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Ministry of Environment and Spatial Planning

REVISING and UPDATING the

KOSOVO ENVIRONMENTAL STRATEGY
(KES)

and

NATIONAL ENVIRONMENTAL ACTION PLAN (NEAP)

2011- 2015

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I. KOSOVO ENVIRONMENTAL STRATEGY (KES)

2011-2015

DRAFT (2)

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LIST OF ABBREVIATIONS

BAT	Best Available Technologies
DoE	Directorate of Environment (MESP)
DPSIR	Driving forces, Pressures, State, Impacts and Responses (methodology integrated environmental assessment and reporting)
EAR	European Agency for Reconstruction
ECLO	European Commission Liaison Office for Kosovo
EEA	European Environmental Agency
EHCIP	Environmental Heavy Cost Investment Project
EIA	Environmental Impact Assessment
EIONET	European Environment Information and Observation Network
EIS	Environmental Information System
EMEP	European Monitoring and Evaluation Programme
EMS	Environmental Management System
EUR	Euro currency
GEF	Global Environment Fund
GHS	Globally Harmonised System
GMO	Genetically Modified Organism
IAEA	International Atomic Energy Agency
IBA	Important Bird Areas programme
IHMK	Hydro-meteorological Institute, Kosovo
IKSHP	National Health Institute, Kosovo
IPA	Instrument for Pre-Accession (to the EU)
IPCC	Intergovernmental Panel on Climate Change
IPPC	Integrated Pollution Prevention and Control
IUCN	International Union for Conservation of Nature
KEAP	Kosovo Environmental Action Plan (2004-2010)
KEPA	Kosovo Environmental Protection Agency
KEK	Kosovo Electricity Company
KES	Kosovo Environmental Strategy
KFOR	Kosovo Force, NATO
LEAP	Local Environmental Action Plan
LRTAP	Long Range and Transboundary Air Pollution and its Protocols (1979)
MAFRD	Ministry of Agriculture, Forestry and Rural Development
MoF	Ministry of Finance
MEM	Ministry of Energy and Mines
MESP	Ministry of Environment and Spatial Planning
MLGA	Ministry of Local Government Administration
MLV	Maximum Limit Values
NEAP	National Environmental Action Plan
NGO	Non Government Organisation
PPP	Public Private Partnership
PSP	Private Sector Participation
R&D	Research & Development
RENA	Regional Environmental Network for Accession
SAP	Stabilisation and Association
SEA	Strategic Environmental Assessment
SIDA	Swedish International Development Agency
SoE	State of Environment (report)
TKE	Thermal Power Plant Limit Values (Athens Agreement)
UN	United Nations
UNEPIE	UN Environmental Protection Programme (industry and environment)
UNDP	UN Development Programme
UNFCCC	UN Framework Convention on Climate Change
UNMIK	UN Mission in Kosovo
VOC	Volatile Organic Compounds
WHO	World Health Organisation
WWTP	Wastewater Treatment Plant

VISION

Our right is to pursue development in a clean and safe environment

And our responsibilities are to make sure we keep it that way

CHAPTER I

This Chapter provides a general introduction to the development of the Kosovo Environmental Strategy (KES, 2011-2015). It gives an overview about the state of the environment in Kosovo and then goes on to detail how the KES has been prepared with goals, objectives, methodology and priorities. This is followed by a description of the legislative and executive institutions which will be responsible for approving and implementing the KES through the National Environmental Action Plan (NEAP, 2011-2015) which is presented as a separate document.

1. FORWARD

This Kosovo Environmental Strategy (KES, 2011-2015) should be considered as part of the long term development strategy of the country. Both social and economic development can only go hand-in-hand with a healthy and sound environment¹. For a new country like the Republic of Kosovo, it is crucial.

Indeed, the KES represents an important step forward whereby for the first time, these environmental issues can be developed, planned and managed as a long term concept. This is also clearly defined in the Constitution, Chapter II–*Fundamental Rights and Freedoms, Article 52* which states:

1. Nature and bio-diversity, the environment and national inheritance are everyone's responsibility.
2. Everybody should be provided an opportunity to be heard by public institutions and have their opinions considered on issues that impact upon the environment in which they live.
3. Environmental impacts will be taken into consideration by public institutions during their decision-making process.

The Ministry of Environment and Spatial Planning (MESP) is responsible for drafting the KES and the legal framework is defined in the Law on Environmental Protection, Nr.03/L-025 with Articles 20 and 21. This states that the KES must be made for a 10 year period and periodically revised and updated to take account of the changing circumstances as a result of new social, economic and political developments. These are systematically addressed in this KES (2011-2015) which uses the previous KES (2005-2015) as a guide.

The KES (2011-2015) therefore aims to provide answers to the present and future needs of Kosovo society and specifically addresses the environmental management obligations at national and international level. It is a document which sets out objectives and priorities which should be implemented through the National Environmental Action Plan (NEAP) 2011-2015.

The drafting of the KES (2011-2015) is a result of co-operation between MESP and other relevant Government agencies, scientific institutions, NGOs', experts and stakeholders. It started with the formation of Working Groups for each environmental sector and continued through meetings and workshops. This combined effort enabled a common approach to assessing the existing state of the environment and putting forward objectives and priorities. When the draft was completed, additional public meetings were organised to ensure further public and stakeholder participation in the decision-making. Their comments and suggestions are included in the final draft.

¹ Indicators of Sustainable Development: Guidelines and Methodologies. 2001. New York, United Nations Commission on Sustainable Development.

Grateful thanks are to be extended to all those involved in this process. In addition, valuable assistance was provided by SIDA and their continued financial and technical support for the future of environmental protection in the Republic of Kosovo is much appreciated.

2. INTRODUCTION

'It is our right to pursue development in a clean, safe environment...and our responsibility to make sure it stays that way'. This is the Vision of the KES (2011-2015). This impacts not only upon the general socio-economic development of the country, but also upon the well being of all its citizens. Although significant advances have been made in recent years with regards to capacity building and the harmonisation of legislation with EU standards, nevertheless, implementation of the legislation is still accompanied by various difficulties and remains at an unsatisfactory level.

