM15-Trepça Industrial Park, AM16-OSBE, AM17-Tobbaco factory AM18-Water plan, HMIK-Hydrometeorological Institute of Kosovo



Graphic .MPV of total deposited dust is exceeded in 4 monitoring points

MONITORING OF AIR QUALITY IN KEK- OBILIQ ⁴³

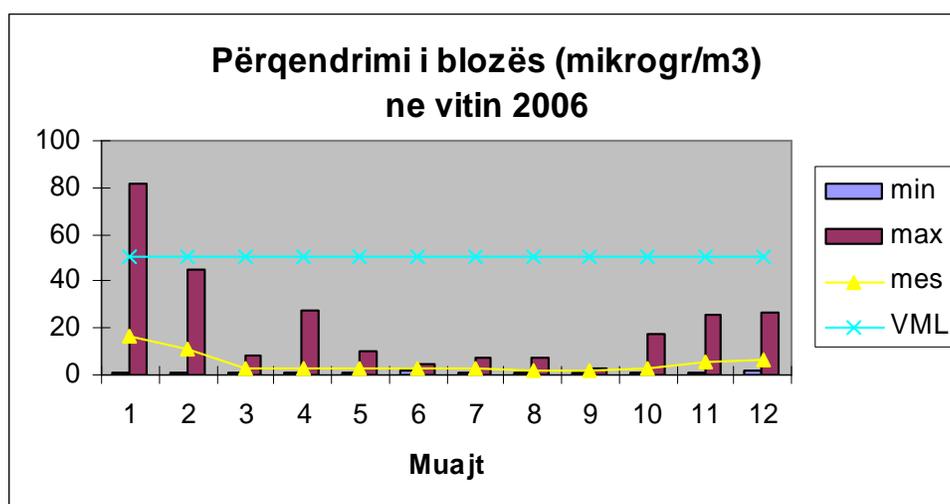
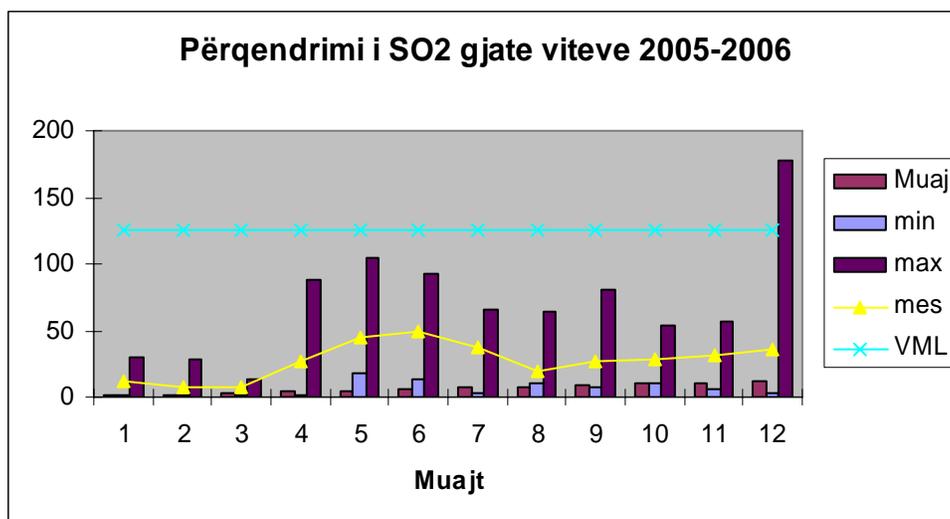
Obiliq and its periphery is a territory is well contaminated, as a result of emissions from existing Power stations, producing electrical energy with an old technology. The air contamination, very often exceeds maximum permitted values for dust, values of which make more difficult the situation the overall environmental situation in this region. Monitoring of air quality in KEK region is carried out by INKOS Institute.



⁴²A report from HMIK

⁴³ Environmental report 2006-Departamenti of environment i Mjedisit n KEK





Contami/Place		INKOS	Kastriot	Bardh	PML
Air crumbs	2002	85.13	-	119.04	150 $\mu\text{g}/\text{m}^3$
	2003	100.4	91.85	113.43	
	2004	56.8	-	-	
	2005	56.0	-	-	
Deposited dust	2002	727	-	817.2	300 $\text{mg}/(\text{m}^2 \cdot \text{d})$
	2003	1865	553.61	410.85	
	2004	313	460	195	
	2005	429	428	-	

Table 29. Average values of the dust, according to INKOS, in years

Explanation: Values with red color, indicate the exceeding of MPC (maximum permitted concentration)

From details presented in 2005, 2006 and 2007, in some monitoring points have been registered exceedings of maximum permitted values. In some cases Smoke-black and dust crumbs deposited have been noticed, whereas SO₂ was noticed less exceedings of MPL

Emissions



Except the deficiencies in monitoring of air quality, monitoring of the emissions from economical capacities, impacting in air quality has also stagnated in general.

Obligations coming out from the Law of air protection by contamination are not implementing; in this context delays are unjustifiable. In this report are not included those modest details for emissions, because most of them are old results, that coincident to actual circumstances of KEK operational capacities -u, Ferronikeli, Sharr-cemi, emissions from traffic etc. In absence of adequate details, has not been given any assessment about the contamination, caused by emissions in air.

Sources of acidic compounds -Acidification

The occurrence of the acidification is a serious problem all over the world. This occurrence is as a result of large discharges of the contaminants in atmosphere as - SO_2 , and Nitrogen oxides - NO_x . This occurrence, differently may be called as "Acid deposit", as the acidic compounds fall in the ground surface by two methods: humid deposits, (incised in rains) and dry deposit, which happens through falling and absorbings of acidic compounds of sulphide in the ground surface, plant, buildings and water surface. So, by acidification term are related acidic deposits in the ground surface, more positively deposits:

- Solutions of the acids stronger than carbonic acid (H_2SO_4 , HNO_3);
- Acidic oxides (SO_2 , NO_x);
- Acidic salts (as NH_4HSO_4).

Acidic rains are calculated to be those if its pH is under 5, because the precipitations in normal conditions have the pH 5-6 which is equal to dissolution of CO_2 in water. This change will happen on the occasion of increase of SO_2 in atmosphere.

Antropogene sources which negatively contribute in increasing of this occurrence are many ex. burning of fossils, metallurgical industry, chemical industry, fires in the forests electrical discharges in atmosphere, transport etc.

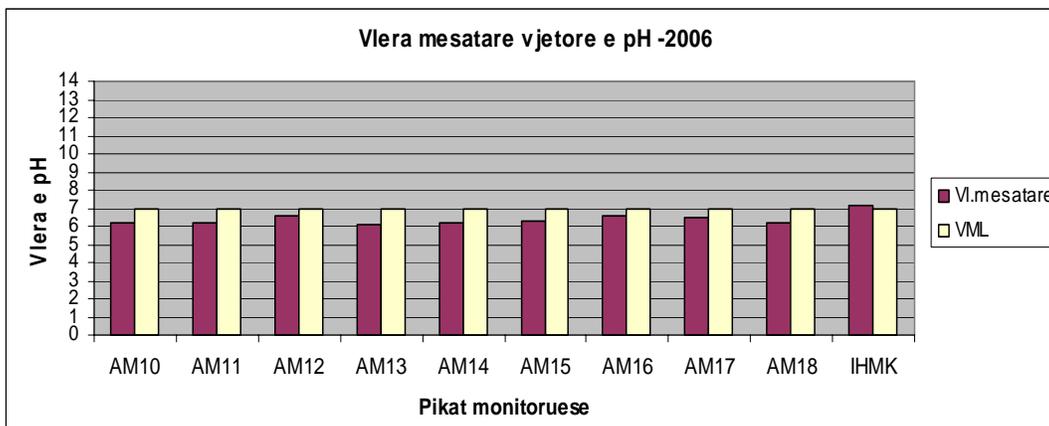
In Kosovo, the monitoring of rainfalls and especially those acidic ones, which is expressed by difference of pH, carries out HMIK, in two centers: Prishtina and in Mitrovica. (The table below).⁴⁴

Monitoring points	AM ₁₀	AM ₁₁	AM ₁₂	AM ₁₃	AM ₁₄	AM ₁₅	AM ₁₆	AM ₁₇	AM ₁₈	HMIK
Average value	6.16	6.18	6.61	6.13	6.22	6.32	6.54	6.47	6.18	7.17
MPV	7	7	7	7	7	7	7	7	7	7

Table 30. Average value of pH of rainfalls in a monitoring network in Mitrovica HMIK / 2006)

44 Raporti nga IHMK





Kosovo and European legislative frame for air

Framing of Kosovo in approval of international convents and protocols, will be enabled through adoption of national legislation for reduction of contamination emissions as are; SO₂, NO_x, CO₂, dust emissions by plants with large burningsetc..

According to the legislation in force, one of the objectives of Kosovo’s Plan for Action in Environment and Environmental Strategy, is respectation of the international directives and convents for contamination emissions and environment protection. Kosovo is facing a big challenge concerning of respectation of European legislation ,which in the near future should be respected and signed as the only condition for further integration.



2. Waters

The assesmnet of situation

Kosovo has limited water resources, which in the future may be a handicap for economic and social development of the country. Water system of Kosovo is divided in to 4 river basins: Drini i Bardhë, Ibri, Morava e Binçës, and Lepenci⁴⁵. The annual average of rainfalls in Kosovo changes from 658 mm (Sitnica) to 1515 mm (Ereniku). The running coefficient is around 4.92 l/sec/km² (Morava e Binçës) to 42.46 l/sec/km² (Lumëbardhi i Deçanit). From Kosovo's territory, during wetty years, on the average are running 3.8×10^9 m³ of water .respectively 121.2 m³ /sec.

Kosovo approximately has 1600 m³/ujë per person. Protection, preservation and development of water resources is of great importance and it is one of the major environmental challenges. ⁴⁶

A hydrological Characteristic of Kosovo is the equal distribution of water resources, comparing to the need, which is reflected with large deficiencies of water, particularly during summer time.

Reserves of the ground waters are limited ,and they are mainly in the western part of Kosovo .Reserves of superficial waters are larger in this part of Kosovo as well ,comparing to east and south east part.

Kosovo has mainly artificial lakes (Batllava, Gazivoda, Radoniqi, Përlepnica and Badovci), and a number of small lakes for irrigation.Topographic conditions for construction of artificial reservoirs, for water accumulation are not suitable .For this reason are required large investments.

Kosovo has important sources of thermal waters, which are used for recreational and health purposes.There are three rehabilitation centers: Peja spa, Klllokot spa and Spa, north of Mitrovica). Although, there are other thermal resources which are not used and in future those should be investigated and pay more attention to them. The potential of thermal waters may be used for the dvelopment of recreational tourismas well.

Superficial waters

Superficial water resources are: rivers, sources, artificial accumulations, lakes, and other running waters.

Rivers and water basins

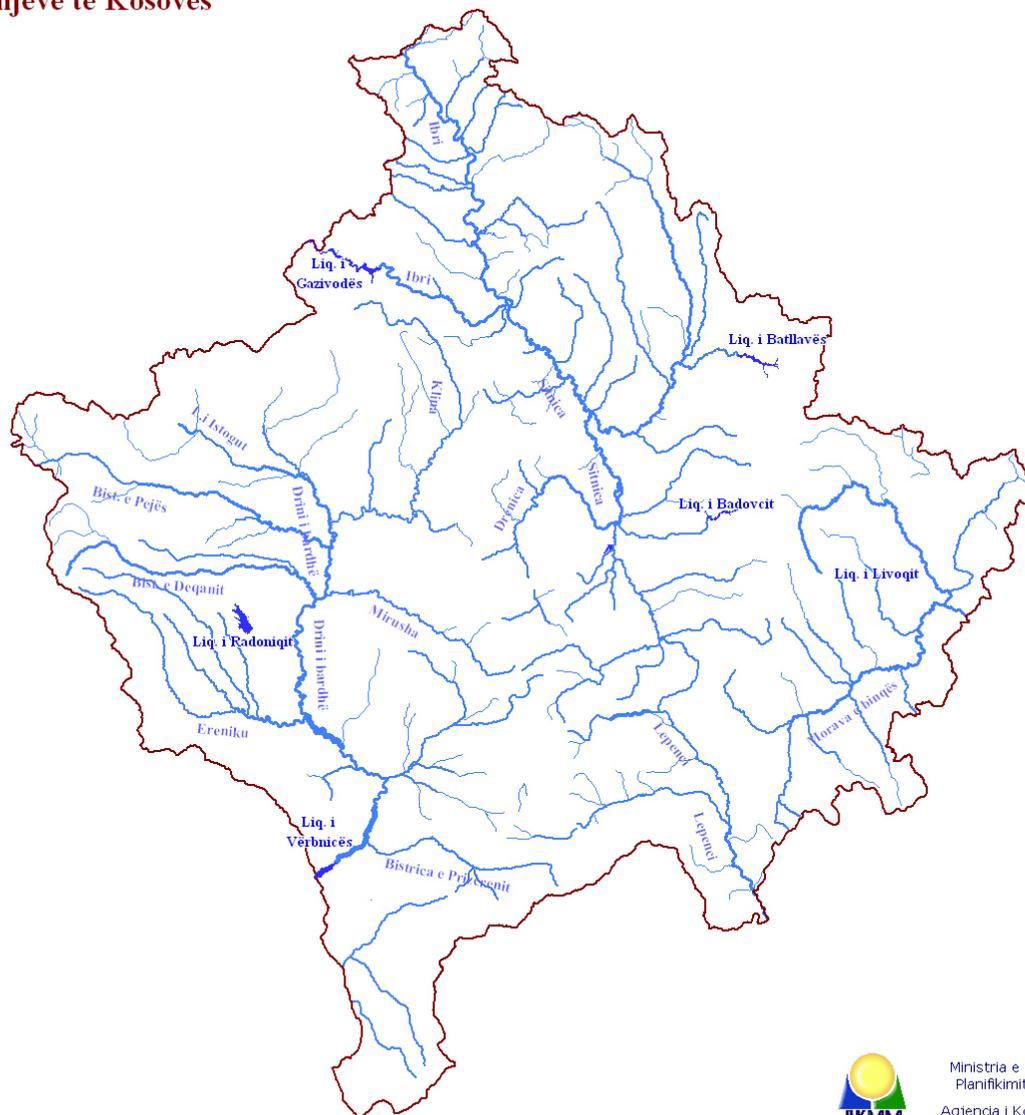
All Kosovo rivers are divided in to four watershed lines (accumulative basins), which run in different directions.

⁴⁵ Report about environment situation in kosovo 2003

⁴⁶ PKVM-2006



Harta e Lumenjëve të Kosovës



Sistemi Informativ Mjedisor / GIS

Emri i Hartës:
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info_gis_sim@ks-gov.net

LEGJENDA

-  Kufiri i Kosovës
-  Liqejtë
-  Lumejtë
-  Rrjedhje lumore



Ministria e Mjedisit dhe
Planifikimit Hapësinor
Agjencia i Kosovës për
Mbrotjtjen e Mjedisit



No.	Basin	S[km ²]	Q[m ³ /s]	q[l/s*km ²]	Annual waterflow [mil.m ³]	Running direction
1	Drini i Bardhë	4649	61.0	14.6	2.200	Adriatic sea
2	Ibri	4009	32.6	8.13	771	Danub / Black sea
3	Morava e Binçës	1564	6.1	4.35	330	Danub / Black sea
4	Lepenc	0.685	8.7	12.7	307	Deti Egje

Table 31. Accumulative basins, area, quantity of running water and outfall place

Lakes

Lake	Area	Watercourse
Radoniqi Lake	130 km ²	16 m ³ / sec
Batlava Lake	226 km ²	16 m ³ / sec
Ujman Lake (Gazivodes)	1060 km ²	13.5 m ³ / sec
Badovci Lake	103 km ²	105 m ³ / sec

Table 32. Area and watercourse of artificial lakes in Kosovo

No.	River	Accumulation name	Water quantity in m ³	Percentage (%)
1	Ibër	Gazivoda	390.000.000	68.45
2	Përrue	Radoniq	113.000.000	19.98
3	Graçanka	Badovci	31.000.000	5.44
4	Batlava	Batlava	30.000.000	5.26
5	Përlepnicë	Përlepnicë	4.200.000	0.73
6	Livoç	Livoç	1.000.000	0.17
7	Ibër	Pridvorcë	490.000	0.08
Total			569.690.000	100

Table 33. Main accumulations in Kosovo, area, watercourse and accumulation volume

From the table we can see that water reserves are $V_r=395.291.540 \text{ m}^3$ (accumulations volume $V_A=569.690.00\text{m}^3$ minus the quantity of the water consumed by population as potable water $V_P=174.398.460 \text{ m}^3$ so $V_r=V_a-V_p= 569.690.000-174.398.460 \text{ m}^3$)

Ground waters

Ground waters and their reserves in Kosovo have not been investigated.

Ground waters in Kosovo are in different rocks and of different oldness, since Paleolithic age to the Kuaterneri and are very important for supply of the population with potable water, industry and agriculture etc

Exploitation of the ground waters is done through wells and sources which in most of the cases are in highland areas



In the following table are presented some details of some ground accumulations.

No.	Ground accumulation	Basin (km ²)	Useful volume (m ³)	Estimated capacity	
				m ³ /sec	Total (m ³)
1	Istog	76	12x10 ⁶	2,8	89x10 ⁶
2	Vrellë	28	14x10 ⁶	0,600	19x10 ⁶
3	Drini i Bardhë	90	14x10 ⁶	3,23	102x10 ⁶
4	Lubizhdë	42	45x10 ⁶	4,2(150)	55x10 ⁶
5	Pejë	300	37,5x10 ⁶	4,0(150)	52x10 ⁶
6	Deçan	144	33x10 ⁶	3,5(150)	45x10 ⁶
7	Lloqan	39	12x10 ⁶	1,2(150)	15x10 ⁶
8	Krk Bunar	81	10x10 ⁶	1,6	50x10 ⁶
9	Korishë	18	3,6x10 ⁶	0,38	12x10 ⁶
10	Fusha e Therandës	50	75x10 ⁶	2	63x10 ⁶
		998	271x10 ⁶		511x10 ⁶

Table 34. Ground water accumulations

From the details presented we can see that estimated capacity of waters in ground accumulations is **511.000.000 m³**. **So the overall quantity of waters in Kosovo is 1.080.690.000 m³**

Water management ⁴⁷

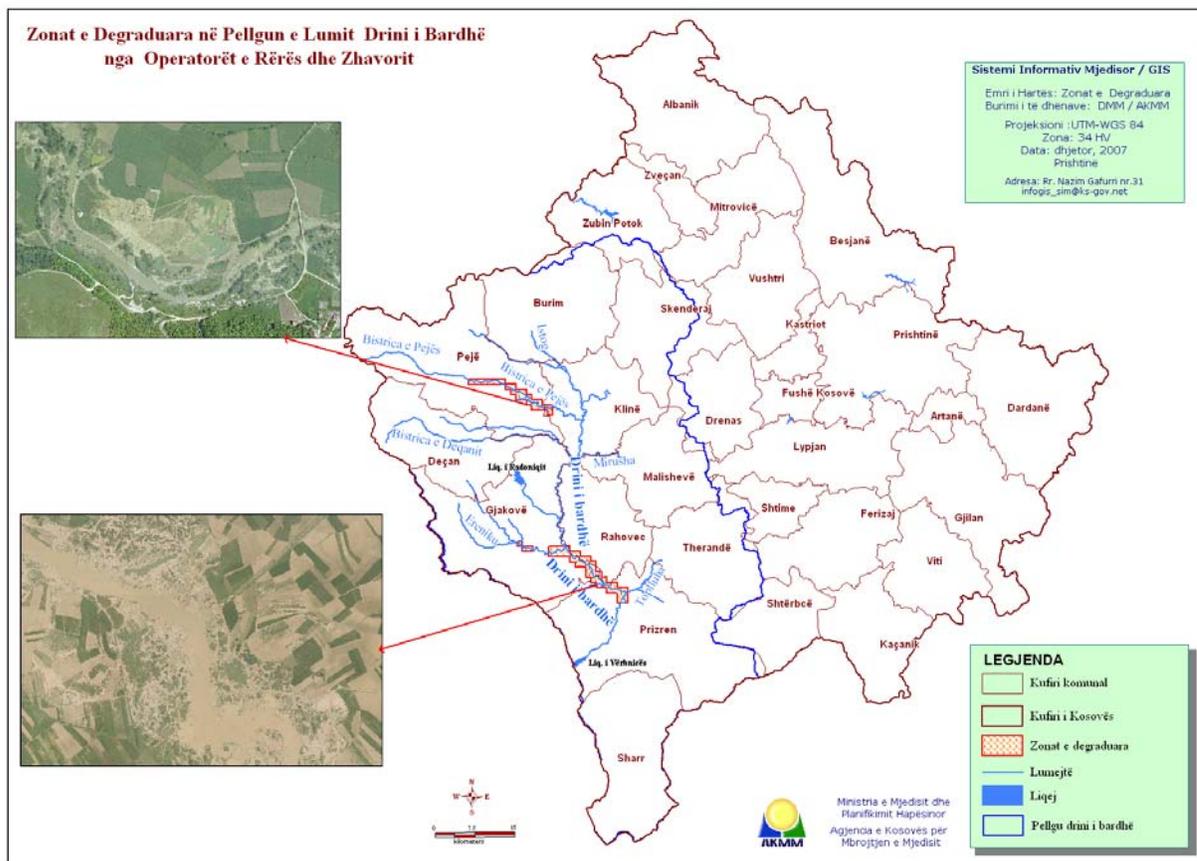
Water management means, many activities, decisions and measures, objective of which is keeping, preservation and improvement of the water quality. Good managing of the Kosovo's waters shall be in the list of priorities for protection of environment. This has been foreseen by Laws and a regulation in force. Real managing of the water resources is sustained in some basic principles:

- Water is an unrecoverable source of life in ground, and it is an obligation of every citizen to protect these resources;
- With waters should be managed according to European standards and a sustainable development, where there will be an access to all according to WHO principles;
- Administration-territorial boundaries of the units can not be an obstacle for integral management of waters;
- Units for water management are regions and water basins as hydrographic and economical integration;
- For utilization of waters over the permitted limits as well as administrative – territorial borders of the units can not be an obstacle of integral management of waters;
- For water utilization of over permitted limits and for every degradation of water quality shall be foreseen the compensation which will be proportional with the benefits, respectively shall be dependent to level of impact and change of water status.

⁴⁷ Report of environment situation 2003



Degradation of river beds



Water supply

The situation of water supply and especially, supply with potable water is not good, as a reason of many factors:

- Low level of water supply from the public system ,especially in rural areas;
- Low level of maintenance of water infrastructure;
- Amortization of water system and drainage;
- The lack of the plan for protection of water rsources;
- Lack of investments.

Kosovo’s population is supplied with potable water from superficial accumulations in eleven Kosovo municipalities (Mitrovica, Vushtrria, Skenderaj, Drenasi, Podujeva, Prishtina, Kastrioti, Gjilani, Gjakova and Rahoveci, Fushë Kosova), in this case is consumed a quantity of 93 milion m³ per year⁴⁸. Other is supplied by ground waters and sources. Rural localities are supplied by wells and local water supply systems through overcoming of sources.