This KES (2011-2015) tries to improve the current situation. It can thus be seen as a strategy that must be harmonised with the social and economic demands but also well aware that as more pressures are placed upon the natural resources and environment, it means that measures to protect these resources – such as for air, water, soil, cultural heritage and so forth, are even more important for future generations. And this is the responsibility of all citizens. Under such a premise, this strategy recommends an integration of environmental management and protection into all sectors in Kosovo.

It should also be noted that Kosovo is not a direct signatory to any conventions, protocols or other international environmental agreements. As a consequence, the Government is not able to co-operate as an equal partner at multi-lateral, regional, sub-regional or bilateral level. This hampers achieving sustainable development and particularly when attempts are made to attract international technical and financial assistance.

Despite this, Kosovo must endeavour to incorporate and apply international standards, particularly those of the EU. Within this framework, the Vth and VIth Action Programme² have special importance and they focus upon five main objectives:

- Formulation of a strategy for priority sectors (climate change, acidification, bio-diversity, water, urban planning and waste);
- Action on priority sectors in which environmental protection measures are integrated;
- Increase in the number and dissemination of all types of instruments contributing to a decrease in environmental impacts;
- Full information, transparent access and development of the concept of divided responsibility;
- Emphasis upon the international dimension for environmental protection.

Given the difficult economic situation in Kosovo, having different institutions under development and with incomplete data on the current state of the environment, meeting these main objectives requires the comprehensive engagement of all sectors in Kosovo society.

The KES (2011-2015) also aims to answer the question *what should be done to realise the expected goals?* And furthermore, the NEAP will develop the strategy and provide answers to additional questions such as *how can this be realised, with what, and when?* In this sense, it is indispensable to co-operate and learn from the good experiences and practices from other countries in a similar state of transition as Kosovo.

² Incorporating Decision No 2179/98/EC 'Towards sustainability' and Environmental Action Plans 2002-2012
Revising and Updating the KES (2011-2015)

As a final note, the measures foreseen in this strategy will be prioritised by taking into account the impact cost on human health, legal obligations and commitments on approximation with EU legislation based upon sustainable development principles.

3. GENERAL STATE OF THE ENVIRONMENT

The principal features of Kosovo society are characterised by the following³:

- Relatively high population density (202 inhabitants per km²);
- High unemployment rate (over 40%);
- High poverty level (about 56% live in poverty and 15% in extreme poverty as defined by World bank indices);
- Low level of economic development;
- Slow integration process of Kosovo society at regional and EU level;
- Lack of personnel with specific environmental qualifications;
- Low rate of industrial production in both the public and private sectors;
- Frequent breaks in energy supply (electricity) to meet the demands of household and industry;
- Crises in the agricultural sector e.g. loss of agricultural land to construction, poor environmental conditions prevent certification of products;
- Poor transport infrastructure;
- Critical environmental problems inherited from historical industrial activities.

4. KEY INDICATORS FOR SUCCESS OF THE KES (2011-2015)

Implementation of the KES will bring benefits to multiple sectors:

- Cleaner and safer environment;
- Protection and sustainable use of natural resources;
- Preservation of natural and cultural heritage;
- Increased standard of living for all citizens;
- Integration into the EU;
- Increased competitiveness in the economic sector;
- Application of modern technologies bringing more job creation, income generation and poverty reduction;
- Supporting ecological and environmentally friendly production and products.

The success of the KES also depends upon exploiting the positive development aspects to their full potential and taking advantage of the following:

- Relatively large number of educated youth;
- Ample natural resources;
- High professional standard and well educated Government officers;
- High acceptance of new ideas and experiences by society;
- Large market for a relatively cheap labour force.

When setting the environmental priorities, potential weaknesses that may hamper successful implementation should also be taken into account. These include:

- Lack of administrative experience in public institutions as well as a lack of tradition in spatial planning;
- Inability to absorb international funds (e.g. GEF);

³ as also detailed in the SoE Report, 2010 KEPA, MESP

- Low level of economic development and lack of long-term vision for tackling poverty;
- High density of population in urban areas;
- Lack of economic instruments to support and encourage environmental protection;
- Limited public attitude towards pollution prevention and environmental protection;
- Outdated technologies and equipment used by industry;
- Modest municipal infrastructure.

The challenge for the authorities is thus to mitigate these weaknesses. It must also be mentioned that there are risks from not implementing the KES which are considered even more dire. These would include:

- Uncontrolled increase in pollution and worsening health of the population;
- Continued irrational use of the natural resources and in some cases, permanent loss for some resources (e.g. forest, soil, bio-diversity);
- Irreparable damage to the natural and cultural heritage in Kosovo;
- Loss of income generation activities, with subsequent higher unemployment levels and no redress for an increase in poverty levels;
- Lack of interest and involvement by the public in their local environment, leading to more trends for migration.

5. THE LEGAL BASIS FOR THE KES

The drafting of the KES is based upon the Law on Environmental Protection⁴. This stipulates that the strategy should include objectives and aims for environmental protection for a period of ten (10) years with the possibility of review every two (2) years. It states that the strategy should include:

- A description of the state of the environment;
- Strategic policies and priorities for rational use of the natural resources, including the time and surface location, quality and quantity and their replacement with renewable resources;
- Proposals for environmental protection and improving the present situation;
- Long and short-term measures to promote environmental protection and the prevention, reduction and control of environmental impacts;
- Conditions for improved production, applying BAT and economic as well as other measures regarding environmental protection combined with sustainable development
- Provisions for continuous revision and updating the strategy.

MESP drafts the KES in co-operation with other ministries, scientific institutions the public and other interested parties. It should be given for public consultation at least 45 days before it is sent to the Government in order for interested parties and/or individuals to give their opinions, suggestions and comments. These are taken into account for the drafting of the final document. The Ministry reports to the Government and the Assembly once (1) a year about its progress and implementation.

6. NATIONAL ENVIRONMENTAL ACTION PLAN (NEAP)

The drafting of the KES leads on to the NEAP. With the proposal from MESP, the NEAP is then approved by the Government for a period of five (5) years. The plan includes measures and activities for the improvement and protection of the environment and the tools for their implementation (this is presented as a separate document).