⁴⁸Performance report for 2006, anex C1, published by ROWW, June 2007



The water supply system is organized through seven companies for supply with potable water, and managed by KTA:

- KRUK "Prishtina" - Prishtinë
- KR "Hidromorava" - Gjilan
- KR "Bifurkacioni" - Ferizaj
- KR "Hidroregjioni Jugor" - Prizren
- KR "Mitrovica" - Mitrovicë
- KR "Hidrodrini" - Pejë
- KR "Radoniqi" - Gjakovë.⁴⁹

About 73% of the population has access in water supply system .Some of the localities the water supply system have adjusted partially .The table below presents supply sources and daily quantity in m³.

No.	Source	The water quantity consumed in [m ³ /daily]	The water quantity ,consumed in [m ³ /per year]	Precentage [%]
1	Natural sources	153.264	55.941.360	32.10
2	Reservoirs	7.749	2.828.385	1.62
3	Rivers	11.191	4.084.715	2.34
4	Lake (superficial accumulation)	279.260	101.929.900	58.44
5	Well	26.340	9.614.100	5.51
Total		477.804	174.398.460	100

Table 35. Water supply sources and daily quantity in m³.

From the table we can see the most of the quantity of potable water is consumed from superficial accumulaton (lakes), whereas the smaller quantity is consumed by reservoirs.

All Kosovo's localities are facing with highlighted problems of potable water. Problems are of different natures, as: insufficient capacity of water sources; irrational consumption and loosings in the water system, Old filtration stations and limited capacity, lack of adequate urbanization of the localities, expansion of water system, and in the cases where the capacity is limited, lack of stimulative measures for water savings, lack of professional human resources for water management etc.

⁴⁹ A report from water deartment ,2007

Table 36. The quantity of water, produced by 7 licensed regional companies, offering water supply ⁵⁰

Details	Regional offers of water supply Services in Kosovo							Total
	KRUK 'Prishtina' (Prishtine)	KRUK 'South hydroregion' (Prizen)	KRUK 'Hidrodrini' (Peje)	KRUK 'Regional water system' (Mitrovica)	KRUK 'Radoniqi' (Gjakove)	KRUK 'Bifurkacioni' (Ferizaj)	KRUK 'Hidromorava' (Gjilan)	
	Municipalities: <ul style="list-style-type: none"> • Prishtinë • Fushë Kosovë • Obiliq • Podujevë • Lypjan • Shtime • Drenas 	Municipalities : <ul style="list-style-type: none"> • Prizren • Dragash • Therandë 	Municipalities: <ul style="list-style-type: none"> • Pejë • Istog • Klinë • Deçan • Junik 	Municipalities: <ul style="list-style-type: none"> • Mitrovicë • Skenderaj • Vushtrri 	Municipalities: <ul style="list-style-type: none"> • Gjakovë • Rahovec 	Municipalities: <ul style="list-style-type: none"> • Ferizaj • Kaçanik 	Municipalities: <ul style="list-style-type: none"> • Gjilan • Viti • Kamenicë 	
Number of population in the area of service	617,500	380,000	258,000	400,000	220,000	200,000	107,000	2,182,500
Population supplied	586,700	191,500	130,871	320,000	160,000	130,000	94,500	1,613,571 (73%)
Produced water (m ³ /year)	45,080,060	14,856,386	31,282,887	16,750,478	19,960,537	4,278,939	6,627,071	138,836,358

Remark:

Municipalities in the northern part of Kosovo as are: Zubin Potok, Leposaviq, Zveqan and municipalities of Shtërpçë and Novobërdë are not included in this table, because they are part of regional companies, licensed by Regulatory Office of Water and Waste (ROWW)

⁵⁰ ZRUM

Utilization of water in industry

Utilization of water in industry is not much, because the most of the industrial companies, which were active, are out of function, or are in a process of privatization⁵¹.

Most of active industrial companies use public water system .whereas there are no details about those using their own source of water supply system.

For industrial needs (in technological process, production, cooling, sanitation, etc), has been calculated that are consumed about 150 milion m³ per year, which presents 30% of overall consumption.

For instance ,the quantity of water ,used by NPH "Ibër- Lepenc" from Gazivoda Lake ,as drinking water ,irrigation and cooling of Power Station " Kosova B", is; 113.923.00 m³ /per day ,or 41.581.895 m³/ per year.

No	NPH,, Ibër - Lepenci"	Water quantityin [m ³ / per day]	Water quantityin [m ³ / per year]
1	Population	43200	15.768.000
2	Industry	55.104	20.112.960
3	Agriculture	15.619	5.700.935
Total		113.923	41.581.895

Table 37. Water distribution by NPH,, Ibër – Lepenc"

By development of Industry in the future, in Kosovo, it is expected to be increased the consumption of water resources, which will put in danger the supply of population with potable water, especially in accumulation basins ,in which have joint access ,the industry and population.

Water utilization for hydroenergy

Water in Kosovo is used for hydroenergetical purposes as well with a small capacity. So far in Kosovo have been constructed these hydroenergrtic capacities:

- ✓ **Kozhnjeri** with a power of 8.4* MW and with available power of 6,4 MW * and annual production of 37 GWh*,
- ✓ **Dikanci** (1956), with 1,4 MVA and installed active power of 1,20* MW,
- ✓ **Istogu** with 0.56 MVA and installed active power of 0,45 MVA (1934),
- ✓ **Gazivoda** with installed course of 2x18=36 m³/s*, installed power is 2 x 17 = 34 MW with a average planned production of 95 GWh*.

Water utilization for watering

Water resources are used also, for watering purposes of agricultural land .In Kosovo, before 1999 under irrigation system have been included 25 % of agricultural land area⁵².

According to the studies of husbandries in 2005, the land area under irrigation is around 41.860 ha (or 28 % overall cultivated land). According to the regions, the major part of the watered land

⁵¹ Raport nga DU

⁵² Raporti i departamenti të ujërave



is in municipalities of Peja and Gjakova. Peja and Deçani have broadly system of irrigation, including around 20% of overall irrigated area in Kosovo.⁵³

Region	Watered land area (ha)	% of watered land	Distribution of watered land ,on the base of regions in %
Total	41.860	27.9	100
Prishtinë	5.136	27.0	25
Mitrovicë	3.416	16.5	7.8
Pejë	13.429	50.4	17.4
Gjakovë	12.967	48.7	20.1
Prizren	4.588	19.4	11
Ferizaj	1.484	29.0	9.7
Gjilan	840	17.2	9.1

Table 38. Utilization of water for irrigation purposes, on the base of regions

On the base of KSI report (2005)⁵⁴ for irrigation of cultivated land in Kosovo municipalities, the situation is as follows.

Municipalities	Watered land area (ha)	% of watered land	% of overall watered land area in Kosovo
Shtërpcë	242	45,7	0,8
Yushtrria	41.860	15,6	100,0
Deçan	5.783	21,3	9,2
Gjakovë	2.682	11,5	9,3
Malisheva	486	38,0	1,3
Gjilan	251	14,6	3,2
Dragash	579	13,1	1,7
Istog	4.733	47,7	5,8
Kaçanik	611	34,6	3,5
Klinë	722	20,6	1,8
F.Kosovë	1.174	35,1	2,4
Kamenicë	275	16,9	2,5
Mitrovicë	684	21,0	1,8
Leposaviq	243	12,8	0,6
Lipjani	832	26,7	4,6
Novobërda	218	23,3	0,8
Obiliqi	476	15,6	0,8
Rahoveci	4.522	45,9	6,6
Peja	7.954	71,9	9,8
Podujeva	1.179	22,5	5,7
Prishtina	862	29,5	4,0
Prizreni	2.073	33,8	3,5
Skenderaj	461	15,5	2,5
Shtime	264	23,2	1,6

Table 39. Land irrigation in municipalities

The situation supply is not condition in as well: tourism, recreation. fields has not attention ,in either, even existing conditions development

of water in a good these sectors fishery, sport and To these been paid the past that there are practical for their e tyre.

⁵³ Burimi: SOK, raporti zero

⁵⁴ ESK, Enti i Statistikave të Kosovës



CONTAMINATION OF WATER ⁵⁵

Superficial and ground waters are not protected from the contamination and is not respected the appropriate level sanitation areas.⁵⁶

The industry is the largest consumer of the water .The quantity of water used in industry, in the most cases returns to the water runnings with degraded quality. Also in households the consumption of water is very large, and at the same time is presented as considerable contaminant of superficial and ground waters.

Detergents as effective on hygiene keeping have a great use in the house .They are calculated to be among the contaminants with impact in the environment ,as biologically dissolvable which give a contribution of water eutrification.

Also, the use of fuel and oils from different machineries, which directly or indirectly come to the water source is, present as potential contaminant of the water.

The sewage outpour

The sewage out pour is the main source of contamination of natural waters, because they do contain many substances that spend dissolved oxygen ,solvable compounds of phosphorous and nitrogen (eutrofikimin), pathogenic bacteria and viruses ,heavy metals as Cd, Hg, Zn, Pb, Cr, Cu, ,and substances that affect water quality.

There is no system of sewage monitoring. The management of sanitations is done by seven regional public companies of water supply. Around 30% of Kosovo's populations have access in a sanitation system⁵⁷.

There are no treatment plants of sewages. It has been completed the plant construction in, but it has not been activated.

⁵⁵ A report by WD

⁵⁶ PKVM, 2006-2010

⁵⁷ SHUKOS



Water eutrophication

Solvable compounds of phosphorous and nitrogen are indicators of the growth of nutrition matters which causes the growth of plants and algae ,causing harm of water quality and ecological disbalancing in water ecosystems. In natural conditions, waters have a relatively low content of phosphorous and nitrogen, and this condition is known as “oligographic “condition. When discharged waters contain matters of antropogen origin, abundant with phosphorous and nitrogen, there is a possibility of the growth of algae, and there is no water clearness. Such water condition is known as “eutrophic”⁵⁸.

The eutrophic condition of waters has large consequences for water organisms, because it is accompanied by decrease of concentration of disoluted oxygen in water.

There are no details in Kosovo for the water eutrophication, because there is no monitoring of contaminated water outpour in rivers. However, it has been estimated that industrial used waters, outpoured directly in the river course, without previous treatment have an impact in eutrophication of running waters.

The river classification, according to the classes

On the base of monitorings made in 2007, by KHMI of superficial water quality, Kosovo’s rivers, belong to the following classes⁵⁹:

The basin of Drini I Bardhë: rivers, Ereniku, Lumëbardhi i Pejës (Bistrica), Lumëbardhi i Deçanit, Mirusha, Lumi Klina, Lumëbardhi i Prizrenit (Bistrica) until at the entrance of the towns, are waters of I-st quality, whereas at the exit from the towns belong to the II –nd class.

The basin of: The river of Nerodime from the source ,till the entrance of Ferizaji town ,belongs to the I-st class ,respectively II-nd class ,,whereas the water changes contamination after the discharge of sewage and industrial waters from the town’s sanitation system ,and passes in to a III and IV class.

Ibri basin: Sitnica to the discharge of Graçanka has the characteristics of II class, whereas, after the discharge of urban waters from Prishtina city and KEK Complex, they pass in to a III and IV class, dependently from the discharges of the waters in river.

Whereas , with its flow of Sitnica river ,by reason of water power station and artificially balanced flows in Gazivoda reservoir ,remain in the II class.

Basin of Morava e Binçës, by discharges of the sanitations from Vitia and Gjilani localities, from the II class, pass in to III class to the outfall of river Kriva (Kriva Rekës). From the outfall of river Kriva (Kriva Rekës) to the border with Serbia and by the reason of self cleaning capacities of the river, the water comes to the II class II.

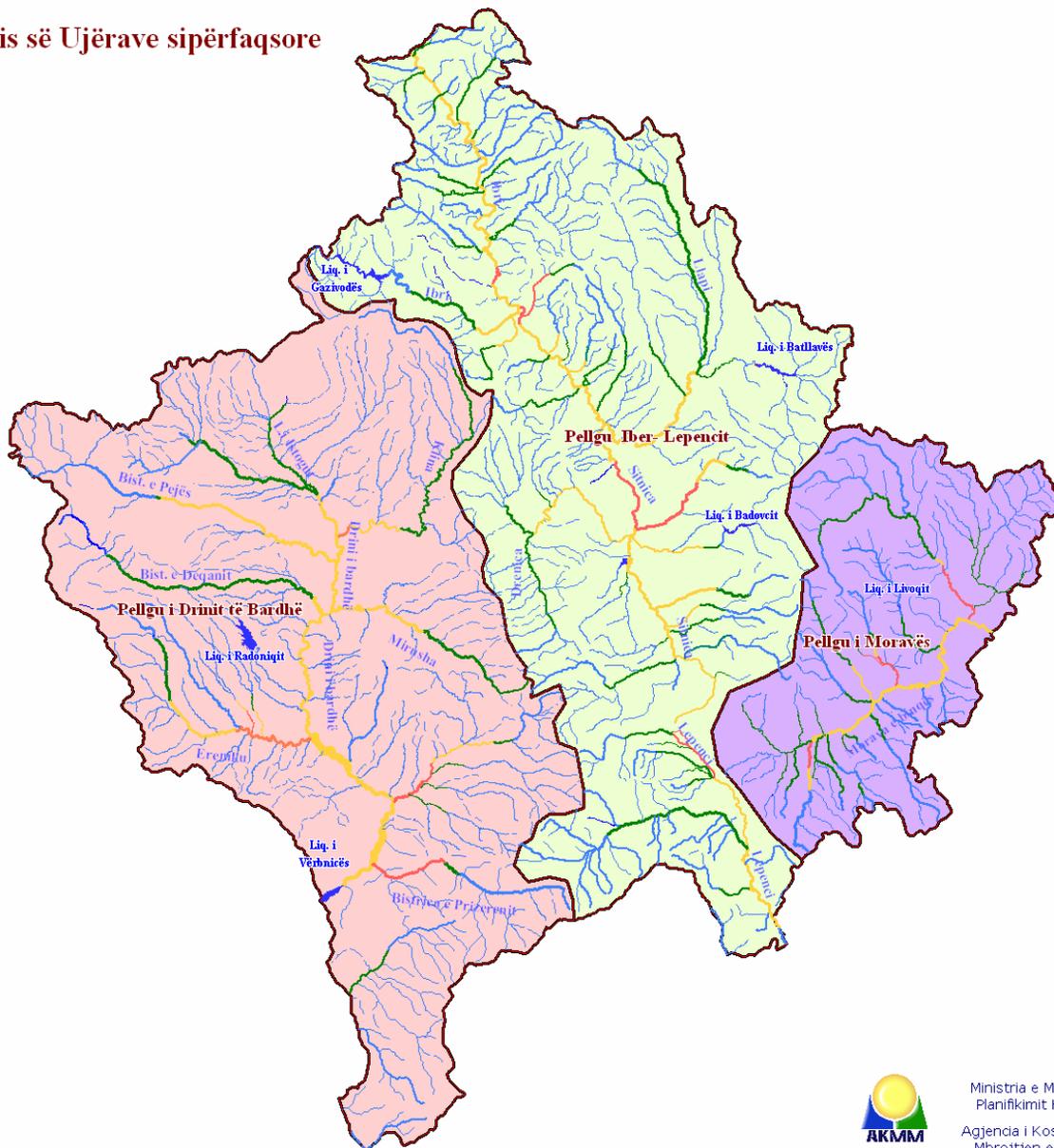
MONITORING OF SUPERFICIAL WATERS

In Kosovo, the monitoring of superficial waters is carried out by Hydrometeorological Institute with 28 monitoring stations. In 54 water profiles is carried out the measure of the physical and chemical parameters of the water quality. Partially water monitoring is carried out by: INKOS (for KEK), Ferronikeli, Sharr-cemi, etc. Ground waters and accumulations are not monitored. This fact shows a need to build the general capacities for a completed monitoring system of waters, in regard to increase the monitoring points, number of parameters and sampling frequency. KHMI plans to organize monitoring of biological and bacteriological parameters.

⁵⁸ Environmental chemistry Tirane, 2005, Alqi Çullaj

⁵⁹ Water department

Harta e cilësisë së Ujërave sipërfaqësore



Sistemi Informativ Mjedisor / GIS

Emri i Hartës:
 Cilësia e Ujërave sipërfaqësore
 Burimi i të dhënave: DU/ AKMM

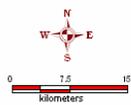
Projeksiioni :UTM-WGS 84
 Zona: 34 HV
 Data: mars, 2008
 Prishtinë

Adresa: Rr. Nazim Gafuri nr.31
 infogis_sim@ks-gov.net

LEGJENDA

- Kategoria I
- Kategoria II
- Kategoria III
- Kategoria IV

- Pelgu i Drinit të Bardhë
- Pelgu i Iber - Lepencit
- Pelgu i Moravës
- Liqejtë



Ministria e Mjedisit dhe
 Planifikimit Hapësinor
 Agjenda i Kosovës për
 Mbrojtjen e Mjedisit



RRJETI I STACIONEVE HIDROMETRIKE



Sistemi Informativ Mjedisor / GIS

Emri i Hartës:
Rrjeti i Stacioneve Hidrometrike
Burimi i të dhënave: IHMK / AKMM
Projeksioni :UTM-WGS 84
Zona: 34 HV
Data: nëntor, 2007
Prishtinë
Adresa: Rr. Nazim Gafurri nr.31
infogis_sim@ks-gov.net

LEGJENDA

- Kufiri i Kosovës
- ▼ Stacionet Hidrometrike
- Lumë
- Rrjedhje Lumore



Ministria e Mjedisit dhe
Planifikimit Hapësinor
Agjencia e Kosovës për
Mbrojtjen e Mjedisit

AVERAGE VALUES OF PHYSICAL AND CHEMICAL ANALYSES OF SUPERFICIAL WATERS ,ACCORDING TO THE PROFILES IN KOSOVO BASINS -2005/2006/2007										
Rivers	Monitoring pointse	TDS values -mg/l			pH values			O ₂ values dissolved - mg/l		
		2005	2006	2007	2005	2006	2007	2005	2006	2007
Lepenci	Brezovicë	72.2	78.5	60	8.43	7.29	8.05	12.1	12.52	11.16
	Kaçanik	109	106	121	8.07	8.17	8.20	11.09	11.3	10.95
	Hani i Elezit	128	119	147	7.96	8.07	8.13	11.24	11.5	10.57
Nerodime	Nerodime	105	71.35	107	8.11	8.02	8.24	12.22	13.08	11.36
	Gërlice	203	210	275.2	7.75	7.84	7.82	7.50	8.19	6.194
	Kaçanik	209	223	265	7.81	8.00	8.02	9.52	10.36	9.71
Nerodime northern part ,outpoured in Sitnicë	Ferizaj -te ura	261	204	261	7.67	7.94	7.37	10.43	16.4	13.98
Shtimja	Carralev	189	229	215	8.02	8.12	7.98	10.205	12.52	9.56
	Davidovc	240	227	262	8.09	7.93	7.98	10.07	9.25	8.44
Sitnica	Bablak	171	161	207	7.61	7.83	8.24	8.705	15.19	16.68
	Lipjan	252	225	249	7.83	7.68	7.85	7.09	10.69	12.12
	Vragoli	322	266	325	7.81	7.87	7.78	6.73	8.96	4.94
	Plemetin	278	253	279	8.06	7.93	8.13	7.26	7.05	6.61
	Nedakoc	227	322		7.74	7.78		12.03	7.54	
	Mitrovice	312	286	301	7.88	7.73	7.80	8.16	7.98	7.64
Prishtina	Bresja	356	303	362	7.76	7.75	7.81	5.52	5.56	4.28
Graqanka	Vragoli	833	778	760	7.70	7.67	7.74	10.0	9.05	9.42
Drenica	Baicë	239	219	291	8.11	8.08	8.1	11.38	15.54	10.64
	Vragoli	313	349	382	7.90	8.02	7.94	8.48	9.205	7.31

Rivers	Monitoring points	TDS Values -(mg/l)			pH values -(0-14)			Values of O ₂ dissolved - (mg/l)		
		2005	2006	2007	2005	2006	2007	2005	2006	2007
Llapi	Reqicë	145	127	129	8.18	7.91	8.14	11.28	10.27	10.01
	Podujevë	216	216	217	8.02	7.92	8.05	9.14	8.01	7.79
	Millosev	222	237	208	7.96	7.97	7.98	9.74	10.68	9.57
Ibri	Kushtovë	169	144	159	8.23	8.12	8.49	12.6	14.5	13.1
	Mitrovice	211	156	165	8.27	8.37	8.38	12.97	13.53	13.2
	Kelmend	247	236	256	7.86	7.87	7.94	9.57	9.29	7.43
Morava e Binqës	Viti	79	90	84	7.85	7.97	8.21	12.16	10.46	9.6
	Kllokot	201	183	181	7.81	7.79	7.93	9.26	8.42	8.11
	Uglare	234	291	296	7.69	7.70	7.83	7.23	6.27	5.65
Dardana	Dardan-hyrje	245	289	269	7.90	8.16	8.63	10.325	10.51	11.28
	Dardan-dalje	203	305	347	7.85	7.90	7.94	10.285	8.40	9.3
Drini i Bardh	Radavc	132	124	132	8.00	7.90	8.05	10.19	12.40	11.44
	Klinë	198	180	185	8.14	8.16	8.12	10.9	12.36	12.51
	Gjonaj	174	181	180	8.17	8.13	8.28	10.56	11.51	11.55
	Vërmice	158	145	187	8.15	8.13	8.49	11.21	14.27	12.27
Burimi	Burim	136	129	145	8.01	7.70	8.07	13.76	11.56	13.12
	Zllakuqan	171	166	172	8.1	8.05	8.14	10.41	10.79	12.59
Klina	Llaush	324	299	433	8.17	7.78	7.705	14.12	10.94	6.545
	Klinë	280	318	336	7.96	7.93	7.85	10.43	10.2	9.88
Lumbar. i Pejës	Mbi qytet	115	108	112	8.24	8.20	8.34	9.745	11.7	10.68
	Lagja Dardania	131	126	128	8.16	8.15	8.15	10.84	11.32	12.4

Rivers	Monitoring points	TDS Values -(mg/l)			pH Values-(0-14)			Values of O ₂ disolved- (mg/l)		
		2005	2006	2007	2005	2006	2007	2005	2006	2007
Rimniku	Xërxë	327	345	306	7.97	8.01	8.09	7.62	8.83	7,54
Toplluha	Buqall	201	218	256	8.22	8.25	8.22	11.11	12.5	9.56
	Piran	239	252	223	8.15	8.17	8.23	10.49	11.93	11.13
Lumbar. i Deçanit	Mbi qytet	162	151	102,8	8.18	7.86	8.12	11.55	12.45	10.66
	Kralan	177	158	204	7.88	8.17	8.17	10.50	11.65	10.21
Mirusha	Volljak	265	281	314	7.93	7.95	7.90	10.36	11.52	10.7
Ereniku	Junik	90	75	92.4	7.99	7.84	8.13	12.1	12.36	9.975
	Te ura e Terezive	141	141	169	8.01	8.05	8.14	10.7	11.0	11.02
Lumbar. i Prizrenit	Mbi qytet-Prevall	117	67	83	8.12	7.6	7.97	11.96	13.82	10.1
	Vlashnje	150	169	149	7.84	7.85	7.88	9.78	11.09	8.9
Plava	Plavë	In this period of time, there is no monitoring of these rivers								
Orqusha	Orqushë									
Restelicë	Restelicë									