⁴ Law on Environmental Protection 03/L-025, Chapter III – Documents on Environmental Protection, Articles 20 and 21.
Revising and Updating the KES (2011-2015)

7. GOALS OF THE KES (2011-2015)

The environment today is a global concern and a common challenge faced by both rich and poor, developing and developed countries. From the international point of view, the long-term goals for the environmental sector are the following:

- a better quality of life for all citizens;
- sustainable economic, social and cultural development.

These principles guide the working groups, stakeholder workshops and formulation of the strategies and actions needed for implementation of the plan.

The importance of a global approach cannot be over emphasised. The measures and actions needed to realise these strategies are integrated into the development programmes of *all* international donor organisations (e.g. UN, EU, World Bank) as pre-requisites for further support to national economic projects.

8. OBJECTIVES OF THE KES (2011-2015)

8.1. Long-term objectives for environmental protection

The long-term objectives for Kosovo are the following:

- Reducing pollutant emissions including environmental degradation and damage, and minimising or prohibiting those economic activities that are dangerous for human health and the environment;
- Protection of bio-diversity and actions to preserve the general ecological balance within Kosovo;
- Rational and sustainable use of natural resources including agricultural land;
- Protection of valuable natural landscapes, such as national parks and monuments.

8.2. Short-term objectives

These include the following:

- Implementation of the existing legislation and, where necessary, harmonisation of other required legal acts to the EU acquis as soon as possible;
- Integration of environmental protection into all sectors so that it will be part of the overall policies and (sector development) programmes;
- To continue with integration with the EU environmental structures.

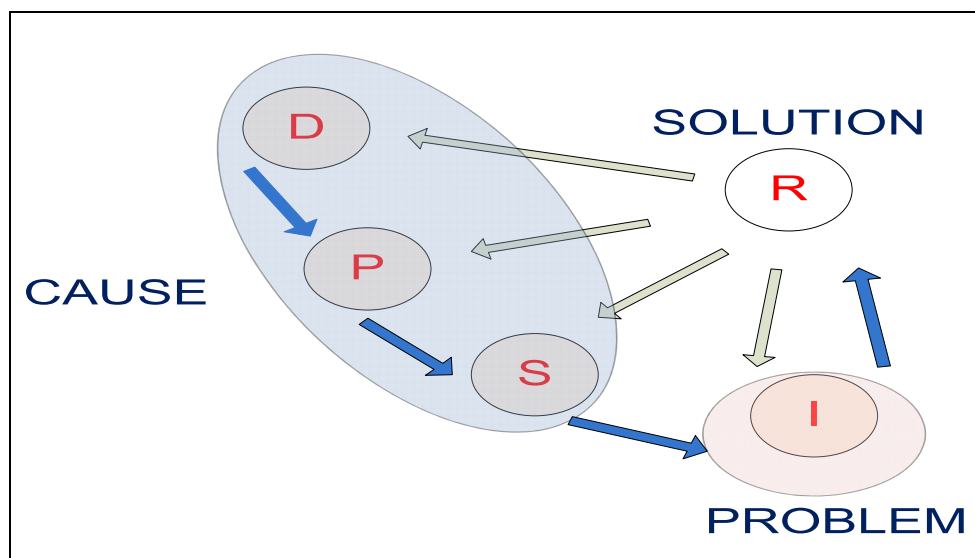
In summary, the overall objectives are to reduce pollution to levels which meet the EU acquis and international standards

9. METHODOLOGY FOR THE KES (2011-2015)

9.1. Integrated environmental assessment

The DPSIR framework⁵ has been adopted by the EEA⁶ as a method for integrated environmental assessment and its subsequent reporting. It is widely adopted by many agencies including the EEA's State of the Environment Reports and also by KEPA (SoE Report 2008-2009). This method is thus also used in preparing the KES. The framework presents indicators in a standardised form to assist policy makers in their decision-making.

According to the DPSIR framework there is a chain of causal links starting with 'driving forces' (such as economic sectors and human activities) through to 'pressures' (e.g. emissions, waste) to 'states' (e.g. physical, chemical and biological) and 'impacts' on ecosystems, human health and functions. These lead to political 'responses' (e.g. prioritisation, target setting, indicators). A scheme showing the causal effects and inter-relationships is given below:



Decision-making within the DPSIR framework

9.2. Key principles of the KES (2011-2015)

These are listed as follows:

1. Integration of environmental policies into sector policies

The strategy is a sector document. The process of drafting and the methodology used will enable the integration of environmental policies into all sector policies.

2. Partnership and sharing responsibilities

Advancing the KES objectives and their implementation is only possible through partnership. This means the whole population, interest groups, business community, central and local Government institutions and international community. Each of them should bear their respective responsibility.

⁵ Driving Forces, Pressures, State, Impacts and Response

⁶ European Environment Agency EEA, <http://www.eea.eu.int/>

3. Changing behaviour in production and consumption

The efficient development of environmental policies based upon the principles of sustainable development cannot be successful without changing the individual in their production and consumption behaviour.

4. Increasing the instruments available for implementation of activities

All available instruments, particularly those related to the integration into other sectors, should be applied for the implementation of environmental policies. The traditional instruments based upon administrative charges and the 'polluter pays principle' are insufficient. The leading role in this process is expected to be borne by those instruments based upon the Eco-Fund to support 'voluntary principles'.

5. Execution

Targets, strategic directions and the objectives of this KES should be realistic and applicable given the present stage of economic development in Kosovo.

6. Pragmatism

The strategy is based upon the actual situation and know-how about the general economic and environmental situation in Kosovo. It must take into account the real possibilities to realise positive changes.

7. Integration

Kosovo is focused towards EU integration. The sooner the process commences then the lower the real costs of accession. Albeit the unresolved political status, Kosovo is involved in the tracking process for Stabilisation and Association (SAP) to be a member of the EU.

8. Globalisation

Although Kosovo is neither a signatory nor has ratified any international convention, its political status should imply taking over its environmental responsibilities as defined by these conventions. Nevertheless, even in the current circumstances, the international guidelines are complied with in both environmental legislation and policies.