Table 40. Physical and chemical analyse of superficial waters, according to the profiles in Kosovo basins 2005-2007

AVERAGE VALUES OF PHYSICAL AND CHEMICAL ANALYSES OF SUPERFICIAL WATERS IN KOSOVO BASINS -2005/2006										
Rivers	Monitoring points	Amoniac - NH ₄ ⁻ ,mg/l			Nitrates- NO ₃ ⁻ ,mg/l			Nitrite-NO ₂ ⁻ ,mg/l		
		2005	2006	2007	2005	2006	2007	2005	2006	2007
Lepenci	Brezovicë	0.8	1.075	0.705	///	2.20		<0.07	0.008	<0.07
	Kaçanik	0.989	2.43	0.939	0.64	4.05		0.055	0.17	0.007
	Hani i Elezit	1.867	2.434	2.05	1.68	4.225		0.16	0.155	0.2
Nerodime	Nerodime	0.84	1.387	0.67	///	3.00		<0.07	0.029	<0.07
	Gërlicë	3.56	6.08	9.322	3.90	5.68		0.19	0.26	0.022
	Kaçanik	2.707	4.007	7.700	8.25	9.16		0.55	0.671	0.774
Nerodimje pjesa veriore - Sitnica	Ferizaj -te ura	4.27	3.13	2.84	0.2	0.533		0.42	0.198	0.009
Shtimja	Carralevë	1.42	0.05	0.795	.02	1.00		0.19	0.011	0.005
	Davidovc	4.78	2.698	2.91	0.82	4.05		0.815	0.293	0.153
Sitnica	Bablak	2.25	2.50	0.851	1.95	3.50		0.08	0.15	0.016
	Lipjan	3.84	2.792	1.784	3.03	3.50		0.38	0.079	0.03
	Vragoli	2.83	2.85	2.16	7.59	6.50		0.292	0.21	0.022
	Plemetin	5.3	4.845	6.138	4.96	6.875		0.382	0.36	0.037
	Nedakoc	2.28	5.145		4.3	///		0.12	///	
	Mitrovicë	4.25	2.477	4.374	10.37	10.28		0.436	0.38	0.067
Prishtina	Bresje	14.56	12.53	13.43	4.31	6.675		0.67	0.667	0.645
Graqanka	Vragoli	4.87	4.253	3.208	6.46	7.49		0.558	0.213	0.068
Drenica	Baicë	///	2.12	1.47	1.40	5.10		<0.07	0.035	0.008
	Vragoli	2.57	2.28	1.21	8.70	7.56		0.485	0.47	0.037

Rivers	Monitoring points	Amoniac - NH ₄ ⁻ ,mg/l			Nitrates- NO ₃ ⁻ ,mg/l			Nitrite-NO ₂ ⁻ ,mg/l		
		2005	2006	2007	2005	2006	2007	2005	2006	2007
Llapi	Reqicë	1.08	2.615	0.97	////	2.00		0.13	0.028	0.009
	Podujevë	2.09	2.92	3.22	2.73	4.875		0.152	0.105	0.012
	Millosevë	1.51	1.738	1.31	4.03	6.50		0.172	0.149	0.014
Ibri	Kushtovë	2.048	2.37	0.754	1.55	4.00		0.01	0.002	0.002
	Mitrovicë	4.24	2.376	2.352	2.30	2.98		0.023	0.033	0.028
	Kelmend	3.91	2.73	3.174	8.425	6.27		0.39	0.26	0.092
Morava e Binqës	Viti	2.295	1.642	0.47	0.25	2.00		<0.07	0.063	0.001
	Kllokot	2.73	2.51	1.619	3.28	5.00		0.16	0.40	0.076
	Uglare	7.03	5.206	5.08	5.45	5.96		0.459	0.42	0.012
Dardana	Dardan-hyrje	2.245	2.634	0.61	3.383	2.00		0.363	0.597	<0.007
	Dardan-dalje	1.865	2.76	2.312	0.30	3.94		0.29	0.43	0.153
Drini i Bardh	Radavc	2.295	1.415	0.58	////	3.00		<0.07	0.01	0.005
	Klinë	1.57	2.04	0.681	3.79	4.75		0.057	0.034	0.007
	Gjonaj	1.61	2.04	0.648	3.8	4.98		0.135	0.085	0.012
	Vërmicë	1.94	2.25	1.275	1.76	2.72		0.19	0.054	0.025
Burimi	Burim	1.93	1.253	0.74	1.15	4.00		<0.07	0.007	<0.007
	Zllakuqan	1.67	2.24	0.702	3.44	5.5		0.047	0.062	0.023
Klina	Llaush	2.829	2.775	7.425	5.15	4.00		0.04	0.03	0.018
	Klinë	1.803	2.834	1.581	3.85	13.4		0.103	0.077	0.077
Lumbar. i Pejës	Mbi qytet	2.751	1.704	0.7	////	2.00		0.01	0.008	0.005
	Lagja Dardania	1.96	3.479	0.767	2.24	3.40		0.07	0.019	0.004

Rivers	Monitoring points	Amoniac - NH ₄ ⁺ ,mg/l			Nitrates- NO ₃ ⁻ ,mg/l			Nitritet-NO ₂ ⁻ ,mg/l		
		2005	2006	2007	2005	2006	2007	2005	2006	2007
Rimniku	Xërxë	8.01	6.13	6.38	11.7	6.6		////	1.1	0.15
Toplluha	Buqall	2.984	2.05	0.73	1.6	3.0		////	0.005	0.003
	Piran	1.479	2.083	0.76	9.5	9.2		0.34	0.157	0.018
Lumbar. i Deçanit	Mbi qytet	1.94	1.538	0.069	2.03	1.00		0.038	0.035	0.001
	Kralan	0.839	2.371	0.56	///	1.00		<0.07	0.040	0.0051
Mirusha	Volljak	1.68	2.648	0.749	7.94	5.55		0.13	0.048	0.004
Ereniku	Junik	0.628	2.62	0.545	////	1.00		<0.07	0.040	<0.07
	Te ura e Terezive	2.67	3.16	1.928	1.5	4.10		0.319	0.13	0.206
Lumbar. i Prizrenit	Mbi qytet-Prevall	////	0.06	0.685	1.0	1.0		0.014	0.013	0.002
	Vlashnje	7.964	3.081	2.745	1.367	5.90		0.35	0.181	0.025
Plava	Plavë	In this period of time, there is no monitoring of these rivers								
Orqusha	Orqushë									
Restelicë	Restelicë									

Table 41. Physical and chemical analyses of superficial waters, according to the profiles in Kosovo's basins 2005-2006

From values presented in the tables XXXXXX we can see that in the most cases, there is a minimal of the oscillations In years for the three year period 2005-2007. Comparing measured parameters from the sources with the pameters in other monitoring points, we can clearly see that there is an increase of values. From results that superficial waters are of satisfied quality only in their source. By their flow through the localities and industrial zones, the water quality is reduced, dependently from the quantity and the contamination level of waters. This assessment of superficial water quality is based only in the monitoring results of physical and chemical parameters. For an acceptable assesement of water quality shall be taken in to consideration biological and radiological parameters as well etc. Contrary to a relatively good tradition of water quality monitoring, Kosovo needs to establish an advanced monitoring system, based on EU and WHO criteria.



Water monitoring, according to INKOS Institute

Water monitoring is carried out, periodically by INKOS Institute. This monitoring is carried out in rivers and influents coming out from KEK area. Monthly results are insufficient to determine the real extension of contamination. Monitoring does not include heavy metals and seldom metals, which are important elements in a wide specter of requirements for a real assessment of water quality. Monitoring program is also insufficient in regard to monitoring frequency. Monitoring is carried out in this zone for ground waters as well.

No	Parameters	Permitted limits			
		I Class	II Class	II Class	IV Class
1	Aroma	NO	NO	-	-
2	Colour	NO	-	-	-
3	Temperature	-	-	-	-
4	Electricity conductance	1500	1500	Over 1500	Over 1500
5	pH Value	6.5-8.5	6.5-8.5	6.0-9.0	6.0-9.0
6	Nitrates	10	10	Over10	Over 10
7	Nitrites	0.05	0.05	0.5	0.5
8	Dissolved oxygen	8	6	4	3
9	Saturation with oxygen %	90-105	75-90	50-75	30-50
10	Chlorures	200	200	Over 200	Over 200
11	Dried unfiltered residue	350	1000	1500	1500
12	Dried filtered residue	-	-	-	-
13	Suspended matter	10	30	80	100
14	Sulphates	200	200	Over 200	Over 200
15	Consumption of KMnO ₄	8-12	8-12	-	-
16	Phenoles	0.001	0.001	0.3	0.3
17	SHBO5	2	4	7	20

Table .42. Parameters and permitted limits according to classes ⁶⁰

Monitoting results of the discharged wayers from TCA, TCB in Sitnica River for 2005 and 2006 jare presented in the following tables.



Monitorimi i ujërave të shkarkuara nga Termocentralet "Kosova A" dhe "Kosova B" në Recipientin – Sitnicë, 2005

Nr	Subjekti	Parametrat(mg/l)	Deponia e hirit				Recipientët: Sitnicë,Llap							Termocentrali "Kosova B"								
			2.2	3.1	3.2	3.3	3.4	Ia	3	4	5	6	7	4.1	4.2	4.3	4.4	P2	Pa	Pb	Pc	Pd
1	Aroma (e nuhatur)	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa
2	Ngjyra (e vërejtur)	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa
3	Temperatura (°C)	12.7	12.6	11	13	12.5	11.8	12	11.5	9.92	11.1	11.2	15.5	22	14.2	14.8	12.5	13.5	12.4	12.1	12.3	
4	Përqu. (S/cm)	1853	634	995	1172	464	568	623	569	479	547	491	424	462	381	401	2832	1415	1369	1615	1329	
5	Vlera pH	10.1	8.6	9.8	8.8	8.1	8.0	8.0	8.3	8.0	8.2	8.9	9.79	8.5	8.3	7.8	8.0	7.9	8	7.9		
6	Nitratet (mg/l)	1.5	3.81	3.57	3.56	1.76	6.33	6.58	6.27	62.9	5.72	5.47	2.72	2.31	2.61	2.76	0.83	2.16	1.3	1.1	1.36	
7	Nitritet (mg/l)	0.0	0.0	0.0	0	0.19	0.0	0.0	0.83	0.0	0.0	0.0	0.15	0.04	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
8	O ₂ i Tretur(mg/l)	9.15	9.06	8.97	9.12	8.87	8.37	7.54	8.52	9.64	9.7	9.6	8.8	5.47	9.9	9.33	7.6	7.49	8.3	8.22	8.06	
9	Ngop me O ₂ (%)	88.1	87.4	78.7	89.5	85.7	77.3	72.1	82.6	88.8	91.8	90.9	86.2	62.4	89.1	98.2	74.5	73.6	79.9	75.9	78.5	
10	Kloruret	144	38.1	22.3	63.8	138	37	39.1	33.8	22.8	30.2	29.3	27.6	19.3	26.4	27.6	83.9	41.5	36.1	32.3	36.4	
11	Mbetja e thatë e pa filtruar	1641	651	603	446	751	748	743	711	588	598	637	378	2077	1037	543	3980	2499	2633	2227	1710	
12	Mbetja e thatë e filtruar	1530	562	523	338	432	584	570	519	467	468	477	313	577	438	685	3330	2270	2303	2053	1508	
13	Materialet e suspenduara	111	85.4	80	118	325	152	181	186	87.9	141	150	66.3	1	600	181	8	292	271	246	202	
14	Sulfatet	537	87.6	102	84.3	62.8	96.1	126	113	54.3	74.7	67.2	49.7	154	96.3	109	1541	692	739	860	634	
15	H.i KMnO ₄ (mg/l)	79.4	77	16.4	15.2	14.9	25.3	20.7	24.1	15.9	20	17.1	15.9	19.9	17.2	17.1	55.1	17.6	19.7	18.7	15.1	
16	Fenolet	0		0.005		0.01		0.01	0.007			0.01				0.02						
17	SHBO ₃ (mg/l)	2.13	2.4	1.8	1.6	2.4	4.7	4.2	4.7	3.1	4.3	4.5	2.1	3.12	2.24	2.19	1.63	4.1	2.4	3.8	3.04	
18	Vlera "p" mval/l	4.71	0.52	0.08	1.95	0.08	0.04	0.05	0.0	0.03	0.03	0.04	0.42	0.57	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
19	Vlera "m" mval/l	2.1	4.9	4.1	4.6	4.1	5.1	5	4.47	4.7	4.6	4.6	2	2.21	2.3	2.3	5.7	5.1	5.1	6.6	4.8	
20	Hidroksidet	8.78	0.49	0.0	0.95	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.39	6.1	0.18	0.0	0.0	0.0	0.0	0.0	0.0	
21	Karbonatet	2.5	2.0	5.0	63.8	5.0	2.0	3.0	0.0	2.0	1.5	2.5	0.0	6.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
22	Bikarbonatet	91.9	262	252	74.6	243	302	305	265	288	278	305	113	99.5	154	188	380	312	317	380	308	

Monitorimi i ujërave të shkarkuara nga Termocentralet "Kosova A" dhe "Kosova B" në Recipientin – Sitnicë,2006

Nr	Subjekti	Parametrat (mg/l)	Deponia e hirit				Recipientët: Sitnicë,Llap							Termocentrali "Kosova B"									
			2.2	3.1	3.2	3.3	3.4	Ia	3	2	4	5	6	7	4.1	4.2	4.3	4.4	4.5	P2	Pa	Pb	Pc
1	Aroma (e nuhatur)	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	
2	Ngjyra (e vërejtur)	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	Pa	
3	Temperatura (°C)	14.3	11.96	12.9	11.6	12.5	11.32	12.23	16	11.64	10.4	10.99	10.9	15.9	20.4	15.25	13.9	15.4	12.6	14.2	13.3	12.4	12.7
4	Përqu. (S/cm)	947.5	539	448	819	470	585.8	546.7	586	918	423	480	485	422	389	461.8	318	255	2098	1893	1672	1491	1517
5	Vlera pH	8.3	7.9	8.1	7.23	8.34	7.8	7.9	7.9	7.9	8.0	7.8	7.8	8.2	9.7	8.7	8.4	8.3	7.8	7.8	7.84	7.8	7.8
6	Nitratet (mg/l)	1.3	1.3	1.3	2.1	3.1	5.3	5.6	5.9	5	3.8	4.5	4.3	2.7	3.5	2.8	2.6	2.6	1.8	0.9	0.9	1.14	1.05
7	Nitritet (mg/l)	0.0	0.0	0.0	0.0	0.001	0.0	0.0	0.0	0.0	0.0	0.0	0.0003	0.05	0.08	0.003	0.0	0.0	0.0	0.0	0.0	0.0	0.0
8	O ₂ i Tretur(mg/l)	8.34	9.19	8.9	8.2	8.6	8.1	7.8	7.2	8.1	9.29	9	9.12	0.2	0.3	0	9.3	0.5	6.2	6.1	7.17	7.2	8.3
9	Ngop me O ₂ (%)	80.3	87.7	84	81.9	84.2	77	75	75.6	76	83.7	83.56	85.8	85.7	70.6	80	93.1	87.1	61.6	60.1	70.3	69.9	70
10	Kloruret	36.6	23.6	28	409	35	35.08	36.67	30	35	23.6	27.7	29.5	30.5	25.5	45.17	27.4	27.6	88.7	54.8	50.3	41.2	36
11	Mbetja e thatë e pa filtruar	1198	662	667	783	606	770	690	715	658	463	529	597	565	913	600.8	561	664	4091	2349	1139	1474	2260
12	Mbetja e thatë e filtruar	1026	585	587	699	496	567.5	523	443	495	357	424.6	491	350	378	435.8	429	540	3477	1636	996	1058	1882
13	Materialet e suspenduara	171.2	76.7	80	83.8	110	202.5	168.8	273	162.1	97.5	104.2	106.2	215	536	172.6	132	127	615	713	382	402	378
14	Sulfatet	555.5	83.1	63	173	54.4	105.4	119.4	140	113	49.6	70.95	77.16	78.04	90.5	105.3	75	67.1	1566	1029	907	880	915
15	Harxhimi i KMnO ₄ (mg/l)	73.22	18.2	18	15.4	15.7	16.32	14.86	17.2	17.1	13.1	15.42	16.4	19.05	17	20.73	19.6	16.1	22	16.3	18.6	24	22.4
16	Fenolet	0.009	-	-	0.11	0.01	-	0.026	-	0.015	-	0.008	0.005	0.006	0.003	-	-	0.003	-	-	-	0.003	-
17	SHBO ₃ (mg/l)	2.28	2.5	1.6	17.4	2.8	4.4	4.97	4.96	36.99	2.04	3.2	3.3	2.6	1.88	1.9	1.6	1.3	0.9	3	2.79	1.6	1.9
18	Vlera "p" mval/l	0.00	0.00	0.0	0.10	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.8	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	Vlera "m" mval/l	3.12	4.18	4.5	3	7.8	4.6	4.9	5.3	4.16	4.43	4.46	4.3	2.2	1.54	2.27	2.07	2.61	6.91	5.69	6.96	7	5.13
20	Hidroksidet	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
21	Karbonatet	0.0	1	1.5	12.7	2	0.5	3	2.5	1.5	2.5	1.5	1	0.0	12	2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	Bikarbonatet	189	255	265	154	263	297.7	292.8	318	264.3	294	294.3	281	157.4	55.2	136.3	159	159	411	376	424	418	313

Table 43. Discharged waters from Power Station "A" and Power station "B" in Sitnica river 2006



3. Land/Soil

Continous impact of human activities brings to degradation of the land surfaces, causing socio-economic consequences. The challenge is to prevent the land degradation, through measures and specific policies for land protection.

The assessment of situation ⁶¹

Kosovo is characterized with a variety of lands, based on the genesis of their creation physical, chemical and pedological characteristics. The Kosovo's land is suitable for agricultural production. Lands, which are mostly of humus, alluvial lands, deluvial and rocky land etc.

Main factors impacting in land losing in Kosovo are:

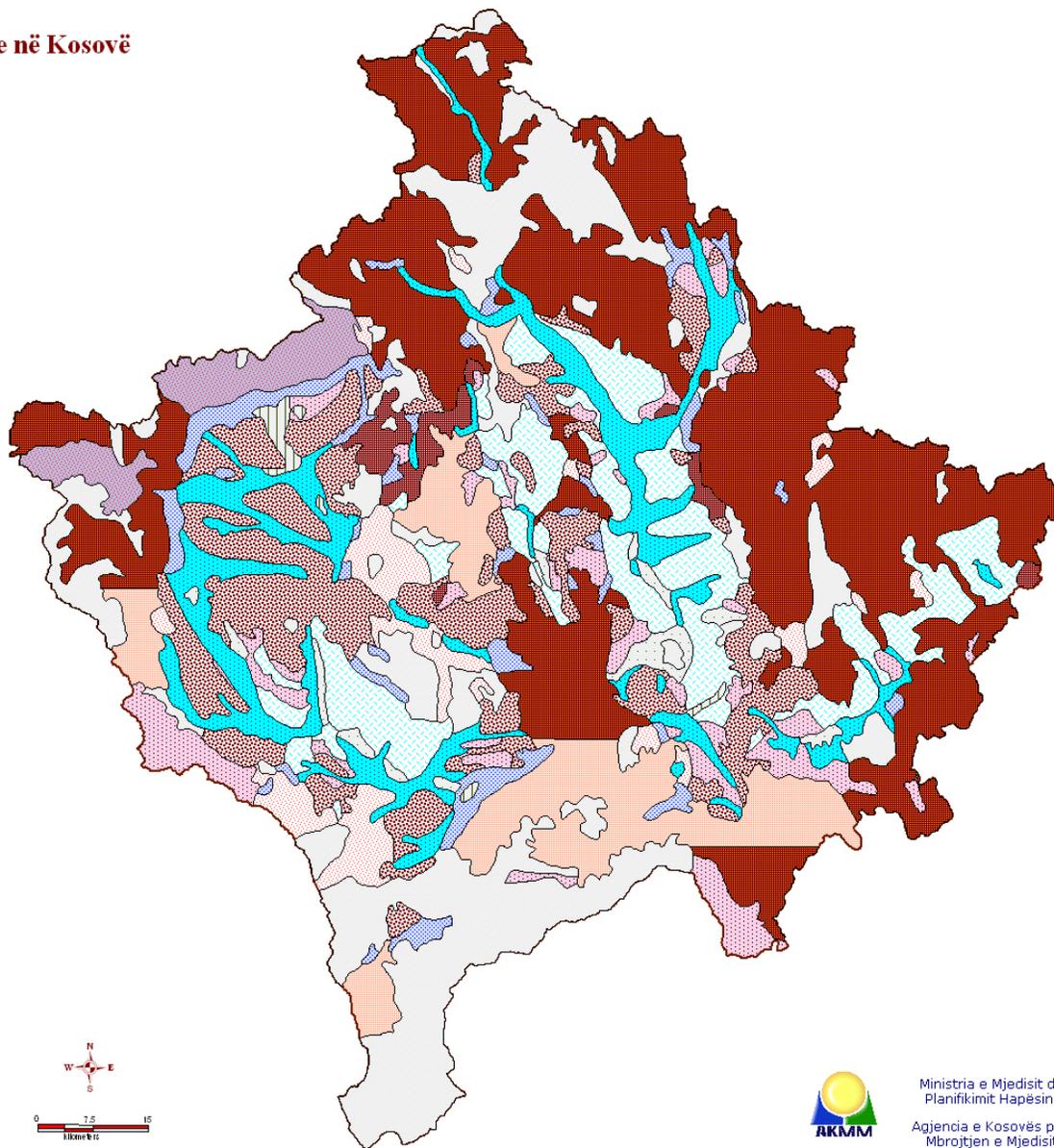
- Localities (unplanned constructions);
- Industry (industrial waste ,surface diggings);
- Mines left from the last conflict in Kosovo;
- Waste and dumping sites;
- Erosion;
- Uncontrolled exploitation of gravel.

Contamination with heavy metals

This category of contamination is produced by industrial processes. Heavy metals and very toxic, contributing in contamination are: metallic mercury and organomercuric compounds as it's is dimethylmercury of Hg (CH₃)₂, arsen, leaden, cadmium, berilium etc. Their effect in organism is very negative, causing a damage of nervous system, cardiovascular system, urination system; also they cause pneumonia and lesions in the skin. In Kosovo there is a lack of informations about the level of this contamination.

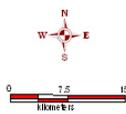
⁶¹ PKVM 2006

Harta Pedologjike në Kosovë



Sistemi Informativ Mjedisor / GIS
 Emri i Hartës: Harta Pedologjike
 Burimi i të dhënave:
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 Data: nëntor, 2007
 Prishtinë
 Adresa: Rr. Nazim Gafurri nr.31
 infogis_sim@ks-gov.net

- LEGJENDA**
- Kufiri i Kosovës
 - Tokë rankeri
 - Tokë pseudoglej
 - Tokë litosole
 - Tokë mineralo-moqalore
 - Tokë e murrme argjilore të liqejve
 - Tokë e murrme në shtresat kompakte
 - Tokë e murrme e kuqërremt
 - Tokë e livadheve
 - Tokë deluviale
 - Tokë aluviale
 - Tokë e kuqe
 - Tokë smonice
 - Tokë rendzinë



Ministria e Mjedisit dhe
 Planifikimit Hapësinor
 Agjencia e Kosovës për
 Mbrojtjen e Mjedisit



Erosion and runs

Erosions and runs in Kosovo's territory put in a risk the nature and created and planned public and private properties. They are manifested by degradation of agricultural and forestry land, traffic and railway system, and as well as buildings and localities.

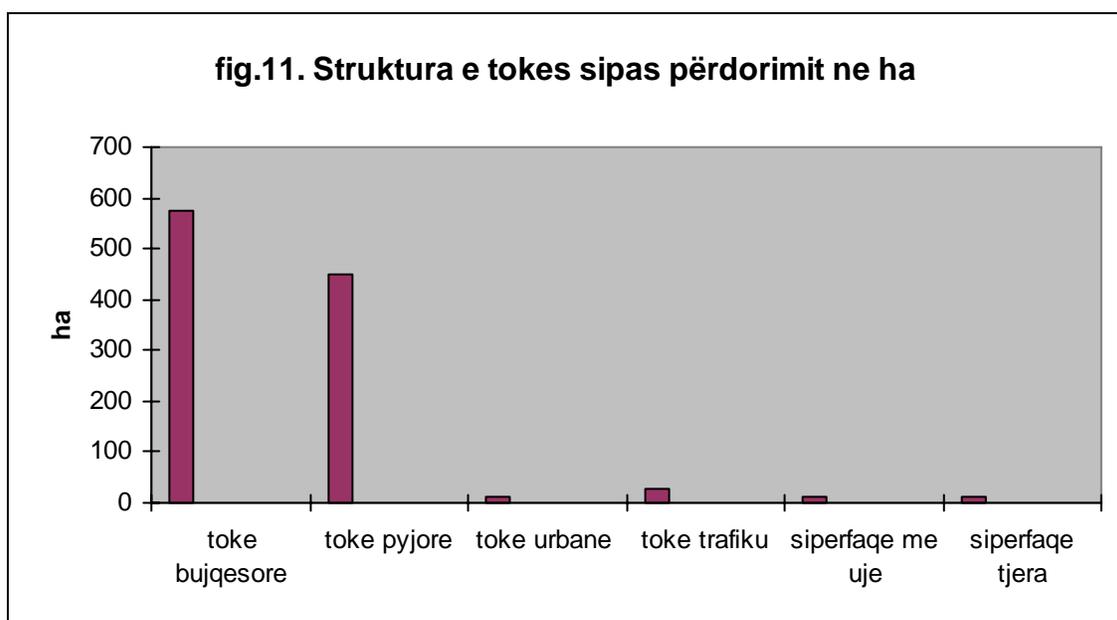
Category	I, II, III	5.973 km ² or 55.6 %
Category (poor erosion)	IV	3.680 km ² or 34.2 %
Category (very poor erosion)	V	1.097 km ² or 10.2 %

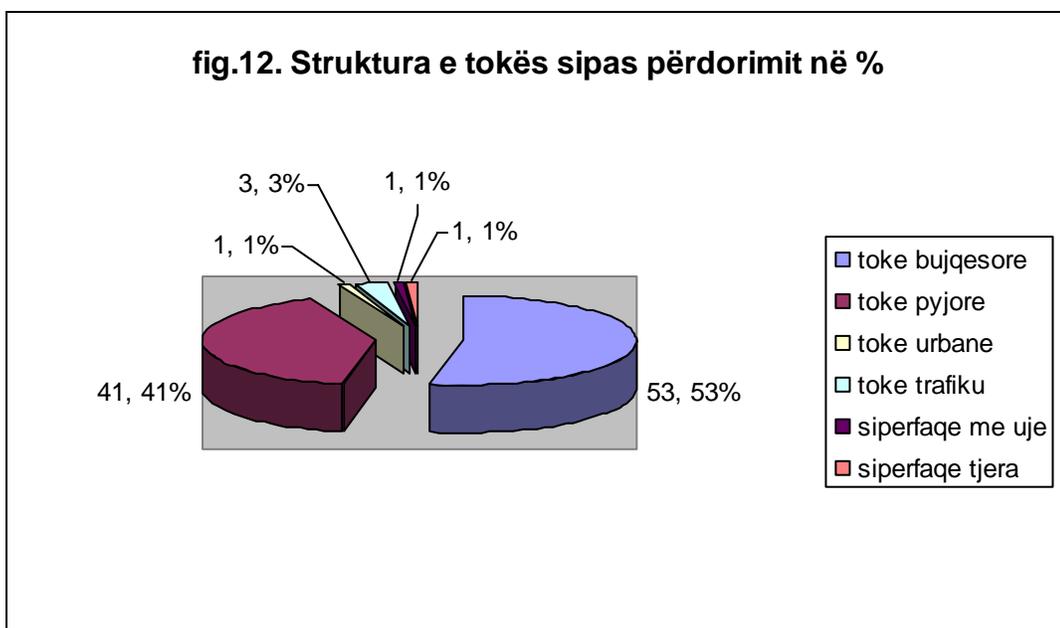
Table 44. The existing situation of erosion

The productivity of alluvions is more emphatic in the upper run of the river Ibri (the situation shall be improved by measures and antierosive actions). Also, a surface of Lepenci basin is in endangering by erosion. whereas the risk is small in the Drini I Bardhë and Morava e Binçës basins, whereas in the basin of Sitnica river is smaller.

Destination of land utilization

From overall Kosovo's area 1.098.200 ha, 574.231 ha, of them is agricultural land, 450.249 ha, forest land, 12.073 ha, is urban land, 27.796 ha, traffic land, 12.344 ha, is water surface, whereas 12.814 ha, are other areas (10)





Change of agricultural land destination has been assessed as one of the most serious threatenings, done to the future of agriculture in Kosovo. In a year, over 1.000 hectares of agricultural land has been converted in to a construction land, in a time before 2000, whereas there are assessments that this figure is bigger and with tendency of increase. The fragmentation of parcels is another major problem for husbandries, divided in many parcels which often presents a lower limit of economical justification to produce in those parcels. Industrial contamination from industrial complexes, but, even from other smaller contaminants, presents a serious threatening to lands. Also, the contamination from dumping sites is a source of contamination of the land.

The map of mined zones

Year	M2	ha	Antipersonel mines	Antitank mines	Cassete bombs	Explosives
June 1999-2001	32224107	3222.4107	19457	5515	15940	13896
2002	187346	18.7346	200	27	318	5207
2003	799242	79.9242	198	1	398	2155
2004	2730912	273.0912	910	15	772	2554
2005	4318966	431.8966	719	30	977	1378
2006	2754310	275.431	695	84	879	2498
16 .11. 2007	1076679	107.6679	292	14	271	1230
Total:	44091562	4409.1562	22471	5686	19555	28918

Table. 45. LIST OF THE MINE CLEANING AND UNEXPLODED EXPLOSIVES IN KOSOVO, JUNE 1999 - 16 NOVEMBER 2007



4. Biodiversity and protected areas

“The variability between live organisms ,living in a land ecosystems ,sea and other aquatic ecosystems ,and ecological complexes in which they are a part of it ;this includes the diversity within the specie ,among the species and ecosystems”⁶².

Said in other words, the term biological diversity means the number and all species of live organisms in a planet. Within this term, is included the diversity of genes, species and ecosystems which are a product of evolutive process of 3 miliard years. Humanity and its survival depend by this biological diversity. Within this meaning the term biological diversity is a synonym of term “Life in a planet”.

Kosovo is known as a small country and rich biodiversity. Geographical position .geological, pedological, hydrological factors, landscape and climate have enabled Kosov to have this rich of biological and landscape diversity, with variability of flora, fauna and vegetation, where it worths to be mention the presence of relict species and other species of specific importance.

The assessment of situation

On the base of studies made in Kosovo, has been identified around 1800 species of flora. It is supposed that this number is larger and comes up to 1800 species. Flora and fauna of Kosovo makes important and attractive a number of relict, endemic and subendemic species. The richest areas with flora and dfauna are “Malet e Sharrit” and “Bjeshkët e Nemuna”⁶³. Kosovo still does not have a complete inventory of biodiversity.

In the past years, it was done a hard work on identifying of new zones of the nature and on protecting them by law. To the number of the protected zones (52) ,during the period 2006-2007 have been added another 24 new zones with total surface of 7.25 ha, and now we hve 75 protected zones The total protected area now is 46.437 ha(4.25 % of Kosovo’s territory).Also have been proposed another 195 new areas ,including here “Bjeshkët e Nemuna” as National Park. Objectives of PKVM, regarding to protected areas have started to be realized, but we still have to do a lot.

Protected areas of nature and biodiversity have been changed by increasing of the impact by human activities in them. The development of many different activities in the nature as: construction of localities ,development of the mountain tourism ,construction of industrial premises and hotels ,forest cuttings ,exploitation of inerts and other activities have been done without any stabil criteria ,and also have been as threatening factors for the nature values. Also, these impacts have not been saved, neither the National Park “Malet e Sharrit”, Regional Park “Mirusha”, “Shpella e Mermertë” in Gadime, “Gërmia” Park etc. Also from this impact have been seen loosings and partitions of habitats, degradation of ecosystems, wild animal unrest, liquidation of species, or threat for liquidation.

Nor of PKVM projects has not been realized and neither has started to be relaized. Reccomandations have to do on facing challenges to stop this negative impact in the future, whereas it is necessary:

⁶² Biodiversity convent t

⁶³ PKVM-It has been estimated to be 8 different species of fish ,13 species of amphibia ,12 species of reptilia ,154 species of birds ,37 species of mammalia and 147 species of daily butterflies.



- Strengthening of Institutional and legal frame for nature protection;
- Strategy and action plan for biodiversity;
- Initiation of the projects for inventarization ,coming out from PKVM ,because Kosovo still does not have a complete inventarization of flora and fauna;
- Paralel to extension to protected zones system „atrntention should be paid drafting and implementation of managing plans of these zones with a purpose to find more suitable models;
- To increase interest to participate in European and regional initiatives, as are Nature 2000, SPA, Emerald, etc.

Flora and vegetation

In the flora aspect and on the base of researches made so far ,have been identified over of 1800 species of vascular flora ,even though it is supposed that their number is larger (about 2500). Within the researched species, around 200 of them are endemic, endemorelict and subendemic species. Especially it is important the group of local endemics, the number of which is still completely unidentified (It is known about fourteen vascular species of flora), some of them are very limited spread. These endemic species and other plant species and among them there are medicinal plants, are spread in some parts of Kosovo's mountains. Places with the richest phyto-diversity are considered are "Malet e Sharrit" and "Alpet Shqiptare" ("Bjeshkët e Nemuna").

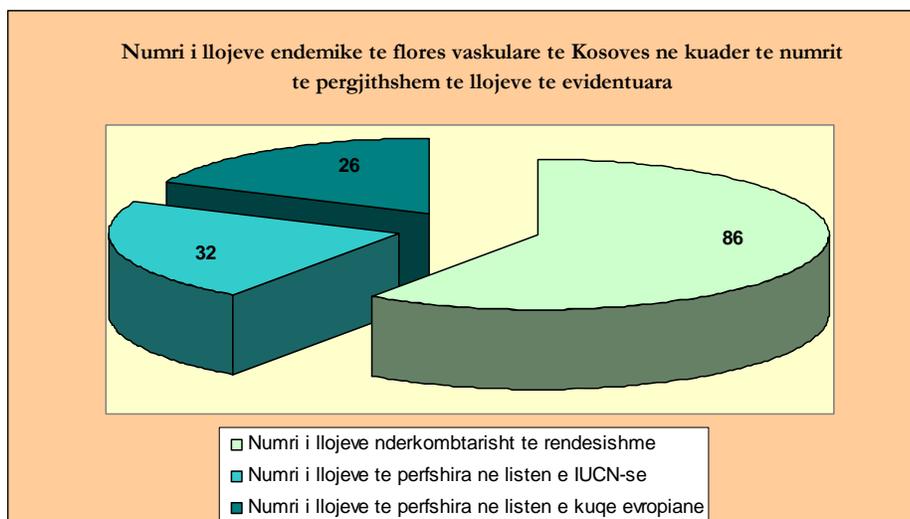
During 2005 ,teams of KIEP have started to work with higher intensity in studying of these plant species ,and in particular of animal species.from the biodiversity sector are studied some of endemic species and some of rare and endangered species. Whjereas some of the stenoendemic species are in the herbarium of KIEP.

Some of the endemic species, very characteristic for Kosovo are: *Barpezmi i mbretit Aleksandër*, *Akoniti i Rusolisë*, *Petriku i Grojterit*, *Bornmulera e Degenit*, *Kokoçeli i Albertit*, *Cefalaria e Pashtrikut*, *Dredhja e Kosovës*, *Gjuhëqeni i Krasniqit*, *Karafili i Sharrit*, *Bishtmiu*, *Plantago Dardane*, *Zorrëca e Dorflerit*, *Manaferra e Pejës*, *Rrushqyqja e Epshme*, *Burgulli i Koshaninit*, *Iriqëza e Sharrit*, *Pendëkaposhi i Mayerit*, *Zhumbrica e Dorflerit*, *Zhumbrica*, *Barpeshku i Sharrit*.





Comparing to the surface that Kosovo has (around 2.3%) within the Ballcanic peninsula ,we can come to a relative conclusion that Kosovo’s phytodiversity is good. Just for illustration we will mention only one example .In the national park of Mali I Sharrit have been identified about 2000 species of vascular plants. From the total number of identified species in Malet e Sharrit, 86 of them have been declared as internationally important, 26 species have been included in the European red list, whereas according to IUCN-, 32 species are in “Malet e Sharrit” which are in the red list of the threatened plants. Only in the subalpic and and alpines “Albanian Alps (“Bjeshkët e Nemuna”) have been recorded 797 species of vascular plants, where 182 of them are considered with endemic character ⁶⁴



⁶⁴ (Millaku, F.1999).



In Kosovo's flora there do exist a considerable number of plant species, considered as endangered and rare plant species, because of the fact that a large number of these plant species are represented with species of tight area. Because of overexploitation most of the aromatic, medicinal and industrial plant species are endangered. With objective to protect these species, there is a need to draft a list of the rare and endangered species, which is in ongoing process and will be defined after the appropriate analyses in the field. Some of the plant species, considered as rare and endangered in Kosovo are: *Bershei i rëndomtë*, *Bujgeri*, *Vidhi i rëndomt*, *Panja malore*, *Boshtra*, *Vulfonia*, *Tulipani i Sharrit*, *Troliusi*, *Zambaku*, *Karafili i Sharrit*, *Kurorëza*, *Bathra*, *Lepjeta*, *Asheja*, *Xerxelja*, *Ramonda*, *Bozhuri dekorativ*, *Bozhurea koralin*, *Valdestenia*, *Poligala*, *Moltkea*, *Dioskora*. Even that Kosovo's phytodiversity has been exploited in centuries, there is a concern the fact, recently this exploitation is irrational and unplanned, which in the future may result unforeseen consequences. The target of damages, specially are forests and other areas of primary natural vegetation.

Group	Species in Kosovo	Species in Europe	Species in the World
Alga	400 (x)	Unknown	>40,000
Mushrooms	104 (x)	16,000	>70,000
Plants with flower	1800 (2500)	11,415	250,000
Molucs	X	Unknown	80,000
Insects	129 (x)	40,000	1,000,000
Fish	8	Unknown	8,500
Amphibia	14	62	4,000
Reptilia	14	123	6,500
Birds	154 (175)	450	9,881
Mamals	45	200	4,327

Table 46. The number of some species of live organisms in Kosovo, in report with those in Europe and in World according to the main groups

Fauna

In the aspect of fauna, Kosovo is characterised with very rich fauna, heterogene, endemic and interesting fauna, with a large variety of species, even that research in this direction have not been completed yet. The most richful areas in Kosovo are "Malet e Sharrit", "Alpet Shqiptare" ("Bjeshkët e Nemuna") and Water basins".

It has been calculated that in Kosovo live over than 224 species of vertebrata, 150 species of butterflies, over 500 taxones of water macrozoobentos, and many other invertebrates, which still are not determined. Some of the large mammals and birds are in the risk of disappearance.

In Kosovo, there are only two of reservoirs of wild animals: **Rusenica, in Theranda municipality** (a bobcat's habitation) and **Kozhnjari in Deçani municipality**, (a habitation of chamois).

High forests and mountain ecosystems of Kosovo, offer practical conditions for the life of important populations of large mammals, as are: bear, bobcat, roe, chamois, etc. Then many species of predatory birds and songbirds, pretty important to Kosovo's ornitofauna, Ballcan and Europe ornitofauna. Mountain eagle, white clutcher falcon wild fowl etc, are some of the most representative species of the country, which have an international protection status. They are on the list of IUCN (International Union for Protection of Nature), EU-RL (European red list), and WR-RL (World red list).



According to the details and informations collected in the field the status of fauna in Kosovo is not good. They are showing for an deterioration of their status, from:

- Illegal hunting and without any criteria;
- Victimization and capture for the purpose of marketing;
- Continuous anxiety from humans;
- Illegal fishing;
- Destruction of natural habitats;
- Impact of urbanization, transport and tourism.

Protection of endangered species of flora and fauna "*in situ*" is regulated in that manner that special areas are named, protected reservoirs of certain species of flora and fauna (seven plant reservoirs and two animal reservoirs). Actually there is no organization of their management and neither plans for their maintenance and development.

With the scope of protection of the fauna species, in 2003 by a decision of MESP (Ministry of Environment and Spatial Planning) has drafted a list of the rare and endangered species of mammals, have been declared as endangered and strictly protected ten species of mammals: Blue Bear, bobcat, chamois, roe, wildcat, squirrel, golden musteline, white musteline, and dormouse.⁶⁵

Institutional practices have not been set up for protection of the species "*ex situ*". Whereas, contrary to the fact, some of these species are kept in mini zoos, usually build in restaurants and without any criteria. During 2005, KINP has visited all these mini zoos and has registered all those rare species kept in them.

There is evident the missing of the zoos in Kosovo, except the estetic, scientific, cultural and recreational values etc., which serve as method of protection "*ex-situ*" (out of their natural habitat) of some animal species, but this lack does not justify actions of these individuals to keep these animals without respecting criteria of their functioning.

Having in regard conditions that should be fulfilled, on the occasion of keeping animals isolated as are: area and living environment, feed, number of individuals and breeding conditions, contact with other species, ability to offer them natural conditions, veterinary treatment etc, we can see that most of these conditions are not fulfilled in these mini zoos.

Agricultural biodiversity

Regarding to agricultural biodiversity still has not been carried out inventarization and can be supposed that intensification of using productive and modern genotypes for intensive production has put in danger elimination of some species and native varieties.

The presence of GMO-s

Even that in Kosovo still has not been drafted a legal base for biological safety and administrative directives related to the procedures, use, supervision and licensing of GMO-s. There are no existing activities, officially registered for use of genetically modified materials for commercial purposes.

Protected areas of nature

The protection of nature through protected areas is a very important instrument for preserving the biodiversity. Under legal protection are 75 of natural areas so far and

⁶⁵ Decision of MESP, 2003, quote number



have been proposed another 195 areas. Protected areas include a surface of 46.437 ha, (4.25 % of Kosovo's territory). From them 1 National Park ("Malet e Sharrit"), 11 wildlife sanctuaries ("Bifurcation of river Nerodime", "Arnenit reservoir ", "Maja e Ropsit", "Rusenica", etc.), 61 natural monuments ("Gadime cave", "Rugove defile", "Ura e Fshajtë", "Trungjet e Vjetra" etj.) and two protected landscapes ("Gërmia" and "Mirusha")⁶⁶.

No	Denomination	No:	Surface /ha
1	Wildlife sanctuaries	11	847
	Wildlife sanctuaries of flora	7	
	Wildlife sanctuaries of fauna	2	
	Special wildlife sanctuaries	2	
2	National Park	1	39.000
3	Natural Monument	61	4.909
	Spelologic natural monument	4	
	Hydrological natural monument.	10	
	Geomorphological Natural monument	5	
	Botanical natural monument	40	
	Memorial natural monument	3	
	The museum of cristales in Stantërg	1	
4	Protected landscape	2	1.681
	Total	75	46.437

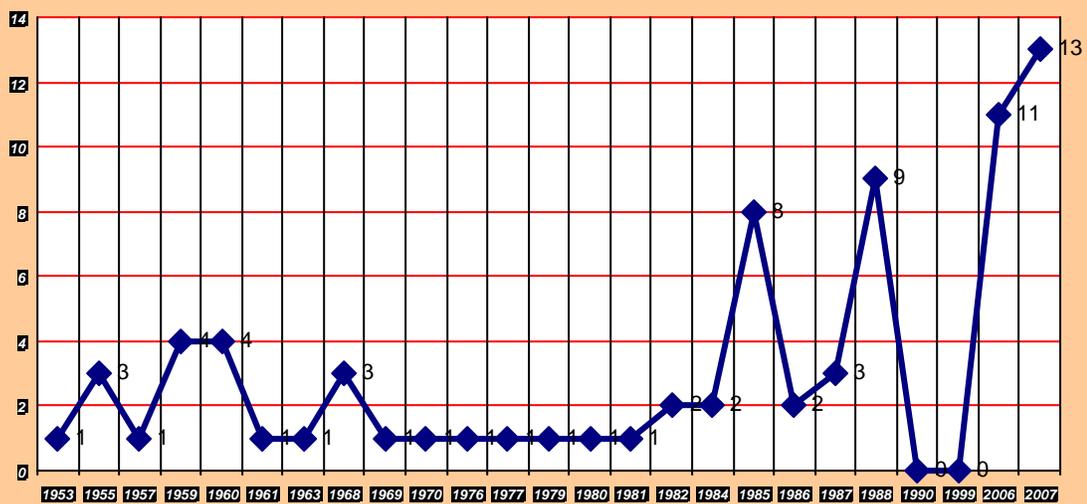
Table 47. Protected natural areas on the base of categories.

During the period of time 2006-2007 have been placed under the protection another 24 protected zones 11 in the territory of drenas municipality and 14 in the territory of Skenderaj municipality. By taking under protection of these areas, the surface of protected area has been increased 7.25 ha.