10. ENVIRONMENTAL PRIORITIES FOR KOSOVO

The general environmental priorities for the next five years are identified as:

- Completion of environmental legislation in harmony with the EU acquis;
- Gradual fulfilment of EU standards and efficient implementation of the existing legislation;
- Establishment and further development of competent institutions including capacity building and equipping with a 'tool box' and other instruments for the implementation of environmental policies.

The specific priorities can be listed as:

- The provision of financial and economic instruments (e.g. establishment of Eco-Fund) for environmental protection. These should go hand-in-hand with economic development;
- Establishment and functioning of an environmental monitoring network throughout Kosovo, with priority given to major industrial pollutants and 'hot spots';
- Gradual increase of access by the population to clean potable water, the sewage network and municipal waste disposal, with support for programmes for recycling wastewater and solid waste;
- Rational use of natural resources e.g. soil, water, minerals, forest. Special attention is needed in the use of limited resources and orientation towards renewables;
- Expansion of protected areas and further protection of natural heritage along with increasing the capacities for their efficient management in accordance with the Rio Declaration on Environment and Development (1992);

- Development of long term educational programmes, public awareness campaigns and support for environmentally focused scientific projects;
- Application of energy efficient concepts in all sectors of energy users.

11. LEGISLATIVE AND EXECUTIVE INSTITUTIONS IN KOSOVO

11.1. Assembly

The Assembly is the legislative body directly elected by the people. There are two important functions related to the environment namely:

- the Committee for Agriculture, Forestry, Rural Development, Environment and Spatial Planning;
- Advisory Board on Environment.

11.2. Government

The Government exercises executive power in accordance with the Constitution and the law. It proposes draft laws and amendments to existing laws and Acts, and may give its opinion on draft laws that are proposed by other bodies.

11.3. Ministry of Environment and Spatial Planning (MESP)

The Ministry's mandate is defined by Regulation No. 02/2011 for administrative responsibilities of the Office of the Prime Minister and other Ministries. It has the following responsibilities regarding environmental protection:

- Compiles and follows up the implementation of policies and programmes identifying and reducing environmental pollution;
- Participates in the development of strategic documents;
- Co-ordinates activities to promote policies;
- Sets environmental norms and standards and issues instructions meeting international standards;
- Oversees the implementation of these standards including inspection and other services as necessary;
- Manages the use and development of environmental infrastructure;
- Promotes community participation, initiatives and development activities;
- Develops policies, implements laws and supervises environmental protection activities, including water resources, air, soil and bio-diversity;
- Encourages and participates in developing and implementing public information campaigns and other promotional activities to raise public awareness and compliance with environmental protection standards;
- Supervises and assesses the state of the environment, particularly the impact of industrial activity, of public services and of economic activity;
- Develops policies for managing water resources and supervises their implementation.

11.4. Municipalities

The Municipalities enact local environmental action plans (LEAPs) and programmes for environmental protection in line with the KES and NEAP and according to their own specific interests. In designing LEAPs and programmes, the public, NGOs, professional organisations and business community are actively encouraged to participate. The Municipalities report to the Ministry about the implementation of these plans and programmes. To reduce the negative impacts upon the environment and in some cases to reduce costs, two or more Municipalities can jointly develop and adopt their plans and programmes.

11.5. Problem issues

After the war, the newly established institutions had priorities other than environmental protection, such as re-building a war-torn economy. Today, even though there is greater involvement at municipal level, and competences and responsibilities of municipal officials have been, and are being supported by various national and international interventions, there is still an urgent lack of funds for key environmental projects. Improvements/upgrading water supplies, wastewater treatment and municipal solid waste management are considered urgent priorities. These so-called environmentally heavy cost investment projects (EHCIPs) can only be funded through the Government Budget and with donor support. Thus the reason why a well-developed strategy and ratification by the Assembly becomes so important.

In addition, financial support for the institutions was, and is still insufficient. From Government sources, in the majority of cases it was possible to cover only the basic expenditures. Additional funding was rarely provided by donors. The new staff lacked experience and consequently had to face enormous hurdles. Moreover, in some environmental fields, there was a lack of specialised cadres. Low incomes are one more obstacle for involving more qualified staff. Furthermore, even though advances have been made in monitoring, there is still a need to upgrade the central environmental monitoring institutions that collect, process and disseminate environmental information and reports.

11.6. Institutional aims

These can be listed as follows:

- Clear delineation of responsibilities for respective environmental institutions and scoping their work activities in accordance with their legal obligation for environmental protection;
- Standardised municipal environmental structures and acceptance of de-centralised responsibilities for management of environmental issues at municipal level, pursuant to their legal obligations;
- Sharing responsibilities and obligations for the environmental sector between the main polluters.

11.7. Institutional priorities

The institutional priorities are to define and delegate clear powers, duties and responsibilities as well as a sustainable financial mechanism for those institutions responsible for environmental protection. All institutions should act in a co-ordinated manner to meet their obligations, and the fulfilment of the KES and NEAP (2011-2015). In addition, it is important to strengthen the institutions with newly recruited specialised staff, through attractive growth in wages and benefits, and with additional incentives such as technical training in EU Member States. They will thus benefit from 'lessons learnt' and act as 'trainer of trainers' for their counterpart staff.

CHAPTER II

This Chapter gives detailed information for each thematic sector of the environment and as prepared by the MESP Working Groups in co-operation with the public and stakeholders. The methodology follows the basic 'DPSIR' Framework. For each sector the present state is described and baseline data presented using the most recent data and tables from a variety of sources. This is followed by a list of key objectives and priorities which will later be incorporated into the NEAP (2011-2015) in a separate document. A more detailed DPSIR can be found in Annex 1 for bio-diversity, air, water and soil. The environmental legislation is outlined in Annex 2.

1. Air

State

Air pollution in both urban areas and especially in industrial zones is considered to be high. Currently, the major contributors to this pollution are power plants, industrial plants (metallurgy, mines, cement factories), the transport sector, small combustion plants, agricultural activities, domestic waste and locations used for waste incineration.