⁶⁶ Kosovo's Institute for Protection of Nature, 2007

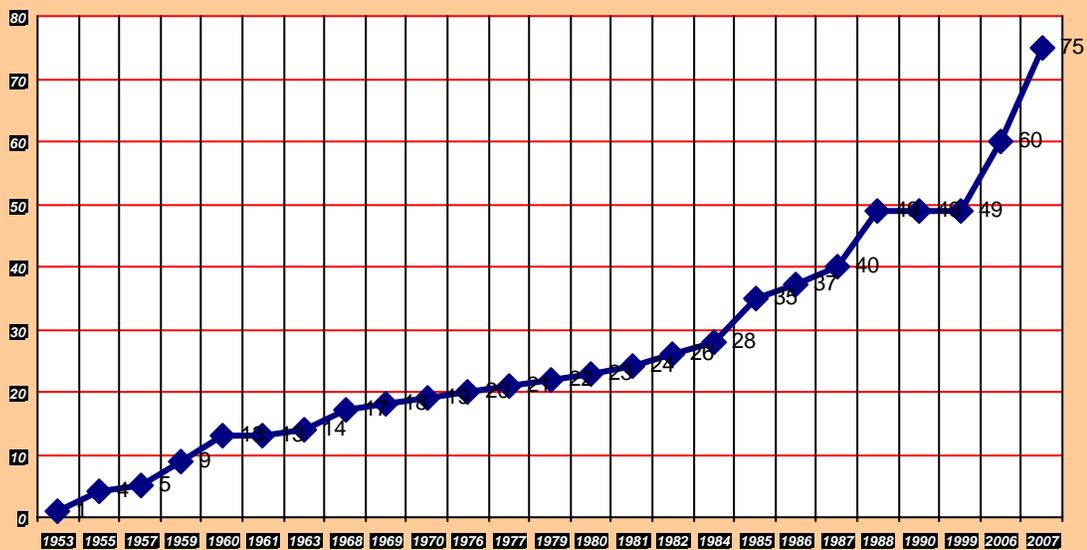


Kronologjia e mbrojtjes së vlerave të natyrës në Kosovë



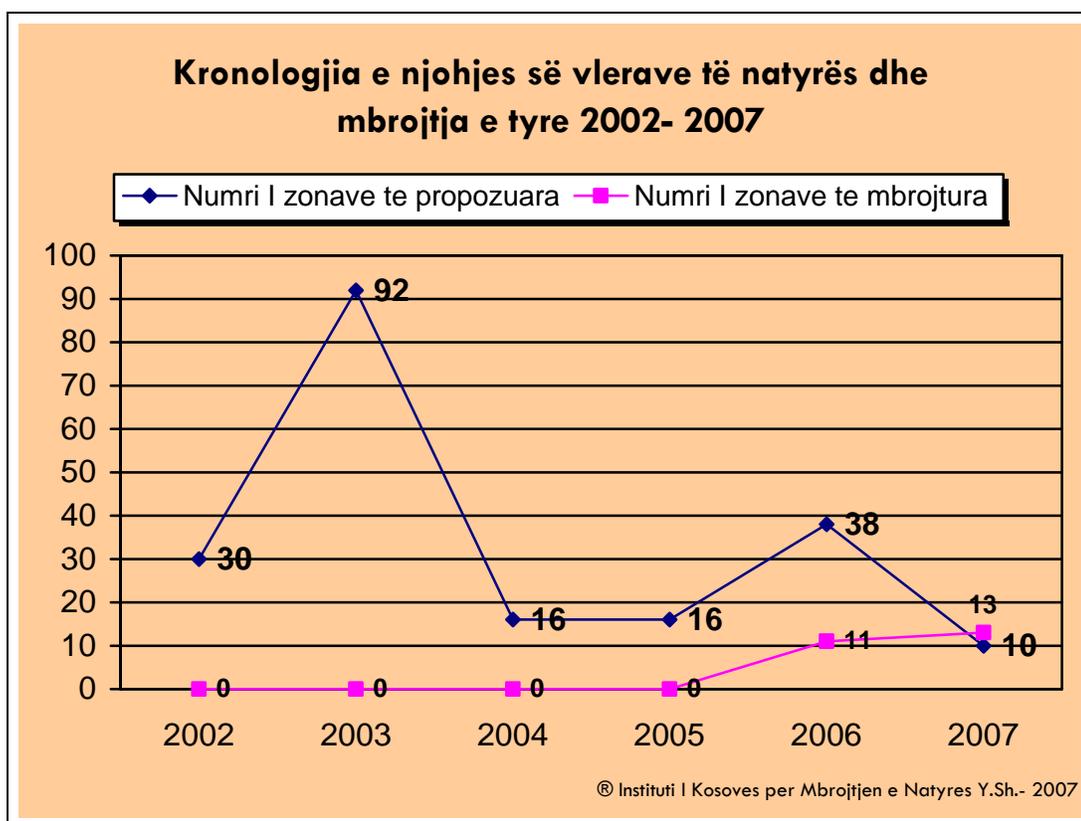
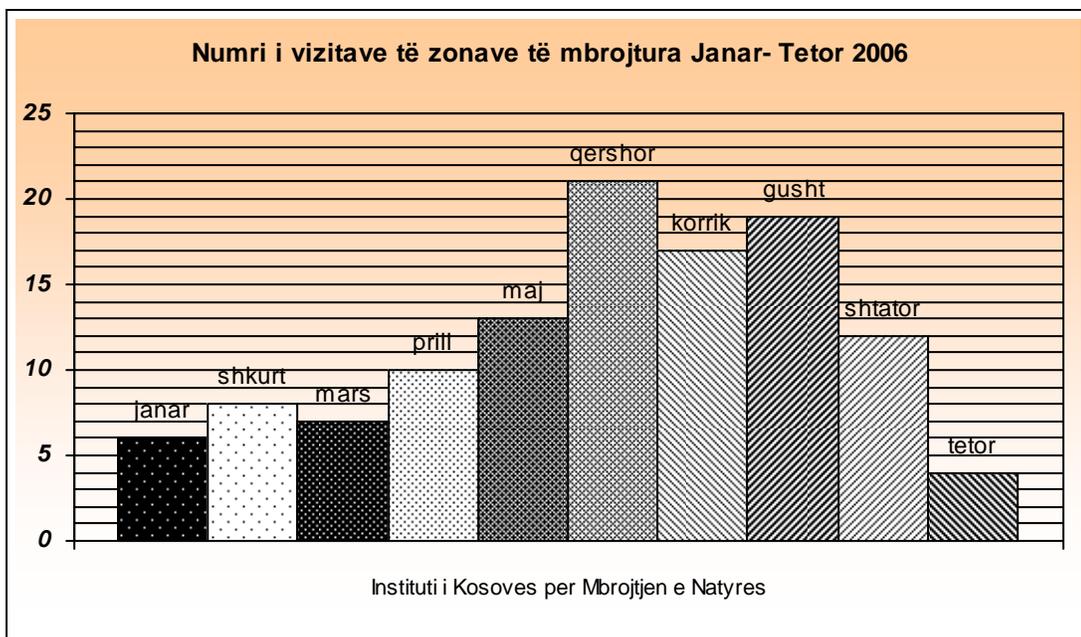
2007, Instituti i Kosovës për Mbrojtjen e Natyrës

Rritja e numrit të zonave të mbrojtura sipas viteve

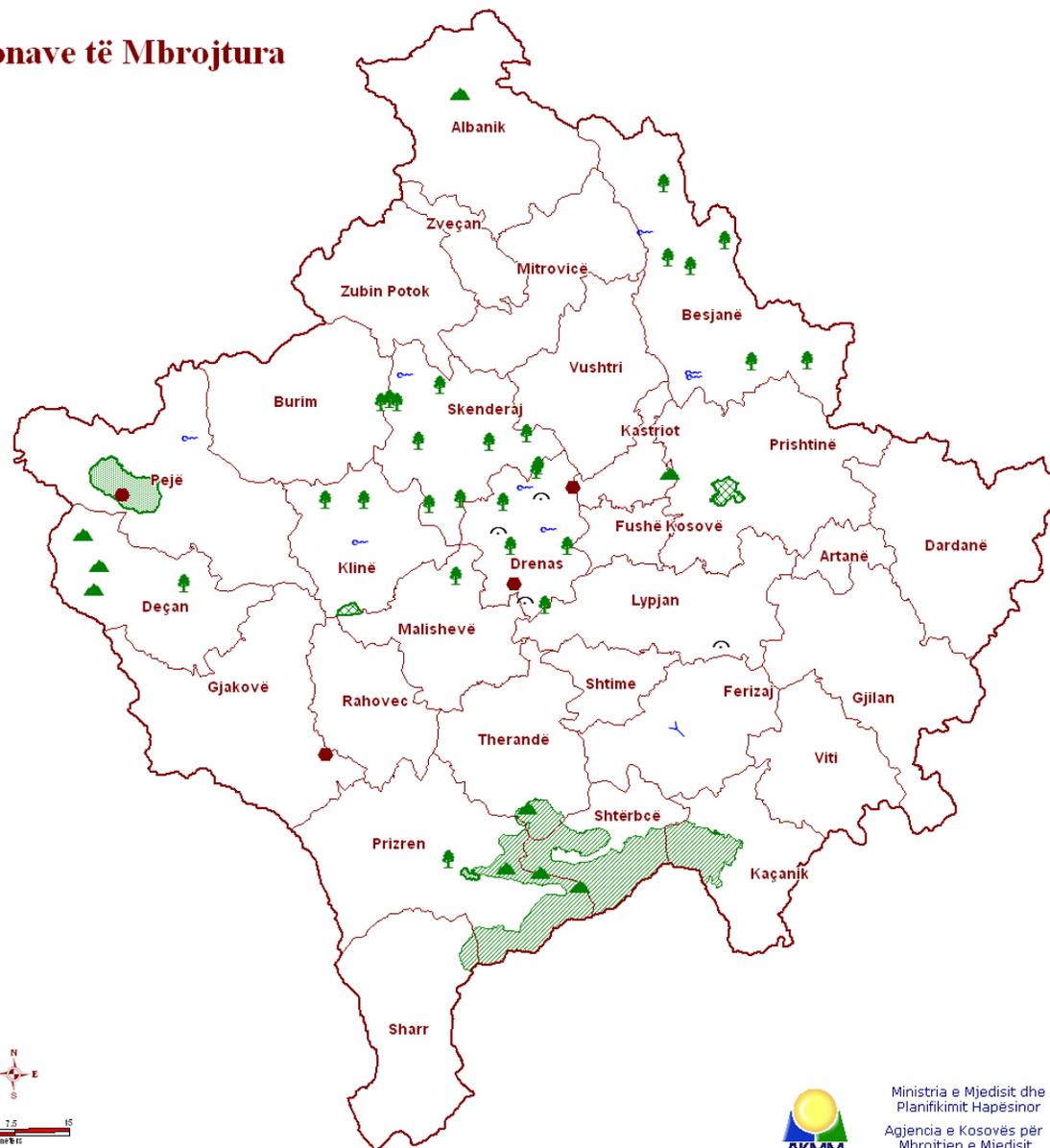


Instituti i Kosovës për Mbrojtjen e Natyrës, 2007





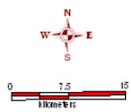
Harta e Zonave të Mbrojtura



Sistemi Informativ Mjedisor / GIS
 Emri i Hartës: Zonat e Mbrojtura
 Burimi i të dhënave: AKMM / SIM
 Projektioni :UTM-WGS 84
 Zona: 34 HV
 Data: nëntor, 2007
 Prishtinë
 Adresa: Rr. Nazim Gafurri nr.31
 infogis_sim@ks-gov.net

LEGJENDA

- Kufiri komunal
- P. N. Mali Sharrë
- Peisazhë i mbrojtur
- Monument i Natyrës
- Biomonument
- Hidromonumente
- Bifurkacion
- Shpellë
- Rezervat natyre
- Gjeomonumente



Ministria e Mjedisit dhe
 Planifikimit Hapësinor
 Agjencia e Kosovës për
 Mbrojtjen e Mjedisit



The status of the protected areas of nature is relatively good, because they have kept their basic values, even if they have been threatened by different natural factors. The development of many and different activities in nature as are: construction of the locality (touristic village in Prevala ,NP Malet e Sharrit),development of mountain tourism ,forest cutting ,stonebreaker ,etc, very often have been done without any stable criteria to protect nature. This exploitation of nature and its values has attacked considerably ecosystems and biological diversity. From this have not been saved protected areas,of specific values of natural heritage as: National Park of “Malet e Sharrit”, Regional Park “Mirusha”, “Shpella e Gadimes”, “Gërmia” etc.

Name of area / object	Municipality	Surface in ha	Year of protection	Category IUCN	Short description of values
Maja e Ropsit	Deçan	20	1955	I	Plant preserve of the species of ,Balkan pine ,fir,pine and beech
Gubavci	Pejë	38.	1959	I	Plant prervoir of the endemo-relict species (Forsythia europeae)
Popovo prase	Prizren	30.	1960	I	Plant preserver with pure content ofPinus heldreichii
Gazimestan	Prishtinë	12	1953	I	Plant preserve of (Paenonia decora Anders)
Kozhnjeri	Deçan	150	1955	I	Animal preserver of the specie of Rupicapra rupicapra L.
Oshljaku	Prizren	20	1960	I	Natural preserver of Pinus heldreichii)and some other endemic plants
Malet e Prelepit	Deçan	0.92	1963	I	Plant preserver with pure contyent of Acer heildreichii
Rusenica	Therandë	300	1955	I	Animal preserver of Lynx lynx L.
Bifurkacioni i lumit Nerodime	Ferizaj	13	1979	I	A special natural preserver .It is a unique phenomenon in Europe and second in a world of a great educational and scientificand tourist importance.
Golem bor	Prizren	35.	1960	I	Plant preserver of the specie of Balklan pine and some singbirds
Kamilja	Albanik-Leposaviq		1988	I	Limy hillock Kamilja is a special natural preservoir of important paleonthologic charachteristics.

Table 48. Nature preservoirs



Managing of protected areas

Managing of the protected areas in the national park of "Mali Sharr", is under the Park Directorate with its residence in Prizren. Regional Park of "Gërmia" is under the management of Public company Hortikultura, whereas "Shpella e Gadimes" is under the management of a body which is not under the supervision of Government, where the competencies between the government and Kosovo trust Agency have not been defined. The situation in the cave is not in a good state as a reason of non professional management.

Whereas the preserves of *Maja e Ropsit, Gubavci, Gazimestani, Kozhnjeri, Malet e Prelepit, Bifurcation of the river Nerodime, Kamilja,* and regional park of *do not have management bodies and neither management plans.*

National Park "Malet e Sharrit"

It has been declared as national park in 1986 with a surface of 39 000 ha and it is expanded in the boundaries of the municipalities of: Prizren (19.500 ha), Shtërpçë (15.210 ha), Therandë (2730 ha) and Kaçanik (1560 ha). The national park of "Malet e Sharrit" separated as a main area for botanical, fauna, ecological, touristic, recreational, sport, educational and cultural values of Kosovo. "Malet e Sharrit" has very specific biological diversity. Flora and vegetation is rich with species. Among these species, 86 of them have been declared of international importance, 26 species are included in the European Red List of threatened animals and plants and according to IUCN, 32 are in the Red List of the threatened plants, (International Union of Nature Conservation). Based on these facts it could be considered as a center of living of diversity species of Balkan and Europe.

Proposed areas for protection

During the period of 2000- 2005 Kosovo's Institute for environment Protection (KIEP) - has carried out the identification of the new natural values in 12 Municipalities Gjakovë, Skenderaj, Drenas, Burim, Rahovec, Kastriot, Vushtrri, Gjilan, Malishevë, Mitrovicë, Klinë, Podujevë, Fushë Kosovë and Viti. During this process have been identified and proposed for protection 195 new values, belonging to different protection categories.

In 2003 has been taken an initiative to declare the second national park of- "Bjeshkët e Nemuna". Declaring the territory of "Bjeshkëve të Nemuna" as National Park with around of 60.000 ha is in ongoing legal procedure. By protection of these areas, the total area in Kosovo will be of 10 % of its territory.

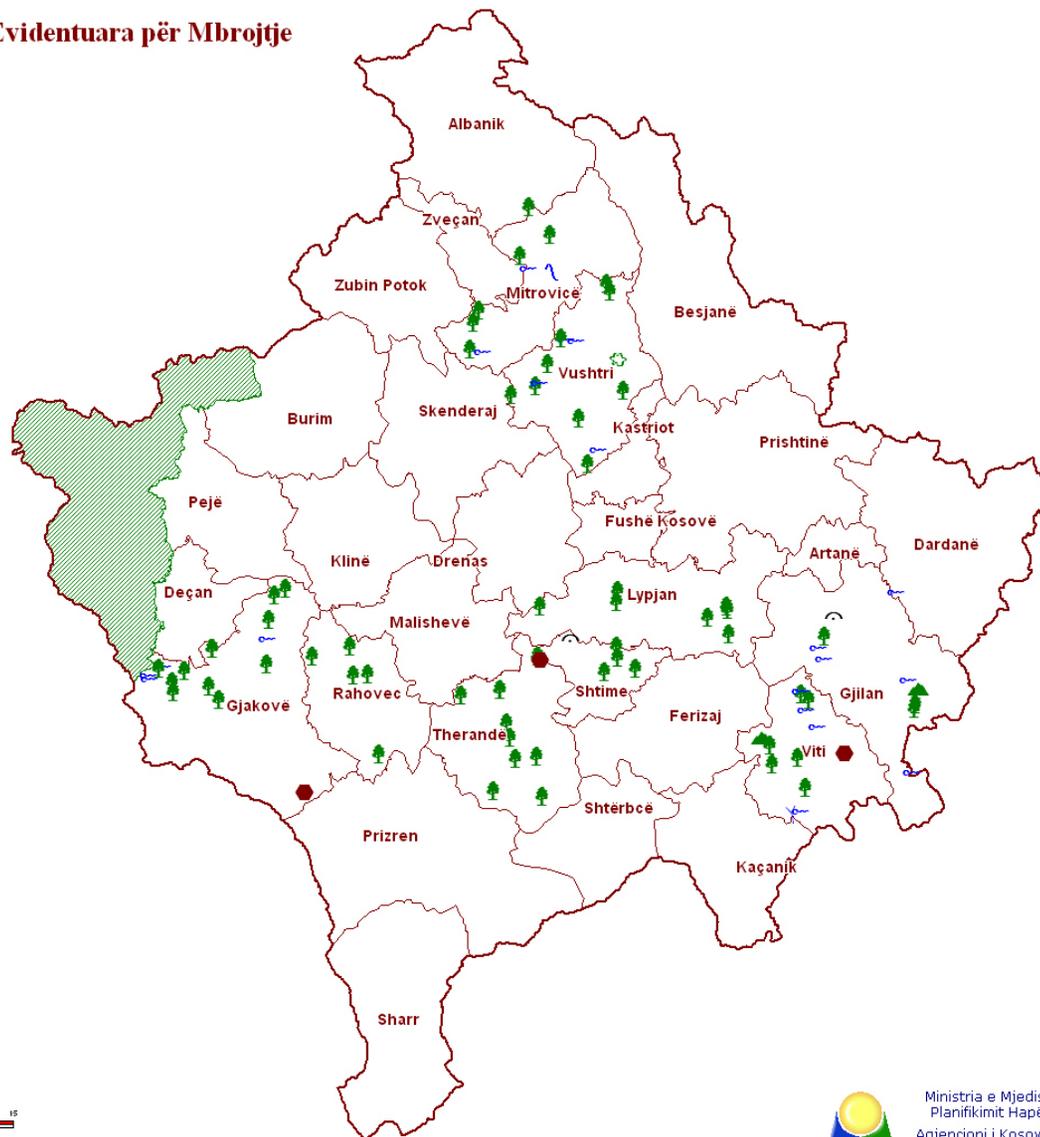
In Kosovo still has not been done the identification and declaring of the areas, on the base of Nature 2000. Also there is no initiative for inventarization and declaring of areas Ramsar.

Plans (activities) for preservation of biodiversity

In Kosovo, during 2007 has started a project "*Progressive monitoring for South East European Countries ("para - candidate")*" objective of which is to monitor approach of environmental legislation with the European Union legislation.

Also is implementing a two year project "*Sustainable forest management in Kosovo*" which will support the sustainable forest management in Kosovo's National Parks, as well as determination of surfaces / zones that fulfill criteria of Nature 2000 of EU.

Harta e Zonave të Evidentuara për Mbrojtje



Sistemi Informativ Mjedisor / GIS
 Emri i Hartës: Zonat e Natyrës të Evidentuara për Mbrojtje
 Burimi i të dhënave: AKMM / SIM
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 infogis_sim@ks-gov.net

- LEGJENDA**
- Kufiri komunal
 - Hidromonument
 - Biomonument
 - Rezervat natyre
 - Gjeomonument
 - Shpellë
 - Bifurkacion
 - Parku i ketrinë
 - Ujëvare
 - Kufiri i P.N Bjeshkët e Nemuna

Ministria e Mjedisit dhe Planifikimit Hapësinor
 Agjencioni i Kosovës për Mbrojtjen e Mjedisit



6. Waste

The assessment of situation

Waste are complex and heterogeneous matters formed by daily activities of human, in work, apartment, public areas, schools, industry, shops and other activities. The development of technology has resulted in production of different goods, packed and wrapped and with other different materials which after their use their packaging or wrapping become as waste.

Even if Kosovo has a number of waste collectors, we can not talk about an authentic waste treatment and collection. Initiatives about collection of specific types of waste of economical profit for waste collectors and treaters are not missing, but they are only few of them. Mainly are collected different types of scrap, scrap vehicles and a little paper, plastic and glass. There is lack in infrastructure in waste selection, even that have been some initiatives that have remained only as projects. For treatment of plastic waste through recycling have been constructed plants in Rahovec and Podujevë, which from the recycled waste produce different products. While, the battery recycling is carried out in Zveçan and Janjevë. Also in Janjevë is the plant of metal scrap recycling. A good practice of waste recycling of glass is applied in Theranda. There are some plants of old tires recycling in. Tire recycling and production of different products from recycled caoutchouc is in Vlashnje.

Based on the inspection and monitoring informations taken from the field, a result that in Kosovo is produced a large quantity of waste, and their administration is not in appropriate level, which many secondary matters together with waste are buried in the dumping sites.

Throwing of the waste in inadequate places is as a low level of citizens' awareness. This occurrence gives an ugly image of the area. Waste smell and create preconditions for spreading of disease and different epidemics.

Actual problem is storage area for temporarily storing of harmful materials (waste).

Other problems in waste management are: Poor coordination between KTA, central government, municipalities and waste managing operators, legal inanimations. Lack of funds, low level of awareness, absence of waste treatment, wild dumping sites etc.

HARTA E DEPONIVE REGJIONALE

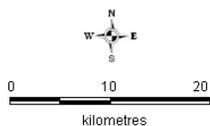


Ministria e Mjedisit dhe Planifikimit Hapësinor
Agjencia e Kosovës për Mbrojtjen e Mjedisit

Sistemi Informativ Mjedisor / GIS

Emri i hartës: Lokacionet e deponive në Kosovë
Burimi i të dhënave: KLMC / AKMM

Adresa: Rr. Nazim Gafurri nr. 31
info@sim@ks-gov.net



LEGJENDA

Kufi shtetror

Deponitë regionale

Gravitimi i komunave në deponi

Deponi_Sanitare	Lloji	Sasia_në_t_06
Prishtinë	Regionale	70,207
Podujevë	Regionale	8,729
Gjiçan	Regionale	44,492
Mitrovicë	Regionale	24,000
Pejë	Publike	19,855
Dragash	Publike	4,287
Prizreni	Regionale	32,256

- Dragash (1)
- Zveçan (2)
- Pejë (2)
- Mitrovicë (4)
- Besianë (1)
- Gjiçan (4)
- Ferizaj (4)
- Prizren (4)
- Prishtinë (5)
- Të papërcaktuara (3)



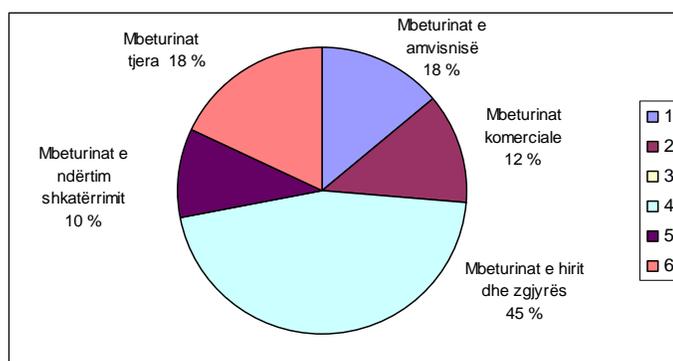
Local waste

The waste management system in Kosovo does not offer completed details of waste production, collection, treatment and waste removal. About 90 % of urban population is covered with organized waste collection ven if is a lack of equipment and diumping sites for waste. Organized collection of waste in rural areas is covered less than 10 % of territory.

Average daily quantity of waste production in Kosovo is around 2 kg./ per person⁶⁷.

Types of waste	Daily average in kg. / per pers	Annual quantity Kg./ per pers	Annual quantity in tons
House hold waste	0.277	101	232541
Commercial waste	0.250	91.25	209875
Medicinal waste	0.0024	0.876	2014.5
Ash and color waste	0.907	331	761426.5
Construction waste /destruction	0.200	73	167900
Other waste (wrappings) plastic, rubber, pesticides, electronic, wood waste etc..	0.360	131.4	302220
Total	2	729	1675977

Table 49: Daily and annual quantity of the waste according to the types



Graphic yy: The percentage of the types of waste

Sanitary dumping sites

According to the assessments in Kosovo are produced around 0.277 kg of the waste per head ,but when added the other waste other than houseslods then the overall quantity of waste is around 2 kg/ per head ,daily.

⁶⁷ A report about the the situation of waste in kosovo 2003/2004 MESP



Sanitary dumping sites:	Region	Type of the site	Surf ha.	Habitants	Time period	Donnor
Prishtinë	Prishtinë, F. Kosovë, Lipjan Obiliq, Glogoc,	Regional	40	724.251	15	EAR
Gjilan	Gjilan, Kamenicë, Viti, Ferizaj, Novobërdë	Regional	24	242.195	15	EAR
Prizren	Prizren, Suharekë Malishevë, Rahovec Gjakova	Regional	24	316.728	15	EAR
Podujevë	Podujevë	Municipal	5	131.300	15	EAR
Mitrovicë	Mitrovicë, Vushtrri, Skenderaj	Regional	7	250.000	15	Danida
Pejë	Pejë, Deçan, Klinë, Istog	Regional	3.6	250.000		COOP
Sharr	Sharr	Municipal	1.2	27.000	16	EAR
Ferizaj	Ferizaj, Shtime, Kaçanik, Shtërpc, Hani i Elezit	Transfer station		210.120		EAR
Zveçan	Zveçan	Municipal			15	EAR
				2.151.159		

Table 50. Sanitary dumping sites in Kosovo

The status of the dumping sites in Kosovo after the conflict has been improved owing to the donations of EAR AER-it, COOPI, DANIDA and the Government of Kosovo, which have supported the rehabilitation program, closure of the old municipal dumping sites and construction of new regional dumping sites.

On the contrary of fact, the regional dumping sites have been constructed with high standards, but because of inadequate management, their situation is not good.

The most often irregularities in management of dumping sites are: mistreating of running waters, waste non covering with the soil according to the standards and other technical problems.





Photo 3. New dumping site in Prizren



Photo 4. Illegal collection
Of drainage and waters in the dumping site of Prizren



Photo5. Uncovered waste in Gjilani dumping site



Photo 6. Drainage from the basin in direction of locality

Situation

No.	Sanitary dumping sites	Janary	February	March	April	May	June	July	August	September	October	November	December	
1	Prishtinë	3013	3412	3561	6586	6421	6239	5843	6432	7100	7514	7432	6654	70207
2	Gjilan /Ferizaj	2868.64	2850.44	3880.84	3813.52	3908.14	3411.65	3925.60	4585.47	4506.95	4240.28	3661.31	5690.47	44492.27
3	Prizren	2124.75	1906.45	2207.85	3417.95	3604.54	2525.60	2698.40	3292.40	3108.40	2886.60	2453.90	2029.20	32256.04
4	Podujevë	539.74	531.71	775.37	837.07	732.34	678.02	805.73	905.45	839.79	888.40	638.80	556.46	8728.88
6	Pejë	1543.8	1252.6	1560.9	1388.5	1613.7	1606.7	1911.4	2007.2	1954.5	1880.5	1656.7	1478.5	19855
7	Sharr	267.4	266	289.8	321	379.40	378	427	485.80	389.20	408.80	343	330.4	4286.80
8	Mitrovicë													24000
9	Total	10357.39	10219.2	12275.76	16346.92	16659.12	14838.97	15611.53	17708.32	17898.48	17818.58	16185.71	16739.07	203825.99

Table 51. The waste quantity (in tons) in the regional dumping sites of Kosovo -2006 ⁶⁸

No.	Sanitary dumping sites	January	February	March	April	May	June	July	August	September	October	November	December	Totali në TON
1	Prishtinë	3,665.45	4,273.73	5,032.07	5,017.46	5,239.63	4,854.54	4,938.13	5,264.28	5,005.82	6,256	6,413	5,703.9	61,664.35
2	Gjilan	6,542.97	5,668.02	2,959.12	4,515.92	4,359.10	3,451.13	3,915.47	4,251.47	3,858.33	4,186	3,585	3,342.09	49,940.08
3	Prizren	2,160.90	1,662.70	2,051.45	2,503.50	2,980.40	2,890	3,407	3,975	3,501	2,546	3,033	2,054.29	32,755.92
4	Podujevë	628.60	529.70	359.56	306.50	481.70	408.78	361.40	931.92	601.70	599.05	591.15	493.27	6239.33
6	Pejë	1341.5	1200.4	1371	1463.5	1574.6	1279.2	1642.9	1887.6	1628.5	1685.4	1582.7	1603.4	18,260.70
7	Sharr	322	301	343	350	427	434	560	616	420	427	410	407	4,242.00
8	Mitrovicë													28,420
9.	Lypjan													5228
	Totali													206,750.38

Table 52. The waste quantity in the regional and municipal dumping sites of Kosovo for 2007 ,in tons

The difference between 2006 and 2007 is 2,924.39 tons

⁶⁸ Details from KLMC and managing companies of the dumping sites, October 2007





Packaging and wrapping

The progress of science and technology has resulted to have in the market packed and wrapped goods of different size and form. After the consumption of these goods all packs and wrappings remain as waste and in this case the quantity of waste is increased. This type of waste is not collected or its collection is very little, so the large quantity of this waste is lost by throwing of these wraps in the waste bins.

Paper

Old paper collection and its recycling is important to decrease the waste quantity, conservation of natural resources, saving of energy and decreasing of costs.

From the paper collected from companies a small quantity of the waste paper is recycled, while the other part is exported outside the country, where it is exchanged with raw material or is sold. The other quantity of waste paper is sent to the dumping sites.

Metals

Different metals, including here scrap metal is collected in organized manner, mainly for economic profit. Processing of this kind of scrap is not carried out in Kosovo, but most of it is exported. From the scrap metal recycling are preserved natural resources, is decreased the quantity of scrap and we have the energy savings. There are a lot of collection centres of the scrap metal in Kosovo.

Glass

Glass waste is collected in a small quantity so far, except the beer bottles of 0.5 l which is reused by the beer production company. Glass waste is not separated and reused, because that there is no market and are not recycled, because there is no plant for the recycling process. A good practice of the glass recycling is applied in Thailand. Collection, reuse and recycling of glass waste, decreases the utilization of the natural resources, energy, and it is a good chance to open new jobs.

Plastic

Plastic can be dissolved with different methods, but biologically it is indissoluble. The shelf life for using of the materials made by plastic is very short, and in the other hand creates long-term problems to the environment. Plastic waste is collected in a very small quantity in Kosovo. There are two plants for plastic recycling: "Pista" Rahovec and "Plastika" Podujevë. The waste created by preproduction of PVC tubes in the plant is recycled.

Wrapping of the hazardous substances

In different activities are used substances which are very hazardous to human health and environment. Packagings of these substances are very large in a number, but should be paid a special attention to them, as are: oil packagings, acid packagings, and other substances used in the households, bottles and packagings of pesticides, consumed medicine



wrappings ,packagings of colors and oils etc. In Kosovo there is no organized, collection, treatment and classification of these packagings. These kinds of waste are mixed with other waste or have not been disposed in the places intended for waste.

Treatment of waste shall be carried out through their thermal treatment, by their burning in high temperatures without ash, or with minimum ash.

Hazardous waste

As a result of industrial production, interruption of the production and other activities, we face many hazardous substances. In the table below are presented details of this kind of waste, collection locations and their quantity until 2006.

Waste - Hazardous substances	Quantity /unit	Location	Municipality	Details provided by:
Waste and solid chemical substances	49045 m ³	Kosova A	Kastriot	REC/MESP
Waste and solid chemical substances	186 ton	Kosova A	Kastriot	REC/MMPH
Radioactive sources	34 njësi	Kosova A	Kastriot	REC/MESP
Waste and solid chemical substances	25505 m ³	Trepça Foundry	Mitrovicë	DANIDA/MESP
Calcium Hypochlorur	6.5 ton	Shipol	Mitrovicë	MESP/KFOR
Waste and solid chemical substances	6300 t + 165 barrels	Metalurgy	Mitrovicë	PIM/MESP
Waste and liquid chemical substances	600 l	Metalurgy	Mitrovicë	PIM/MESP
Waste and chemical substances	2000 l	Chemical industry	Mitrovicë	PIM/MESP
Waste and solid chemical substances	10 ton	First tunnel	Mitrovicë	PIM/MESP
Radioactive sources	3 power	First tunnel	Mitrovicë	PIM/KPC/MESP
Waste and solid chemical substances	8500 kg	Industrial park	Mitrovicë	PIM/KPC/MESP
Waste and liquid chemical substances	42900 l	Industrial park	Mitrovicë	PIM/TMK/MESP
PCB Oils	4 -trafo	Leaden plant	Zveçan	DANIDA/MESP
Waste and solid chemical substances	136 ton	Leaden plant	Zveçan	DANIDA/MESP
Different solutions	2 ton	Metalac	Janjevë	MESP- KFOR
Waste and solid chemical substances	7.0 m ³	Metalac	Janjevë	MESP - KFOR
Waste of photo films	3000 kg	IMK-plant.	Ferizaj	MESP
X ray	3 pcs	IMK-Plant	Ferizaj	MESP
Waste and liquid chemical substances	20 ton	Plant of tools.	Ferizaj	MESP
Waste if photo films	2.5 t	Tools plant	Ferizaj	MESP



Textile colors, chemical substances	9100 kg	Sharr-tex	Sharr	KFOR –KPC
Waste of solid chemical substances	4370 kg	Sharr-tex	Sharr	KFOR –KPC
Used oils	1200 l	„ Adi”	Lipjan	
Radioactive waste	184 rings of Americium	Youth Palace	Prishtinë	
Waste and solid chemical waste	85 tons	Mine -Trepçë	Leposavic	KFOR
Solid chemical waste	22.2 tons	Shoe and leather factory	Pejë	MESP
Waste and liquid chemical waste	17340 l	Factopry of vehicle spare parts	Pejë	KFOR/MESP
Waste and solid chemical substances	200 kg	Factory of vehicle spare parts	Pejë	KFOR/MESP
Waste and solid chemical substances	6180 kg	Factory of shartex	Sharr	KFOR –KPC
Waste and liquid chemical substances	3265 l	Factory of Shartex	Sharr	KFOR –KPC
Solid chemical substances	231.8 kg	Laboratory Kishnicë		KFOR –KPC
Plastic barrels with acid	9 barrels	Laboratori Kishnicë		KFOR –KPC
Unknown polastic bxes	9 barrel	Laboratory Kishnicë		KFOR –KPC
Bottled substances without labell	15 pcs	Laboratory Kishnicë		KFOR –KPC
Waste and solid chemical substances	5 tons	Textile Factory	Gjakovë	KFOR – KPC
Out of date medicines	More than 10 tons	Central Pharmacy	Prishtinë	
Out of date medicines	1 ton	Family medicine	Ferizaj	MESP
Out of date medicines	200 kg	Genti Farm (pharmacy)	Private property - Çagllavice	MESP
Out of date medicines	15 tons	Storage area of Farmakos	Prizren	MESP
Out of date medicines	5 tons	Family medicine	Dardane	MESP
Out of date medicines	3 tons	Family medicine	Shterpcë	MESP
Out of date medicines	5 tons	Family medicine	Prizren	MESP
Out of date madicines in a form of tabletes	1236 paces	Storage area of Agani Company	Prishtinë	MESP
Out of date medicines in aform of ampula	5269 paces	Storage area of Agani company	Prishtinë	MESP
Out of date medicines (antibiotics).	8729 paces	The storage area of agani Company	Prishtinë	MESP



Out of date medicines in a form of syrup	4581 paces	The storage area of Agani company	Prishtinë	MESP
Out of date insecticides	143 paces	The storage area of Agani Company	Prishtinë	MESP
Out of date medicines	10 tons	The main storage area of the medicines from the special list	Milloshëvë	MESP
Medicinal waste	5 tons/year	Family Medicine	Therandë	MESP
Medicinal waste	40 tons/year	Family Medicine	Gjakovë	MESP
Medicinal waste	14.2 tons/year	Family Medicine	Sharr	MESP
Medicinal waste	2 tons/year	Family Medicine	Deçan	MESP
Medicinal waste	60 tons/year	Family Medicine	Prishtinë	MESP
Medicinal waste	27 tons/year	Family Medicine	Pejë	MESP
Medicinal waste	5.5 tons/year	Family Medicine	Gjilan	MESP
Medicinal waste	14 tons/year	Family Medicine	Vushtrri	MESP
Medicinal waste	2 tons/year	Family Medicine	Burim	MESP
Medicinal; waste	8 tons/year	Family Medicine	Prizren	MESP
Medicinal waste	22 tons/year	Family Medicine	Mitrovicë	MESP
Medicinal waste	24 tons/year	Family Medicine	Viti	MESP

Table 53. Types of the hazardous waste, collection sites and their quantity, 2006⁶⁹

⁶⁹ Division of waste, MESP



Industrial waste

Many substances in different forms have remained unused for a long time period in equipments, storage areas, and industrial sectors. Some of these chemicals are out of date or have been degraded, changing their composition, and they are considered as substances of high riskiness. Activities on reduction of the risk from such substances, have been undertaken in some enterprises so far, mainly supported by donations and activities of KFOR and KPC.

Also, from KCB and based on IPEA, have been allocated funds to realize construction of the dumping site for waste and hazardous materials.

No	Location	Sarea of the dumping site ,expressed in ha	The quantity ,expressed in mili.ton
1	Wasteland PIM	35	1.52
2	Wasteland Zvecan (Gornje polje)	50	12
3	Wasteland Leposaviq (Bostaniste)	10	3.6
4	Wasteland Kizhnica (Badovc)	18	7.7
5	Wasteland Stan terg (Zarkov potok)	10	3.6
6	Ash and color dumping site t -KEK	160	42
	Total	283	70.4

Table 54. Areas of the dumping sites of industrial waste and their quantity

Scrap vehicles

Scrap vehicles are all those types of vehicles out of use. Collection of the scrap vehicles is made by some of the private companies.

These companies treat these scrap vehicles in two manners : collecting them as scrap metal for further sale ,which are mainly exported in the countries in region ,or dismantling them to reuse of the spare parts.

Waste tyres

Vehicle tyres are not classifies as hazardous waste, but some of the specific types of thetyres mayu have hazardous and dissolvable material. After 40.000 km. vehicle tyres shall be replaced, so in this manner are out of use thousands and thousands of the old vehicle tyres. From the uncontrolled burning of the vehicle tyres are released harmful substances to the environment for example dioxin. Burning of the vehicle tyres is accompaine by releasing a temperature and for this reason is used as burning material to produce cement. Through temperature of 1000 celsius which is achieved in these furnaces the SO₂ released is linked with cement and in this way is harmless, whereas burning of these tyres in inadequate ovens to calcinate quicklime, presents a hazard to the environment.

Old vehicle tyres are imported or collected in to our contry for the purpose of their reprocessing, whereas some of the companies the waste after the recyclation, use to produce different rubber products.



The final destroy of the used tyres has not been made in organized manner by institutions, having in regard criteria of environment protection. The elimination of the tyres is done spontaneously, mostly in the localities, disrespecting the criteria of environment protection.

Production waste

In production waste are included: Oils as waste, batteries, medicinal and infective waste, electrical and electronical waste, and out of date medicines.

Waste oils

As very problematic waste is used oil, which is the most potentially contaminants of land and waters in Kosovo. Oils are disposed everywhere, in streets, yards, workshops, they are used as heating material in the, workshops etc. In our country there is no collection and treatment of the used oils.

Factory of "Silcapor" in Kaçanik uses the used oil to lubricate the shapes. Also we do not have a real situation about the presence of the oils and waste with content of PCB, PCT, and PBB, known with high riskiness for health and environment. Within one year period, in Kosovo are produced about 1.749.700 liters, without calculating the oil quantity of the KFOR and UNMIK vehicles.

Consumed and disposed batteries

Wastes of high risk to the environment are batteries which you can meet them everywhere in Kosovo. There are different types of batteries, constructed by different types of material and filled with various electrolytes. Most of the metals and electrolytes of the batteries are known with high toxic and cancer attributes.

Some of the vehicle batteries are collected in the scrap metal collection places, but a large quantity of them and other types of batteries are disposed without any criteria. Consumed batteries are a waste which requires a special treatment.

The method of their treatment presents a continuous contamination and with high riskiness. The recycling of vehicle batteries is made in "Trepçë" - Zveçan

Infective and medicinal waste

Infective and medicinal waste is waste of special riskiness which during the manipulation or contact with them is put in the risk environment and human health. These wastes are produced in the hospitals and other clinics or by killing or death of the dogs as well as from slaughterhouses etc.

This type of waste is not treated appropriately. From the monitoring in the field and information that we have, these wastes are not collected, transported and deposited according to the norms and standards.

In Kosovo, there are centers which have equipments (incinerators) for burning of the hospital waste. It has been considered that in these equipments (incinerators) is burnt 20-30% of the medicinal waste, while the other part is disposed in the waste bins. For burning of the infective and medicinal waste, in our country are existing four of these incinerators,



technically most advanced, which are placed in Pristine, Mitrovicë, Gjakovë and Pejë. These incinerators are of simple burning and one phase burning.

According to the details of hospitals and family medicines in our country is produced, daily 5500 kg of medicinal waste, whereas annually are produced 2.014.500 kg or 2.014.5 tons. When calculated in report to the persons, in a daily report is 0.0023 kg of the medicinal waste.

Waste produced in the hospitals have started to be collected in the bins intended for this kind of the waste ,but there are cases where collection and treatment of medicinal waste is not done appropriately ,especially in a private sector which is not under the control.

Partially these wastes are treated by burying them in the dumping sites, for example killed dogs, bones and other wastes from the slaughterhouses are disposed without any specific treatment. Also they are disposed in the streams, rivers and forests etc.

Electrical and electronical waste

Lately is increasing the quantity of electrical and electronical waste which is harmful to human health and environment. These wastes are produced by different household equipments and industrial equipments, which currently finish in the dumping sites or metal collection centers.

Risk from this type of the waste comes from their components ,which are:: types of plastic ,cables ,elements of heavy metals ,electronic lamps ,solvents and many chemical compounds fluorescent glass ,colors ,gas reservoirs for chilling etc .

Out of date medicines

After the conflict, Kosovo inherited a considerable quantity of the medicines, out of date, accumulated by years in the pharmacies and, in the only factory for production of medicines. Also, in Kosovo was a flood of the medicines as humanitarian aid and for the purposes of the profit as well. These medicines have entered without any control of their quality, quantity and type, at the same time almost outdated.

Medicines are placed mainly in the stores of state property pharmacies, in the stores of custom, Farmakos –Prizren, in AGNI Company, as well as central storage area, which is under supervision of the Ministry of Health etc.

There are existing 100 tons of outdated medicines which shall be treated (destroyed) by specific methods. Also a considerable quantity are stored in the hospital areas .Have been made efforts that the destruction of medicines to be carried out in KEK burnings, even that the agreement between KEK and Pharmaceutical department of the ministry of Health has been signed, this agreement has not been realized.

It is worth to be mentioned that unused medicines of the patients, treated at home are a serious contamination.

Outdated pesticides and pesticide wrappings

In Kosovo, regularly are imported pesticides, necessary to combat disease and other pathogens in Kosovo's agriculture. Most of these pesticides can not be sold or used in time and in this way they are outdated changing into a harmful waste.

This problem has not been solved yet, contrary to the engagement of the sector for pesticides within the Ministry of Agriculture, Forestry and Rural Development and division of the



Waste Administration, within the Ministry of Environment and Spatial Planning. Also, a continuous problem presents the packaging of the pesticides, during their use by Kosovo farmers.

MAFRD is organized to collect and confiscate outdated preparations, prevention to use them on protection of the agricultural cultures, also to prevent their sold and their missapplication.

Waste collection and recycling

Waste collection in Kosovo is made by public companies, administering the waste in the localities. These companies are under KTA administration, and are responsible for collection and transportation of urban waste to the dumping site.

Waste treatment is a quite complicated problem and very expensive.

It impacts evidently in decreasing of the overall level of waste. Currently in Kosovo, we do not carry out activities to treat waste, but there are authentic tendencies for waste treatment.

The activities of the Ministry are focused on prevention, collection, selection, treatment (recycling, reuse and composting etc.), and dumping of the waste.

Currently we can talk for some points which are dealing with waste treatment in Kosovo and organized by private initiatives.

In this case we can mention, plastic recycling in Rahovec, Mitrovicë, collection of paper in Xërxë, Lypjan, Fushë Kosovë, Prizren, Prishtinë, glass bottles in Pejë, recycling and processing of glass in Theranda, different metals in some centers in Kosovo (Prishtinë, Ferizaj, Lypjan, Mitrovicë, Gjakovë, Pejë, Janjevë, Podujevë etc.). Also recently, we have initiatives to start composting in some Kosovo centers, among which we should mention that one in Klinë.