Even though the previous KES (2005-2015) is being implemented, several environmental issues in the energy and mining sector involved with air quality in both urban and industrial areas still remain a problem. Progress has been made however, in the adoption of the Law on Protection of Air Pollution and bylaws, the air protection strategy and human capacity building at central level. Nevertheless, shortcomings are still evident in the implementation of the legislation. The main challenge for reducing air emissions is the financial constraints of companies in the public and private sector. Also, this is a lack of co-ordination and harmonisation of plans and programmes between the relevant companies and authorities in implementing the legislation.

Given that the main contributors to air pollution are from the same economic sectors which are monitored by the various Government ministries, then this strategy will specifically address the measures needed to be adopted by these ministries.

Table 1: Emissions from Kosova- A and Kosova - B (KEK, 2009)

Calculated emissions for Kosova A												
	t/year	Ash mg/ Nm ³	kg/ MWh	t/year	SO ₂ mg/ Nm ³	kg/ MWh	t/year	NOx mg/ Nm ³	kg/ MWh	t/year	CO ₂ mg/N m ³	kg/M Wh
A3	4 978	1535.4	6.82	2774	684.3	3.8	2 806	694.0	4.32	1 066 772	263.2	1 461
A4	1 078	1850.0	8.22	475	651.8	3.6	510	699.9	3.89	191 459	262.8	1 460
A5	4 731	1400.9	6.22	3499	828.8	4.6	2 922	692.3	3.84	1 106 022	262.0	1 455
ΣA	10 787		7.09	6748		4.0	6 238		4.01	2 364 253		1 458
Calculated emissions for Kosova B												
B1	2 171	239.7	1.26	5691	628.7	3.3	7 333	810.08	4.25	2 382 954	263.2	1 380
B2	3 797	428.2	1.99	7782	878.0	4.1	7 188	811.05	3.76	2 306 661	260.3	1 206
ΣB	5968		1.62	13473		3.7	14521		4.00	4 689 615		1293

According to the TKE Athens Agreement the limits to be achieved until 2017 are Ash 50 mg/Nm³, SO₂ 400 mg/Nm³ and NOx 500 mg/Nm³

Power plants in Kosovo use fossil fuels (lignite) for their main energy production, and oil products with high sulphur content for starting up the process. District heating is also based on oil. In most cases the industrial sector utilises outdated equipment. The transport sector is characterised by a large number of old vehicles and

use of low quality fuels. However, leaded fuels are no longer used in Kosovo. Small combustion plants and the agricultural sector add to the poor air quality mainly through burning coal and biomass.

Industrial wastes produced from technical and operational processes of Trepça Plant are considered to be one of the largest sources of pollution in the area of Mitrovica. Waste disposal areas as well as uncontrolled waste burning also represent a serious source of air pollution. Furthermore, a low level of awareness by entrepreneurs, consumers and the public also affect the present situation.

In most cases, pollution is from emissions of sulphur dioxide (SO₂), nitrogen oxides (NO_x), lead (Pb) and other heavy metals, carbon monoxide (CO), smoke, particulate matter, volatile organic compounds (VOCs) and dioxins.

Table. 2: Chemical composition of dust in the air, gathered at sources in Mitrovica ('Trepça')

Sampling location	Particle size	Cd (ng/m ³)	Cu (ng/m ³)	Pb (ng/m ³)	Zn (ng/m ³)	Mn (ng/m ³)
Batteries industry- PIM	PM 2.5	8.547	20057.10	4302.840	3215.546	2140.209
Primary School "Migjeni"	PM 10	7.013	29.895	251.540	322.571	91.151
	PM 2.5	1.100	4251.080	776.080	332.562	9.306
School for Special Education "Mother Theresa"	PM 10	1.684	15.432	489.198	67.361	43.472
	PM 2.5	50.754	40357.79	5226.131	7618.090	1326.633
Primary School "Bedri Gjina"	PM 10	1.719	339.698	66.985	50.251	27.452
	PM 2.5	23.346	109.859	3776.338	172.507	1153.239
	PM 10	0.563	849.014	101.296	146.648	367.155

Allowed values of concentrations of metals in air are: Cd 5ng/m³, Mn 150ng/m³ Pb 1500ng/m³ (WHO, 2001).

Data on air pollution in Kosovo are collected from a limited number of sources although it is recognised that they are the main contributors to the total pollution levels:

- Power plants (Kosova A and B);
- Lignite open pit mines;
- Industrial plant in Mitrovica;
- Ferronikeli in Gllgovc;
- Cement factory- Sharcem in Han të Elezit;
- Central heating systems (Prishtinë, Gjakovë and Mitrovicë);
- Heavy basic industry (currently not in function) in Gjakovë, Pejë and Gjilan;
- Production of asphalt based materials;
- Transportation.

Air quality assessment

An assessment of air quality in Kosovo is carried out by using a range of available data and comparing these to the EU standards as reference point, especially EU Directive 2008/50/EC. The results show an inconsistency with these standards. It is thus necessary to undertake measures to control the emissions and to monitor them in a more systematic manner. To achieve this, it is important for the main polluters to comply with the Administrative Instructions on rules and norms for emissions to the air from stationary pollution sources, as well as by observing limit values and tolerance margins.

Air quality monitoring network

MESP started to install a network of air quality monitoring stations throughout Kosovo in 2010. The number of stations was based upon a preliminary study complying with EU Directive 2008/50/EC.

The first automatic air quality monitoring station was installed at IHMK. It is equipped with an automatic analyser for sulphur dioxide (SO₂), nitrogen oxides (NO_x), carbon monoxide (CO), ozone (O₃) and suspended particulate matter (PM₁₀, PM_{2.5}). Another station was donated by the Slovenian government. This is equipped with a three channel optical analyser (Grim Model 180), which is configured to measure particulates (PM₁₀, PM_{2.5}) and other meteorological parameters such as wind direction and velocity, air temperature, relative air humidity and atmospheric pressure.