Interboundary transport of the waste

Interboundary transport of the waste is done in compliance with legal provisions of the Law for waste, and Regulation CE 259 / 93 / EEC, Basel convention and in accordance with rules of road transport (ADR), rail transport (RID) and air transport.

From Kosovo can be exported for that kind of waste which does not exist treating plants, also it is permitted to import the harmless waste and only in that time when existing of the adequate treating equipment and it is permitted by the Ministry.



Radioactive sources of radiations

In a different production companies, health institutions, schools, buildings etc., are a number of the radioactive radiations of all types⁷⁰ (**α , β , γ and x**). These sources are in:

- In X ray equipments and radioactive isotopes ,used in diagnostification medicine ;
- In the equipments used in industry (radiography etc);
- Radioactive isotopes ,used in industry as measuring level;
- Sources with radioactive isotopes in lightning –conductors and fire detectors;
- Collection sites of the metallic waste etc.

In addition to, different radioisotopes in the environment (food, air, soil, construction materials, infrastructure etc.), present a concern for a possible risk with impact to human health.

After the NATO bombings, in 1999 in all over Kosovo's territory have remained a large number of the unexploded means, which present a permanent risk for life of population.

Based on so far reviews of some radiation sources in the territory of Kosovo have been identified the following types:

CO⁶⁰, CS^{137, 134}, Sr⁹⁰, EU^{152,124}, AM²⁴¹, Ra²²⁶, Rn²²², J¹³¹, Au¹⁹⁸, Te⁹⁹, Se⁷⁵, H³, C¹⁴.

For example: many radioactive isotopes, used in industry for different purposes (KEK< TREPÇË etc.) have remained outside of the adequate control .In a former gasification (Kastriot) in the storage areas these types of the isotopes Co⁶⁰:

- 12 sources of initial activity $A_0=3,70$ GBq
- 18 sources of initial activity $A_0=0,74$ GBq dhe
- 4 sources of initial activity $A_0=1, 48$ GBq.

Measures of radioactivity doses by KFOR show the following values:

- Behind the concrete protection wall : 4-104,23 μ Sv/h
- In front of concrete protection wall: 4-23,12 μ Sv/h
- Outside walls of storage area: 0, 11-0, 18 μ Sv/h.

This important field is still unstudied in Kosovo, so it is necessary to initiate a comprehensive project to identify ioning and nonioning sources of radiation, a project which will define managing of these sources from purchasing, transport, use, storing and prevention of risks coming from their presence.

⁷⁰ service of protection by radiation ,Institute of labour medicin in Kastriot



5. Environment and health

Introduction

In the human's daily life are many factors having an impact, as are, food, working conditions and environment pollution. Humans are exposed to air, water, and soil pollution, among others through food, waste, chemicals and different products which he uses at home, or at work. Physical impact of the environment in humans may bring different disease, as are: heart disease, breathing disease, skin cancer, etc. Different chemical impacts may bring hormonal disorders, disorders in growth and development, cancer, etc. The importance of healthy environment is an irreplaceable factor to human health. Even if, there are details about the possible impacts of the environment in human health, nevertheless, there are insufficient details through which can be witnessed its specific impact in human health. A special problem in this direction is collection of such details to argue this.

Assessment of situation

Health status of Kosovo's population is not such good. Only 70 % of the population are supplied by water system with potable water. Around 65 % of the rural population with potable water are supplied by wells, where most of them are not hygienic. Less than 40 % of the population have drainage system and are supplied by water system with potable water. Cases of infective and parasitical disease have been decreased, since the post conflict period, until nowadays. The number of diseased by TBC is increased as well. The most often chronic diseases are: disease of cardio-vascular system, disease as Hepatitis A, Meningitis, diabetes and infective disease of intestines are in a high rate.

Expected longlife

As far as in the most European countries the population is getting older, Kosovo is excluded from this. Kosovo's population is young, where one third of the population belong to the age group 15 years old, about half under 25 years old. The normal age is between 22 and 23 years old. Another indicator of the public health level is the number of deaths of the newborn, which is 18,9 %, being the highest number in Europe. Reasons of the 635 of the newborn deaths are infective disease. In another report published by UNDP (2002), the mortality rate of the newborn, achieves 34 - 35 in 1000 of the newborn, which is more than 18 %.

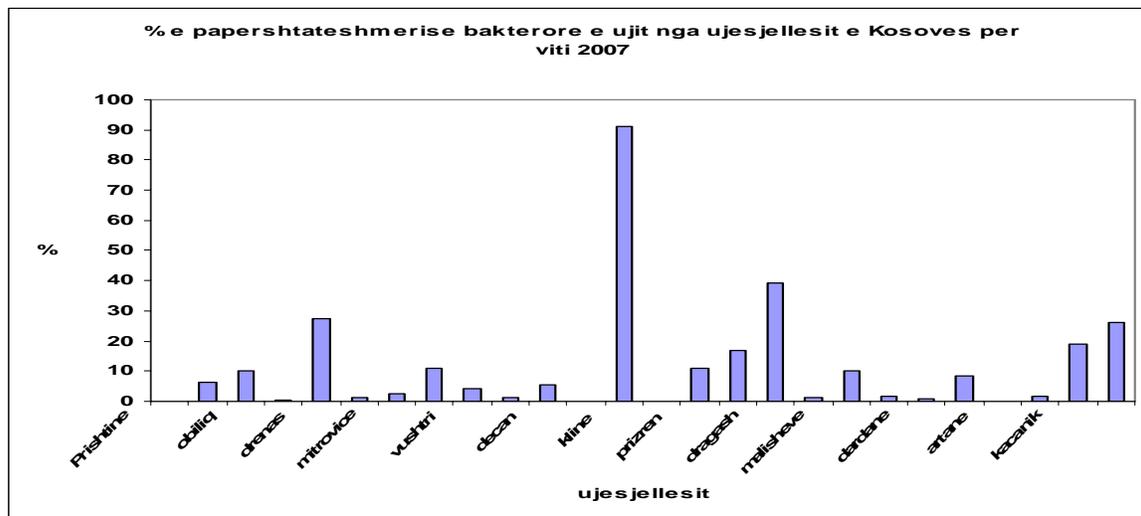
The normal longlife in Kosovo is 68.8 years (67.8 for men and 69.9 for women).

The quality of potable water

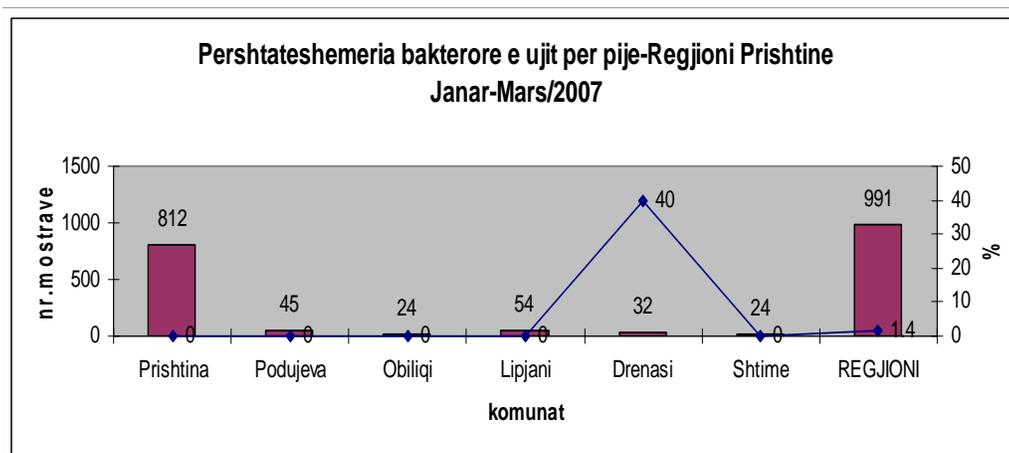
National Institute of Public Health (NIPH), regularly undertakes activities with a scope to set up a control of potable water quality.

On the base of the monitorings of potable water sources for 2006/2007 NIPH offers the following details:

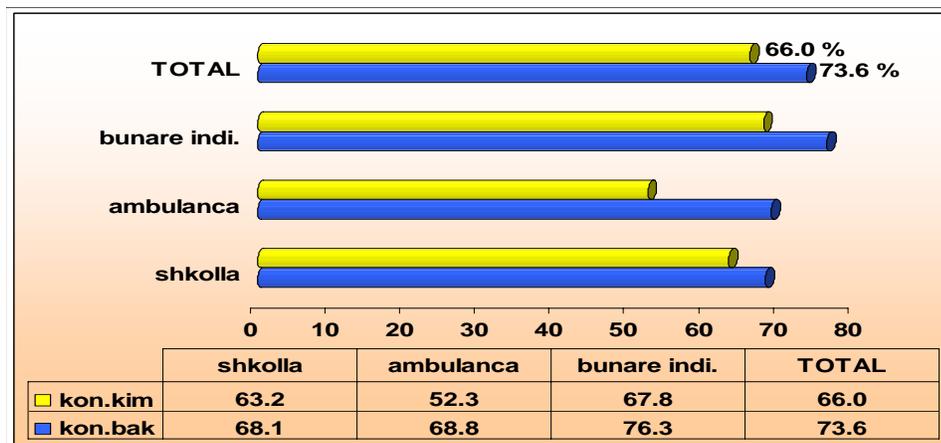




Tab. Xx. The major percentage of bacterial unsuitability of the water from water systems in Kosovo, for 2007, in the first place is the municipality of Klina, over 90%, which is a bad indicator for the water quality. In a not good situation are municipalities of Malishevaq with 40% and mitrovica over 30%.



Tab. Xx. Indicates bacterial unsuitability of the potable water in Prishtina region, over 30 5 for January /March 2007.



In the tab.xx. is indicated the contamination of the potable water is bigger by bacteriological contamination ,with 73.6% comparing to chemical contamination which is 66.0%. This statistic is taken by measures made in schools, clinics and individual wells, during 2006.

Epidemics (infective disease)

However, there was a sensitive incidence of the infective disease cases, during the period of time 2005-2006, the number of the cases continuous to be in high rate. Especiallly we should mention the cases with acute diarrhoea, pneumonia, and tuberculosis. Also, it is a concern the number of the cases with tularemia, brucellosis, hemorrhagic fevers and egzantemic fever.

Infective diseases	2005	2006
ITPR-Pneumonia	17.335	16.486
Acute diarrhoea	39.604	43.231
Infections with intestinal parasites	369	276
Scabies	506	588
Varicela	5.041	4.850
Suspoicion in influenza	35.220	17.659
Meningitis syndrome	298	1.278
Diarrhoea syndrome In blood	88	117
Acute paralysis flacide (PAF)	5	2
Syndrom of hemorrhagic fever	11	5
Syndrom of egzantemic fever	49	49
Epidemical parotidis	156	476
Acute hepatitis A	766	746
Acute hepatitis B	208	152
Pertussis	38	68
Tularemia	102	105
Brucellosis	41	58
Tuberculosis (TBC)	1.102	1.122
Other infective disease	5.780	4.770
Total	102.723	92.040

Table 55: number of the cases of infective disease, during the period of time 2005-2006 (Health statistics 2006, KSI)

Air quality

Industrial sources of contamination in Kosovo ,presents a great health risk as a consequence of environmental contamination ,caused by the discharges of the Leaden ,cadmium,zinc ,cuprum,and other toxic substances in air .Organized and continous monitoring is not



carried out .A study made in 2000 about the level of the leaden in blood of the at workers of the foundry and residents of Mitrovica and localities around ,indicates a high level of the leaden in the blood ,especially at workers and children. Densly traffic, presents another serioz source of contamination. For example, in prishtina there are evident problems with contamination by dust, which in other towns is less evident.

Professional disease

In Kosovo has not been set up a monitoring system in health (except for infective disease). Also there is a deficiency in recording of non infective disease and professional disease. Currently in some of the localities there is a lack of the authentic health services at work. There is no implementation or inspection of safety at work or protection .Preventive approach has not been implemented so far and is not carried out recording of the patients, except in the KEK medical center, in Obiliq and Gjakovë.

Type of disease	2005			2006		
	UCCK	Regional hospitals	Total	UCCK	Rewgional hospitals	Total
Disease of the expiratory system	3166	6962	10128	3482	26028	29510
Disease of cardio-vascular system	2621	5139	7760	2548	17678	20226
Dermatological disease	481	1453	1934	341	5918	6259
Tummors	1148	462	1610	981	1619	2600
Disease of uro-genital system	989	2198	3187	897	11019	11916
Infective and parasitical disease	2146	3014	5160	2538	1423	3961

Table 56: Morbidity by some of the types of diseases in a period of 2005-2006, in UCCK and regional hospitals (statistics of health 2006, KSI)

Realization of objectives

Within the legalframe for public health have been approved these laws, so far: Sanitary Inspection Law (2003/39), Health Law of Kosovo (2004/31) and the Law for Protection of consumer (2004/42), whereas in the procedure are Health Inspoectorate Law and Law about noise.

There is no action plan for health and also there is no health information system. In general, Kosovo has a low level of education in a field of public health, particularly in rural areas. There are no completed details for the projects and investments in the field of public health.



III.
General issues



Assesment of the Impact in Environment

Environmental Acceptance according to the activities					
No.	Activity	Positive	Negative	Undefined	Total
1	Stone-Qauarry	95	4	1	100
2	Seeration	22	3	0	25
3	Gravels	36	4	0	40
4	Asphalt base	12	0	0	12
5	Concrete-mixers	25	0	0	25
6	Pharmaceutics	3	0	0	3
7	Cementer	5	0	0	5
8	Metals	4	1	0	5
9	Factory	11	0	0	11
10	Others	43	0	0	43
11	Pump	107	11	1	119
12	Renovation of the river bed	1	0	0	1
13	Drainage	10	0	0	10
14	Water supply system	0	0	0	0
15	Construction	7	0	0	7
16	Water power station	1	0	0	1
18	Production	3	0	0	3
19	Harmful waste	2	0	3	5
20	Coal	3	2	0	5
Totali		390	25	5	420

Table 57. Environmental acceptances according to the activities



Legal Frame

Kosovo has a new environmental legislation and approached to EU standards. This legislation is adhered in the principles of the European legislation, and has been drafted in cooperation with foreign experts.

However, the environmental legislation continues to be fulfilled and improved to respond in a most effective manner to sustainable development of environment.

Completion with legal personnel for the environment sector is seen by the Government as one important instrument for development of environmental policies.

Nr	Name of the Law	Nr.of the Law
1.	Law of Environment Protection	2003/9
2.	Kosovo's Forestry Law	2003/6
3.	Seed Law	2003/10
4.	Fertilizers Law	2003/22
5.	Law of Spatial Planning	2003/30
6.	Law for Pesticides	2003/35
7.	Health Law	2004/31
8.	Law for trade with Oil and its components	2005/22
9.	Law for Energy	2004/21
10.	Law for Waters	2004/41
11.	Law for co.and amend.of Law 2003/3 for Forests	2004/40
12.	Law for air protection from contamination	2004/48
13.	Livestock Law	2004/39
14.	Law for irrigation of Agricultural Land	2005/49
15.	Animal Welfare Law	2005/24
16.	Law for protection of Nature	2006/22
17.	Agricultural Land Law	2006/37
18.	Law for waste	2006/31
19.	Hunting Law	2006/41
20.	Mine and Minerals Law	
21.	Law for protection from natural disasters and other disasters	2007/4
22.	Law for hydrometeorological activities	2007/2
23.	Law for Cultural Heritage	2006/52
24.	Law for geological researches	
25.	Law for fishery and aquaculture	2006/58
26.	Plant Protection Law	2007/6
27.	Law for protection of plant varieties	
28.	Law for protection from noise	
29.	Law for chemicals	2008/8
30.	Law for organic agriculture	
31.	Law for prevention of the conflict of interest and in exercising of public function	
32.	Road transport Law	

Table 58. The list of the Laws approved by Kosovo's Assembly 2003-2007, which are closely related to environmental field

From MESP has been initiated the procedure to be redrafted the Law for Environment Protection Nr.2003/9 and the Law for protection of Nature Nr. 2006/2



In the approval procedure in the Parliament is: Law for Assessment of impact in the environment

Also, from the working groups is in process drafting of the following Laws: Law for National Parks, Law for Protection by Ionising Radiation and Nuclear Safety, Law for Integrated Prevention and Control of Environment Contamination (IPPC), Law for strategic environmental Assessment (VSM)

For recruitment of legal personnel and facilitation in implementation of environmental legislation, have been drafted the by-laws.

NAME OF THE SUB-LAW	NR. AND TIME OF SIGNATURE	PHASE IN WHICH IS SUB-LAW
LAW FOR ENVIRONMENT PROTECTION		
For constitution of Inspectorate of Environment Protection	Nr.02/2004-MESP, date 18.02.2004	Signed by Primeminister
For organization of the Agency for environment protection	Nr.22/03-MMPH	Signed by Minister
for issuing ecological licenses	Nr.26/05-MESP , date 07.11.2005	Është nënshkruar nga Ministri
For licensing of persons and companies to draft a report for assessment of the impact in environment	Nr.03/2004-MESP	Signed by Primeminister
For assessment of the impact in environment	Nr.09/2004-MESP	Signed by Prime Minister
For cadastre of emissions of the contaminants in the environment ,forms and instructions and fill the forms	Nr.2004/09-MESP, date 03.08.2005	Signed by Minister
LAW FOR PROTECTION OF AIR FROM CONTAMINATION		
About the rules and normatives of the discharges in air from immovable sources of contamination	Nr.06/2007 23.05.2007	Signed by Primeminister
Administrative Instruction -for permitted norms of the discharges in air from movable sources		In a legal office
Administrative Instruction -limit values -rules of air quality		In a legal office
Administrative Instruction for quality of oil and oil products		Finished by MTI.
Administrative Instruction for substances harming ozone		In a drafting process
For criteria, determining of monitoring points, number and speed of measures, working methodology form and reporting time of informations (data) .		In a drafting process
LAW FOR WASTE		
For administration of the used oils as waste	Nr.03/07-MESP , 20 January 2006	Signed by Ministry
For administration of scrap vehicles and their waste	20 December 2006	Signed by Minister
Battery waste and consumed batteries	Nr.02/07-MMPH , 20 December 2006	Signed by Minister
Construction and demolition waste	Nr.05/07-MMPH , 20 December 2006	Signed by Minister
For polychlorured bifeniles and trefeniles.		Expecting the signature of Minister



For elimination of waste from medicinal products		On the procedure to be proceeded in to a legal office of Governemnt
For medicinal waste		On the procedure to be proceeded in to a legal office of Governemnt
For administration of the dumping sites		On the procedure to be proceeded in to a legal office of Governemnt
For competencies of the owner and waste treatment operator		On process of signature by Minister
For the waste from elctricasl and electronical equipment		On the working group ,MESP,legal office - 0drafted
For hazardous waste		Study in a working group of MESP,legal office - drafted
For licensing of waste administration		On drafting process
Conditions for determination of the location and building of the dumping sites		On the procedure in the Government's legal office
LAW FOR PROTECTION OF NATURE		
For form and method of the central bookkeeping of the protected nature areas	Nr. 04 / 2006 MESP,September	Signed by Minister.
For criteria and exploitation of caves.		In the procedure of interministerial review.
For the method of mark of the priotected areas of nature	Nr. 01/07 25.01.2007	Signed by Minister.
For the managing plans of the protected areas of nature.	Nr 11/07 02/11/2007	Signed by Minister.

Table 59 .The list of the by-laws, approved and those in procedure, issued by legislation of environment protection.



Approach of Kosovo's environmental legislation with European Union

The Kosovo's national policy includes the process of European Integration. One of main challenges in this process is environment, and fulfillment of European environmental standards and approximation of national legislation with European legislation. In a period 2006-2007, European Commission has monitored the progress, made in harmonization of the Kosovo's environmental legislation, with EU and its implementation.

Field	EU Directives	The level of harmonization (%)
Horizontal legislation	Directive for AIE (85/337/EEC)	86
	Directive for VSM (2001/42/EC)	19
	Directive about environmental information (2003/4/EC)	32
	Directive of public participation (2003/35/EC)	30
Air quality	Frame Directive for environmental air quality (96/62/EC)	59
	Directive for value limits of SO ₂ , NO ₂ , NO _x , particulate matter) and Pb in environmental air (99/30/EC)	41
	Directive for bensen and carbon monoxide (2000/69EC)	41
	Directive for ozone (2002/3/EC)	52
	Directive for arsenic ,Cadmium ,mercury,nickel and polycyclic aromatic hydrcarbones in environmental air (2004/107/EC)	20
Waste management	Directive for waste (2006/12/EC)	91
	Directive for hazardous waste (91/689/EC)	47
	Directive for packagings as waste (94/62/EC)	55
	Directive for dumping sites (99/31/EC)	58
	Directive for waste incineration (2000/76/EC)	43
Water quality	Frame directive for waters (2000/60/EC)	25
	Directive for urban contaminated waters (91/271/EEC)	15
	Directive for potable water (98/83/EC)	35
	Directive for nitrates (91/676/EEC)	16
Protection of nature	Directive for wild birds (79/409/EEC)	64
	Directive for habitats (92/43/EC)	75
Control of industrial contamination	Directive for integrated control of contamination (96/61/EC)	18
	Directive for plants of large burniungs (2001/80/EC)	36
Chemicals	Directive for hazardous substances (67/548/EEC)	53

Table 60. The monitoring results of the progress made in harmonization of the environmental legislation with the EU⁷¹

⁷¹ European commission, DG ENV, Progress Monitoring Report, Year 10 -2007. June 2007



Financial funds for environment

Since 1999, until, December 2007, for environmental issues in Kosovo, including here: Capital outlays (constructions), maintenance, trainings and other issues, were two kinds of investments:

1. Investments from Kosovo Consolidated Budget /and
2. Donations (UNEP, GTZ, BGS, AER, WB, KfW and Swiss office)

From kosovo's Consolidated Budget ,respectively Ministry of Environment and Spatial Planning have been invested in total of **1031699.00€**, whereas from donors have been invested in different fields ,in total of. Xxxxxx

1999 / 2008 Amount in millions				
Donnor	Training	Construction	Maintenance	Total €
UNEP	0.001	0.00	0.00	0.001
GTZ	0.000	0.00	0.00	0.000
BGS	0.000	0.00	0.00	0.001
AER	17.200	78.25		95.450
WB		10.50		10.500
KfW 2000-2006		96.85		96.850
SO	0.007	24.70	1.80	26.507
Total	17.207	210.30	227.51	229.309

Table 61. Investments by donors in environmental issues.

Clarification

BGS	: British Geological Survey
UNEP	: United Nations Environment Programme
GTZ	: German Organization for Development
EAR	: European Agency for development
WB	: World Bank
KfW	: German Development Bank
SO	: Swiss Office



Educational programmes in the field of environment protection

Environmental education is not only a simple human right, but it is a precondition for sustainable development of a society. It is a main mean for a good practice of natural resources. Environmental education is a permanent and continuous process starting from the early childhood, until to education of adult generations. Unfortunately, environmental education in our country has not achieved the satisfied level and still is considered as secondary in a process of education.

Educational plans and programmes in a different levels of tuition, does not include in appropriate mass, environmental content and sustainable development.