Completion of the air quality monitoring network is planned for 2011. Up until the end of 2010 there were three automatic stations in Mitrovica, Drenas and Prishtina. These are not yet operational but the details are as follows:

- **Mitrovica:** located in the north-east of the city near the River Ibër in the meteorological station. Here are located analysers for monitoring CO, O₃, sampling for PM_{2.5} and meteorological parameters (wind speed and direction, pressure, air temperature and humidity);
- **Drenas:** located near the Municipal building. Here are analysers for monitoring SO₂, PM₁₀ and meteorological parameters (wind speed and direction, pressure, air temperature and humidity);
- **Prishtina:** located in the courtyard of the Government building (former Rilindja complex) and donated by the Slovenian government. This station monitors PM_{2.5} and PM₁₀ which will be supplemented with a NO₂/NO_x analyser.

Other stations in the network to be completed during 2011 will include locations in Peja, Gjakova, Prizren, Shterpce (Brezovica), Elez Han and Gjilan. The final network will consist of 9 fixed monitoring stations and one mobile station.

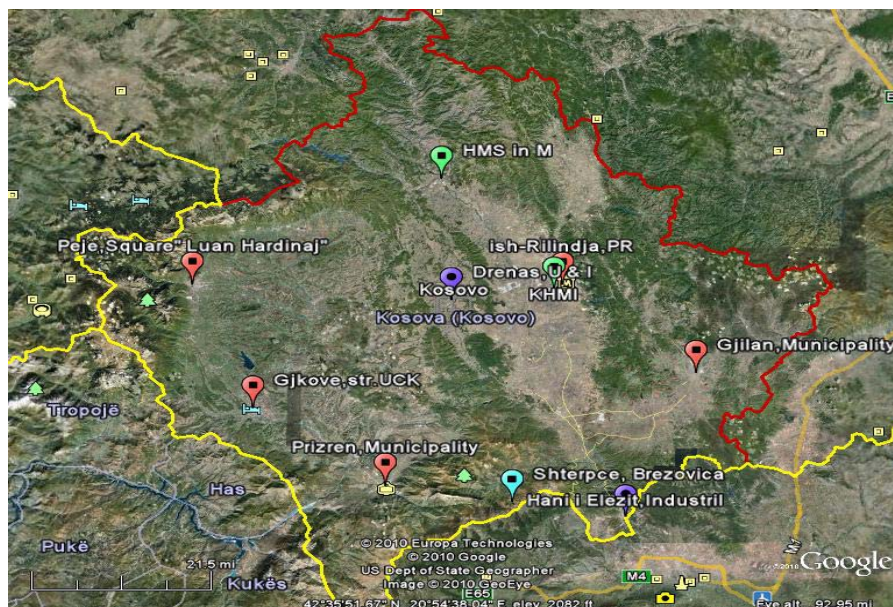


Figure 1: Map of Kosovo showing locations of the air monitoring stations

Table 3: Air quality monitoring network in Kosovo

Nr.	Municipalities	Station ID	Location	Type of area	Type of station
01	Prishtine	RKS01SU01?	IHMK-Prishtine	Suburban	Begrande
02	Mitrovicë	RKS02UT01	ish-ndertesa e "Rilindjes"	Urban	Traffic
		RKS03UBM	Stacioni Meteorologjik në Mitrovicë	Urban	Begrand
03	Drenas	KS04UB/IBD	Oborri i Komunës	Urban/Industrial	Begrand
04	Hani i Elezit	KS05UB/IBHE	Shkolla Fillore "Ilaz Thaqi"	Urban/ Industrial	Begrand
05	Pejw	KS06UBPE	Sheshi "Luan Haradinaj"	Urban	Begrand
06	Gjakovw	KS07UTGJK	Rruga e UÇK-së	Urban	Traffic
07	Prizren	KS08UBPZ	Oborri i Komunës	Urban	Begrand
08	Gjilan	KS09UTGJL	Oborri i Komunës	Urban	Traffic
09	Shterpcë	KS10RBSHP	Zona Turistike në Brezovica	Rural	Begrand/ reference

Objectives for air quality

The objectives are as follows:

- Completion of legislation in accordance with EU acquis;
- Ambient air with no negative effects upon human health or the natural or cultural heritage;
- Air quality monitoring in accordance with EU standards;
- The systematic development of plans for improving the air quality throughout Kosovo;
- Providing a legal and institutional framework for air quality protection in co-operation with all communities;
- To ensure best consideration of air quality parameters by Government institutions, municipalities, inhabitants, business and organisations when making decisions for their activities;
- Promoting the importance of air quality as a critical parameter for the health and welfare of the population;
- Efficient enforcement of legislation.

Priorities

The priorities can be listed as follows:

- Gradual harmonisation of the legislation with EU standards;
- Development of Administrative Instructions for implementation of air protection legislation;
- Completion of the air quality monitoring network;
- Co-operation of public authorities and co-ordination for development and adoption of measures, standards, and/or activities related to air protection;
- Regional co-operation to fulfil obligations arising from EU acquis for trans-border pollution;
- Prevention and reduction of harmful emissions to the air;
- Reducing the sulphur content in diesel fuels;
- Improving the public transport system;
- Increased use of centralised district heating systems.

At least once a month MESP ensures that the information on air quality is made available to the public and interested parties in both electronic and written format.

1.2. Climate change

State

Climate change, its causes and impacts, is the dominant global environmental problem for the 21st Century. The effects are becoming more and more visible exemplified by a series of phenomena such as temperature change, rainfall fluctuations, altered water resources, extreme frequencies of weather conditions, changes in ecosystems and bio-diversity, agriculture, forestry, health and economic damages.

The Rio Declaration (1992) with obligations for sustainable development, the UN Convention on Climate Change (UNFCCC, 1994) to reduce greenhouse gas emissions and the Kyoto Protocol (1997) represent important steps to limit emissions. The science community and Intergovernmental Panel on Climate Change (IPCC) predict that in the future, climate changes will be more pronounced. In this sense, it is necessary to reduce pressures and make efforts to alleviate the negative consequences.

The data on climate change in Kosovo are, to a large extent, limited. Single data on which rough assessments can be made are from 1985-1989. After that time there were no relevant measurements. However, Kosovo has a low level of economic development and belongs to the group of 'developing countries'. As the main energy resource is coal, as economic development increases then there is expected to be a corresponding increase in the overall emissions of greenhouse gas. The KES and NEAP (2011-2015) proposes concrete measures and actions to be taken by the Ministry.

Objectives for climate change

These are as follows:

- The gradual alleviation of climate change pressures in line with the general principles of the UNFCCC (1994);
- Establishment of a system to assess and select appropriate measures to reduce greenhouse gas emissions;
- Legal, institutional and technical capacity building to find systematic solutions for climate change issues;
- Implementing the KES and NEAP (2011-2015) to mitigate the problem of climate change in Kosovo.

Priorities

These are:

- Clarifying the legal status in relation to membership of Kosovo as an active partner in international climate change conventions;
- Institutional capacity building on climate changes issues;
- Establishment of a Focal Point for climate changes;
- Drafting the Registry and Cadastre of immisions and emissions of greenhouse gases by source;
- Assessment of the pollutant air emissions during 1985-1990, in accordance with the requirements of the Kyoto Protocol, under the IPPC methodology for 6 economic sectors;
- Utilisation of the financial opportunities and trade rules on greenhouse gases;
- Spatial planning, taking into account adaptation to climate changes (e.g. flooding).

1.3. Acidification, eutrophication and tropospheric ozone

State

The Geneva Protocol to abate acidification, eutrophication and tropospheric ozone to the Convention on Long-range Transboundary Air Pollution (LRTAP, 1979) entered into force in May 2005. The Protocol aims to cut emissions of SO₂, NO_x, VOCs and ammonia from energy generation, industrial sources, motor vehicles, agriculture and products.

The burning of fossil fuels and agriculture are the main human activities that cause acidification, eutrophication and tropospheric ozone. The impacts are most distinct in forest and aquatic ecosystems, but they are also considerable on buildings and cultural monuments. Ozone is produced from VOCs and NO_x under the influence of sunlight and has a negative impact on the growth of plants.

Kosovo does not yet have a monitoring system for acidification, eutrophication and tropospheric ozone, and consequently no preparation have been made for application of the Protocol. As a result, previously as well as now, no attention has been given to these problems in Kosovo. That means that emissions of SO₂, NO_x and precipitation of these substances have not been monitored.

It is expected that further development of the industrial and energy generating facilities will add to the pressures on the environment. They will require concrete and well organised activities aimed at problem solving.

To date, as mentioned above, Kosovo is at the initial phase of establishing an air monitoring network. In future, it will be necessary to join the European Monitoring and Evaluation Programme (EMEP) in order to collate the data.

Objectives

The objectives are:

- Defining the status of existing conventions and protocols;
- Setting up the legal, institutional and technical basis for preparation of a strategy for gradual elimination of acidifying gases and tropospheric ozone;
- Involvement of Kosovo and full implementation in 'co-operation programme for monitoring and assessment of trans-boundary air pollution in Europe – EMEP' based upon monitoring of SO₂ and similar compounds;
- Reduction of emissions that cause acidification.

Priorities

The priorities involve:

- Adopting the necessary legislation for mitigating acidification and eutrophication;
- Monitoring polluters causing acidification and eutrophication;
- Setting up a Focal Point for co-ordination of activities relating to the Geneva Protocol and LRTAP Convention;
- Training of staff for managing this strategy.

1.4. Ozone layer protection

State

Kosovo's economy is at present not producing any of the chemicals mentioned in Annexes A, B, C, and E of the Montreal Protocol for protection of the ozone layer. However, in the past it has imported products that contain ozone depleting substances, mainly in cooling devices and equipment used for household and commercial needs.

MESP has issued an Administrative Instruction for substances harming the ozone layer.

Objectives

The objectives for ozone layer protection include:

- Gradual elimination of ozone depleting substances;
- Observance of International conventions and protocols for protection of the ozone layer.

Priorities

The priorities can be listed as follows:

- Development of a registry of users of substances that cause ozone depletion;
- Compilation of a national programme for gradual elimination of ozone depleting substances;
- Co-operation with Agency for Implementation of Montreal Protocol, with the UN Environmental Protection Programme (industry and environment – UNEPIE);
- Permanent control and monitoring of the use, import and export of ozone depleting substances listed in the respective Annexes of the Montreal Protocol;
- Awareness about the aims of ozone layer protection, including the risks of skin cancer and the importance of using sun protection measures.

1.5. Radiation

State

Kosovo, according to the International Atomic Energy Agency (IAEA), does not belong to the Group B countries that use sources of ionised radiation in medicine, industry or research. In addition, Kosovo does not have nuclear facilities, nuclear programmes, nuclear materials nor nuclear waste. Where radioactive materials and radiation sources are used in medicine (radiotherapy), these are only in small amounts due to the fact that medical equipment is not installed.

A problem thus exists in Kosovo with the so-called 'lost sources of radiation'⁷ (orphan sources) which refer to soil contamination with depleted uranium during the war⁸, and ash from power plants. Monitoring of radioactivity in landfills is not carried out nor research into its impact upon human health in surrounding areas. There are no data of the impact on flora, fauna, soil, air, surface and groundwater or on human health.

Furthermore, there is no recording system established in Kosovo for non-ionising sources of radiation. Radiation protection is now provided by law for ionising and non-ionising substances and for nuclear safety, but still there are no bylaws adopted, and there are no plans and measures for reduction of exposure to this kind of radiation.

During the Chernobyl disaster (26th April 1986), all countries could witness the short comings in their radiation protection systems. In Kosovo, there was a monitoring system for radioactive contamination operational between 1978 to 1990 although it is now defunct.

Based upon several UNDP reports, during the war some 33 000 missiles were launched, each of them containing around 330g of depleted uranium. Because of this, large areas of soil, surface and groundwater are today contaminated. It is thus necessary to identify the battle field areas and to measure the radiation level. The radioactive and chemical effects from the depleted uranium have long term consequences, and therefore any mitigation measures are urgent.

⁷ Lost radiation sources are: smoke detectors, radioactive lightning rods, equipment used in medicine and industry which were lost during bombardment or building collapse after the war, with potential risk to persons who may unknowingly have contact with them.

⁸ Depleted Uranium in Kosovo – UNEP 1999, the report which detected radiation in 112 measuring points in Kosovo. The amount is calculated to be 9.3 tonnes from 31 000 projectiles used by NATO.