Within the educational plans and programmes for primary schools, the concept of environmental education is transmitted through other subjects as are : Nature and society ,Biology ,Chemistry ,Geography etc . In a recent years in the schooling plans and programmes in a most of primary schools and high schools is included the subject of Environment Protection as selective subject .However the environmental education in a primary education is insufficient and deficient.

In a small number of primary schools and high schools have environmental organized groups, dealing with different activities in the field of environment protection.

As activities in the field of environmental education which MESP ,together with MESThas organized in primary schools are : keeping of lessons environment education ,organization of environmental seminars with teachers ,organization of awareness environmental campaigns ,exhibition with environmental content ,and other activities as well ..

In the plans and programs of postgraduate in Prishtina Public University ,since 1999 until nowadays ,evidently has been increased the number of study programs in the field of environment protection and its management ,including here the subject of environment protection within certain departments, also for opening of new departments for environment protection. Plans and programs for environment protection and its management have been included in the department of Biology, of FMNS, whereas in master studies are included within the department of Geography, Chemistry, and biology of FMNS and in the Faculty of Mines and Minerals. The subject of environment protection as selective subject ,except in the most departments of Faculty of Mathematics and natural Science is included in the plans and programs in the most of the departments of Technical Faculty ,whereas the subject of Sustainable development is included within the Faculty of Economy. (www.uni-pr.edu, Review 2005-2006)

Differently from Public University ,the Private Universities ,except the University for Business and Technology where its included the Department of Energy and Environment and Riinvest University ,where is included the department management of Sources and Sustainable Development ,in other Universities there are no departments of environment protection and its management . In some of these Universities there are only subjects from the field of environment protection.



An important step for incorporation of the plans and programs and increasing the quality of studies in the field of environment protection are two memorandums of cooperation ,between the MESP and FMNS ia scope of which is to promote the joint efforts of these two institutions in protection and advancing of environmental issues ,and the Memorandum of cooperation between MESP ,MEST and PU ,objective of which is to support post graduated studies in the field of environment ,drafting of scientific and professional projects and finding donations to finance the projects and needful equipments in this field.

(www.ks-gov.net/mmph, www.ks-gov.net/masht)

Beside this the level of incorporation of environment protection and management in the plans and programs of the basic studies and postgraduate studies and the quality of these plans and programs still does not satisfy the the needs and requirements to face great environmental problems that Kosovo has.

Information and Participation of Public

Information and participation of public are seen from MESP as advantage of the policies of environment protection. Engagements in this period are realized within the requirements Aarhus convention, as most important international document to guarantee the active participation of public in environment protection. These requirements are included in the Article 5 of point (1) and (m) of the Law for Environment Protection 2003/9.

Information and public participatioin are necessary to resolve environmental problems.

Public is an information source for environmental situation, he plays an important role in resolving of these problems, influencing at local authorities for implementation of the rules and improvement of environment quality.

Public ,through different commissions delivers its opinion to institutions about the determination of advantages ,in this way contributing in actions which will be undertaken to improve the situation in environment. Also participation of public, gives to the citizens precise and complete informations for environmental problem, existing in their area.

MESP is transparent to public, conducts and inspects complains for environmental problems. Aplicates different forms of cooperation as partnership in drafting of the legislation (strategy,action plan laws and regulations regarding to environment), partnership in projecting and implementation of the environmental campaigns ,organized on occasion of environmental public holidays. It worths to be mentioned the Campaign "Kosovo my home "etc.Also offers seminars, round tables and other meetings for environmental problems.

Public information is realized mainly through giving informations to electronic media and press, regarding to the activities of MESP, by celebrating environmental holidays, as well as with the progress of the different environmental projects. Also is prepeared a considerable number of posters and leaflets for environmental awarness, which are distributed to a considerable number of non governmental organizations, in some primary and high schools and in a public in some of Kosovo's towns etc.



Environmental Non -Governmental Organizations

The reliable historic environmental movement has its roots before the conflict in Kosovo where has been established Kosovo's Green Movement .During this period of time .During this period of time have been organized some small and sporadic activities form Kosovo's Group of Ecologists. But for reliable development of environmental civil society can be discussed only after the 1999 when starts the foundation of the first environmental NGO-s .The major aflux of the foundation of environmental NGO-s was during the period of 2000-2002, whereas after this period was a regress of the number of NGO-s as a reason of funds for financing of these NGO-s

Important development in a field of civil society may be considered the foundation of environmental NGO-s network Sharri Net⁷² in 2002. Another step of environmental NGO-s strengthening was the foundation of the first environmental NGO-s coalition "Coalition for Aarhusin", which gave a great contribution to include the principles of Aarhus Convention in the Law for environment Protection 2003/9.

Main source of funding of environmental NGO-s are grants, directly from international organizations acting in Kosovo. From these donors we shall mention: European Agency for Reconstructioun, SIDA, The Government of Netherkand, UNEP etc. In a recent years to the list of donor for environmentalk NGO-s have been added, World Bank, Kosovo's foundation for open Society etc. Grants for environmental projects are managed, mainly by REC, Office in Kosovo. Most of the grants have been from 2,500-10,000 so far, but we have had cases up to 25,000 EUR.

There is no direct funding by the Ministry of environment and Spatial Planning, but there are cases when MESP has supported NGO-s through cooperation in different environmental projects.

According to the last assessments, made in 2006 in Kosovo are active 30 registered environmental NGO-s wwhich is the duplicate number of, comparing to first registration in 2001. The major number of active environmental NGO-s is in Prishtina (6), Pejë (5) and Mitrovica (3) etc. On the base of the details from this research in a half Kosovo municipalities there are no environmental NGO-s, registered.

Within thse NGO-s are around 956 employees, compar5ing to 326 which were in 2001. Until the number of NGO members is falling the number of engaged volunteers in environmental NGO-s was increased ,which may be as a result of more careful definition of the role of membership in these environmenmtal organizations . NIf we do refer to budget, operated by environmental NGO-s, Kosovo is ranked among the countries with lowest total budget in Southeast Europe (EUR 382,500).

In the fields of the activities with priority of environmentalk NGO-s are ranked: environmental education, Protection of nature, sustainable development, waste management, ecotourism, problems of water consumption etc..

Meanwhile the most developed activites in environmental projects of NGO-s are: awarness environmental campaign, education and distribution of informations for environment.

⁷² www.sharri.net



There has not been seen any activity of the civil society NGO-s in a field of climatic changes, which actually is considered as most serious problem of humanity in global level.

The majority of NGO-s are faced with similar problems and difficulties, as are: Lack of the funds for environment, small and unprofessional staff, lack of the conditions and equipments for action, unclear profilization etc.

Whereas from analyse of NGO needs ,it shall be mentioned need for trainings and organization and sustainability of Environmental Non Governmental organizations and increasing chances for resources in development of environmental projects.

Environmental Institutions in Kosovo

The first steps of environment and nature protection in Kosovo begin at the end of 60- ties ,though initiatives for legal protection of nature values were earlier as well. In 1968 has been found the first unit protection of nature within Institute for Protection of Cultural Monuments of Kosovo.

By a decision for division of the Section of nature protection from Kosovo's Institute for Protection of Cultural Monuments, it has been founded Kosovo's Institute for Nature protection and continued its work with same name on the base of the Law for Kosovo's Institute for Protection of Nature⁷³.

Whereas in 1988 Kosovo's Assambley ,issues the **Law for Protection and Development of Natural Values and values created by work in the environment**⁷⁴ ,where in Article 78,Paragraph 2 of this Law is defined the activity of the Institute . On the base of this **Law, one year later Kosovo's Assambley, approves the Law for Kosovo's Institute of environment and Natural Protection**⁷⁵ .

By creation of new governing circumstances, after the conflict in Kosovo and on the base of 1999/1 "Regulation ,all executive and legislative power is under UNMIK"

In 2000 the former Kosovo's institute for Protection of Environment and Nature is registered in provisional civil Administration of the United Nations with name "**Kosovo's Instiute for Protection of Nature and Environment** " ,with residence in Prishtina.⁷⁶ In May 2000 was founded Department for environment Protection and within this are incorporated and act existing Institutions as well: Kosovo's Institute for environment and Nature Protection, Kosovo's Hydrometeorological Institute and Directorate of national Park of "Malet e Sharrit".

After the first general elections, recognized internationally, of 2001 were build Provisional Institutions of Self Government, as are::

Kosovo's Assambley as highest legislative body in Kosovo ,consisted by 120 Parliamentarians ,Within the Assambley is established a functional commission for Environment and Spatial Planning ,initially by 11 members ,which in 2005 was fusioned in to the other Commission for Agriculture,forestry and rural Development with 15 memebres.

The Government of Kosovo, consisted by 14 Ministries, which the Ministry of Environment and Spatial Planning is one of them.

⁷³ Law for foundation of Provincial Institute for Protection of nature ("OGK" 15/81)

⁷⁴ Law for protection and development of the natural values ,created by work in human environment ("OGK"39/88)

⁷⁵ Law for kosovo's Institute for Protection of environment and Nature ("OGK" nr.38/89)

⁷⁶ The Provisional number of register of business operator 80156359, date 14.08.00 with name "Kosovo's Institute for Protection of Nature and Environment"



Ministry of Environment and Spatial Planning

Ministry of Environment and Spatial Planning (MESP) is responsible for producing of “policies implement laws and supervise activities for environment protection, including here water resources, air, land and biodiversity”.

Also, MESP inits field of activity sets norms and standards and as well as supervises their implementation ,monitors and ascertains factic situation ,manages utilization of infrastructure ,promotes educational environmental campaigns ,and awarness of population about environment ,and promotion of pure technologies.

Other Ministries by which is directly linked the work in the field of Environment are: :

Ministry of Health -Contamination impact in the populations’ health;

Ministry of Trade and Industry - Industrial contamination;

Ministry of Economy and Finance - financial implications in reduction of contamination;

Ministry of Public Services -Utilities

Ministry of Agriculture, Forestry and Rural Development -forestry, agriculture, irrigation

Ministry of Transport and Post Telecommunication- contamination assessment from movable sources.

Ministry of Energy and Mine - Limitation of the contamination by KEK, and fuel points.

Kosovo’s Agency for Environment Protection

KAEP is founded in 2003, after the approval of the Law for Environment Protection by Kosovo’s Assambly .On the base of the Law for Environment Protection 2003/9, within the Agency are: Kosovo’s Institute for Nature Protection (INP), and Kosovo’s Hydrometeorological Instittue (KHI).⁷⁷.

Tasks of the Agency (Article 39,point 2 and 3),its devotion is on overall monitoring of environment and on the base of this monitoring ,information of public ,information of l;ocal and international Institutions about the environment situation in Kosovo ,as well as scientific and research projects in the field of environment.

EnvIRONMENTAL Inspectorate

Envbironmental Inspectorate is an Institution which takes care about full implementation of approved environmental legislation .Its function within MESP, mainly carries out in the field.

UNMIK Institutions

Kosovo Trust Agency ⁷⁸

Also, The Ministrie’s work is connected Kosovo Trust Agency, mainly in regard to Public Companies, especially about natural resources and their exploitation.

Waste and Water Regulatory Office -(WWRO) ,functions under the IV (fourth) Pillar of UNMIK .

Local level of governing

Unicipality officers report to municipality structures, whereas in the central level they contact through regional coordinators of the Ministry, in 5 regional centers. Only one municipality in Kosovo has extra Directorate for Environment and spatial planning, in other 25 are founded environmental sectors within different directorates, whereas in one

⁷⁷ Byapproval of hydrometeorological Law by Kosovo Assambley KIHIM is out side of the KAEP structure

⁷⁸ Unmik regulation 2002/12 ,on foundation of Kosovo Trust Agency



municipality this sector is not founded at all .Only one municipality has extra regulation for environment ,in 15 others are implemented other regulations ,while in 11 others are no such regulation ⁷⁹

Professional Institutions - Other existing institutions which the work is closely related to environment protection are:

Kosovo Institute of Public Health - is related to health of population and specially monitoring of potablke water quality. ⁸⁰.

INKOS Institute, - Within the Institute is, Institute **for Environment Protection** in charge for protection of environment in KEK.

⁷⁹ Questionnaire about environmental situation in Kosovo's municipalities, MESP 2002

⁸⁰ UNMIK /JIAS IA 2/99 on testing and implementation of minimum standards of the potable water quality.



RECOMANDATIONS

Socio Economic Aspects

- Drafting of policies about sustainable exploitation of natural resources;
- Finalization of national spatial plan;
- Drafting of regulative plans and urban plans;
- Prohibition of illegal constructions;
- Development of infrastructure ,respecting the trends of populations migrations;
- Protection of land areas.

Energetics

- Promotion of the exploitation of renewable sources for production of electrical energy;
- Promotion and empowering of energetical efficacy;
- Preventing losses of electrical energy;
- Respection of environmental criteria and standards in a process of building new energetical capacities;
- Drafting of programs for reduction of contamination;
- Respection of the principle on use of “the best technology available”;
- Inspection and identification of environmental problems of the existing production capacities of electrical energy;
- Improvement of monitoring of emissions in environment from the existing production energetical capacities.

Industry

- Full control of environmental licensing;
- IPPC Implementation;
- Inspection ,control and prohibition of the illegal activities;
- Control and prevention of the damages in environment ,caused by stonebreakers and rehabilitation of areas;
- Promotion of sustainable exploitation of natural resources;
- Building of monitoring systems for a certain industries;
- Application of pure technologies;
- Installation of water treating plants, discharged by industrial activities.

Agriculture

- Protection of agricultural lands;
- Promotion of organic agriculture;
- Promotion of ecological products;
- Quality control of products;
- Building of monitoring and inspection systems on use of pesticides;
- Building of monitoring and inspection systems on use of fertilizers.



Forestry

- Prohibition of uncontrolled exploitation of forestry resources
- Prohibition of illegal cuttings;
- Finding alternatives for heating and avoiding use of wood;
- Promotion of sustainable exploitation of forestry resources;
- Taking measures for fire protection;
- Afforestations.

Transport

- Drafting a strategy to reduce the contamination from traffic;
- Improvement of road infrastructure;
- Construction of transit roads and avoidance from urban localities;
- Promotion of alternative public transport (tram, train etc).

Chemicals

- Drafting of the strategy for managing of chemicals;
- Empowering legal base ,procedures and instructions for managing of chemicals;
- Building a system for managing of chemicals;
- Building a system for registration ,assessment and authorization of chemicals;
- Drafting of procedures for supervision of interboundary transport of chemicals and data exchange;
- Drafting of programs for monitoring of sustainable organic contaminants (POPs).

Air

- Drafting and implementation of of programs as are mentioned in the law for air protection;
- Instalation of integrated network of air monitoring;
- Implementation of monitoring of emissions in air by static sources;
- Implementation of advanced mechanisms to conduct air status ;
- Implementation of advanced software models for assessment of air status;
- Control and measures undertsking in regard to exceeds of limit values of emissions;
- Drafting and implementation of programs ,related to climatic changes ,serre gases ,and precursors of the damage of ozone;

Waters



- Promotion of sustainable exploitation of water resources;
- Avoiding technical losses of water;
- Building of the new plants for treatment of sewage;
- Involvement of the population in organized water systems;
- Involvement of population in organized drainage systems;
- Strengthening of monitoring system of ground and superficial waters;
- Strengthening of monitoring system of potable water;
- Construction of new water accumulations.

Land (Soil)

- Instalment of integrated network of soil monitoring;
- Drafting of the legal base for soil protection;
- Identification of contaminated areas and drafting programs for rehabilitation;
- Monitoring of erosion.

Biodiversity and protected areas

- Expansion of protected areas (zones);
- Drafting of managing plans for protected areas;
- Complete inventarization of flora and fauna and drafting of the red list of the species;
- Definition and demarcation of the protected areas;
- Complete Map-making of protected areas.

Waste

- Drafting of strategic plan for waste managing;
- Empowering of waste managing institutions;
- Definition of competencies and responsibilities;
- Completion of legal base for waste managing;
- Promotion of waste recycling;
- Awareness of the population about the waste disposal in adequate places and fulfillment of the obligations to service companies;
- Strengthening of local institutions about waste managing;
- Prohibition of illegal disposal of the waste and waste fields;
- Drafting of the programs to reduce the risk from waste;
- Strengthening of managing companies of the dumping sites.



A SHORT SUMMARY OF THE REPORT IN FACTS AND FIGURES

Air and climatic changes

- In Kosovo's territory (Prishtinë, Mitrovicë, and Obiliq) during the period of 2004-2007, in some cases has been noticed the exceed of maximal permitted values of smoke black, dust and SO₂.
- Only through KEK, Kosovo contributes in a global warming with around of 5.5 milion tons of CO₂ within one year. It has bee assessed that the same quantity of CO₂ is released, within one year from traffic and other sources.

Water

- 70 % of Kosovo's population ,is supplied with potable water by public water system;
- Around 92 % of population in cities drink chlored water;
- Around 60 % of rural population are supplied by wells ,where only 1.2 % of them are treated by chlor r;
- Around 30 % of the population has acces in sewage (drainage) system.

Waste

- As around 90 % of urban population is covered by organized waste collection, the population in rural areas is covered only 10 %.
- Avarage quantity of waste production in Kosovo is around 2 kg./per person ,daily.

Forestry and Biodiversity

- Only ,during 2007 around 6.682 ha of the Kosovo's forests have been under the fire (The value of the lost wood mass in exchange in euro is 2.942.338).
- From the illegal cuttings of the forests Kosovo loses on average 10. 471 m³ of wood per year. Around 222.000 m³ of technical wood and fire wood is exploited by both sectors, annually. Meantime the natural growth of the wood mass of Kosovo forests is 116.500 m³/per year, whereas the annual average afforestations in Kosovo are ,around 240 ha.
- In the period of time 2004-2007 in Kosovo is increased the number of protected areas (over 20 new areas), but at the same time is increased the impact in these areas. (Constructions in Mirushë, touristic village in Prevallë etc).

Agriculture

- As the density of residence in Kosovo is around 204 habitants per /km², the agricultural land area per person is only around 0.15-0.18 ha of land, which the smallest comparing to EU average (0.52 ha/habitants).



- It has been estimated that hundreded ha of agricultural land are converted in to a construction land per year.
- On average, around 4 milion and e 800 hundreded thousand kilograms of pesticides are used per year in Kosovo, and still there is no monitoring program odf use of pesticides and fertilizers.

Energy

- Comparing to 2004 the consumption of overall energy in Kosovo is increased for 18 %;
- In Overall energy consumption (2003-2006) the oil and oil products are the main contributors with around 60%, electrical energy with 25,87 %, wood with 20 %, coal with 2,67 %, central heating with around 1% and solar energy with 0.1 %;
- Even that it has been estimnated that Kosovo has a potential to produce electrical energy from alternative sources of energy, only 2 % of electrical energy is produced from these sources, whereas 98 %of electrical energy is produced by coal.

Transport

- Kosovo has around 200 thousand registered vehicles;
- On average ,annually are registered around 17 thousand of new vehicles;
- In a period of time 2005-2006, the number of flights from Prishtina international Airport has achieved around 5000 flights per year. (A simple illustration: an airplane of Boeing 707 for 8 hours flight consumes the quantity of oxygen, producing around 25 thousand ha of forests).

Public health

- The number of cases of infective disease and epidemics in Kosovo is still in a high rate .Only with acute diahrrrea, during 2005 has been around 40 thousand of cases, whereas during 2006, around 43 thousand. The number of cases with pneumonia, during period of time 2005-2006 has been around 17 thousand. Around 100 cases annually are registered with Tularemia, whereas more than 1000 cases with TBC;
- Only in UCC ,in 2005 are registered over than 3000 cases of the respiratory system disease, ,whereas in 2006 ,around 3 thgousand and 500 hundreded .Also in 2005 are recorded over than 2150 cases of infective and parasitic disease ,whereas in 2006 around 2540 cases .This indicates that cases of disease which are related with environmental problems are rising;
- Kosovo has the highest level of the mortality of the newborn in Europe, with around 19 ‰, where 63 % of these deaths are as a reason of infective disease.

Civil Society

- For distinction, in Kosovo since 2002-2006, is duplicated the number of environmental NGO-s but donations for environment are reduced. In around 50 % of the Kosovo's municipalities there is not any oactive environmental



NGO .Most of the NGO-s are characterized with small staff and unprofessional as a lack of conditions and equipments for action and unclear profilization etc.

Environmental Education

- Contrary to the fact that the level of the involvement of environment protection in the educative plans and programs in a primary and high schools ,as well as in basic studies and those postgraduate has been increased evidently .number of these plans and programs does not satisfy needs and requirements facing large environmental problems which Kosovo has.

The main enbvironmental problems which are identified from the report about the situation in environment

Legal vacuums:

- Lack of basic laws as are : Law for Assesment of impact in environment ,Law for strategic assessment in environment ,IPPC Law etc ;
- Partially approach of our laws with EU directives;
- Lack of the strategy formonitoring of environment ,biodiversity strategy ,lack of action plans for basic environmental problems;
- Unclear definition of competencies of institutions, according to the Law etc.

Managing of Environment

- The small number of environmental managing institutions;
- Lack of the managing plans for protected areas (zones);
- Unsatisfied implementation of the existing laws;
- Disrespectation of the law by environmental managing institutions;
- Unclear definition of the competencies of environmental managing bodies;
- Centralization of environmental managing.

Lack of funds

- The small number of the projects in the field of environment protection;
- The limited budget for environment;
- The lack of ecofund and other environmental funds;
- Inefective management of the existing funds;
- The lack of mechanisms to absorb international funds etc.

Monitoring of environment

- The lack of water monitoring system (partially monitoring);
- The lack of integrated system of air monitoring;
- The lack of monitoring system of soil;



- The lack of Corinair Softwares ;
- The lack of mobile monitoring laboratories etc .

Managing with waste

- The report identifies that the situation in Kosovo;s dumping sites is not good;
- The large number of the wild duming sites;
- The lack of effective mechanisms for collection and selection of waste;
- The lack of waste recyclation;
- Low payment for services of waste collection.

The lack of data

- There is no data base for water,air,soil,oils and other industrial wasteetc ;
- The lack of EPR record books;
- The lack of data of certain environmental issues.

Exploitation of natural resources

- Uncontrolled exploitation of inerts from the river beds;
- The large number of stonebreakers;
- Illegal wood cutting;
- Exploitation of water resources without any criteria;
- Unsustainable exploitation of mineral resources;
- The lack of initiatives and projects for exploitation of renewable resources.

Utilization of area

- Change of destination of land utilization;
- Expansion of localities;
- Expansion of road traffic;
- Creation of new industrial zones;
- The fragmentation of parcels etc.

Cooperation with public

- The small number of information booklets;
- Disinclusion of the public in decisiontaking;
- Small Inclusion of the public in debates for environmental issues;
- The lack of environmental information centers;
- The lack of information offices in protected areas.

Other problems:

- The lack of the plants for treatment of sewage;
- The lack of experts for certain environmental fields;



- Insufficient cooperation between institutions ;
- The lack of scientific researches in the field of environment;
- The lack of qualitative environmental programs in Kosovo's educational institutions etc.