Another problem is lightning rods installed prior to the 1980s in various military compounds, industrial plants, schools and kindergartens. It is estimated that there are over 200-300 radioactive lightning rods throughout Kosovo, and unfortunately most of them are out of function. Their installation is now prohibited by the Law on Radiation Protection.

Similarly, there are constraints in the management of the radioactive wastes. Despite the IAEA reports, Kosovo does have a certain amount of radioactive wastes, and some of them are disposed in (more or less) secure places. But there are also lost sources. To date, this includes:

- One bunker at the Power Plant Kosova A, with 37 radioactive sources. The sources are disposed and conserved and the level of radiation outside corresponds to levels found in the natural background;
- At the Trepça Plant the radioactive wastes of Americium-241, Strontium-90 and Thorium-232 are found although there is no data concerning quantities.

It is important to highlight that the origin of these radioactive materials is unknown. The wastes were disposed of by the French KFOR in a special storage unit (1st Tunnel), and under their supervision.

A similar situation prevails in the medical sector too. There is a lack of a management system for radioactive wastes. At the Youth Sports Centre in Prishtina, a total of 184 smoke detectors were disassembled from the fire protection system. These have a metallic ring made from Americium-241 (according to data given by the manufacturer). Both KFOR and KPC recorded the radiation data. The parts are stored in a metal barrel of 200 litres with concrete inner section as protection against radiation emissions. This barrel is secured in a garage (ground floor level) under the supervision of the youth centre management.

Radon is omnipresent and its contribution to annual total dosage of the population is around 50%. MESP does not yet have reliable data and information on Radon gas-222, and there are very limited measurements. Thus, the concentration levels are unknown. Human health risks can only be assessed if a detailed radiation map is prepared, which is essential to answer all the questions related to the level of radioactivity in Kosovo.

The legislation related to radiation was not available until 2007 when the first Administrative Instruction was issued for the application of ionising radiation equipment in medicine. Additional bylaws will be required to adopt a comprehensive radiation policy. There are several unresolved issues such as laser, radar, electromagnetic and ultraviolet radiation. At the same time, the rapid development of mobile phones also needs to be monitored.

Objectives for radiation

The objectives are:

- Harmonisation of legislation related to radiation protection and nuclear safety conforming with EU and IAEA standards;
- Implementation of the existing Law on Protection from Non-ionising, Ionizing Radiation, and Nuclear Safety;
- Protect human health and the environment from radiation sources;
- To adopt appropriate management and best practices for the treatment of radioactive waste.

Priorities

The priorities involve:

- Establishment of necessary capacities for monitoring ionising and non-ionising radiation sources;
- Improved border controls and preventing the unauthorised transport of radioactive material;
- Setting up legal limits for placement of sources by operators;

- Preparing an inventory of radiation sources used in medicine and other sectors;
- Identifying and supervising electromagnetic sources to apply the register of ionising and non-ionising sources of radiation.

2. WATER

State

Unfortunately, the water resources in Kosovo are generally characterised as unequal in distribution and not managed in an efficient manner. Each river basin is also different in terms of quantity and quality of water resources. In general, there is a lack of reliable data. Groundwaters are estimated to be contaminated, especially on both sides of the Drini i Bardhe and Sitnica river basins.

Monitoring is still an issue even though it has been highlighted in several reports (e.g. SoE Report, 2008-2009, KEPA). There is not yet a sufficient coverage with hydrometric and meteorological networks. Although some measures have been undertaken to set up a surface water monitoring network, the situation continues to be a problematic. There is no groundwater monitoring system. Data are still sparse and not properly correlated.

Data on river flow in Kosovo are an assumption only, based upon hydrological observations presented at the Water Master Plan (1983-2000). There is no systematic monitoring system although some data are available from studies by different EU funded projects and implemented by different technical assistance companies.

Drinking water quality is the responsibility of the National Institute for Public Health (NIPH) and according to their reports, the water supply quality meets the drinking water standards. The responsibility for monitoring water quality however in water supplies, groundwater and accumulations is IHMK. Water resources at source and in the upper aquifers are considered of good quality. The quality deteriorates in the middle and lower aquifers due to direct water discharge and lack of treatment from urban areas, industry, agriculture and transport.

The existing water supply and wastewater network needs rehabilitation, because most of the infrastructure is outdated and undeveloped. The water supply network is based upon surface and groundwater resources. The water is processed in treatment plants and the majority is chlorinated. Restrictions on water supply and lack of adequate treatment increases the risk of biological, chemical and microbial pollution. In rural settlements they are mostly supplied with water from open wells and springs. People usually make a well without any permission nor monitoring of water quality, as well as without following hygiene and sanitary rules and standards.

Access and connections to a public sewage network is still a challenge. It is estimated that only about 30% of households and business infrastructure are connected to any form of canalisation. There is thus an urgent need to rehabilitate and expand the network. Several urban areas have an existing wastewater system, albeit in need of repair. But rural areas use mainly septic tanks/pits or open channels.

The situation with wastewater treatment is critical for the whole country. Due to financial constraints, the infrastructure for wastewater collection and treatment has not been developed, and therefore represents an enormous problem. The only plant for wastewater treatment was built in Skenderaj but is even today not yet functional. The discharge of wastewater from households, industry, agriculture, and transport is made directly into the rivers and streams without prior treatment.

A Strategy for Wastewater Treatment for the whole territory of Kosovo was drafted in 2003/2004, but is still not implemented due to budgetary constraints. Several feasibility studies on the possibilities for wastewater treatment are being developed from 2009-2011.

Moreover, attempts have been made with various projects to identify pollutant sources (such as from mining wastes, metallurgical and technological facilities). Most of the data continues to remain scattered and unused by the various institutions.

Data on water consumption from industry are scarce, except for those operators supplied by Ibër Lepenc Hydrosystem which have water permits (KEK, NewCo and Feronikel). Also, data regarding the water quantity used for irrigation are lacking. The figures are partially provided by MAFRD.

Considerable water protection infrastructure is thus needed and this was also the key recommendation of the Water Master Plan (1983-2000). Most of the existing infrastructure is damaged. It is not maintained and often impacted by various constructions such as houses and business premises on or near the water protection infrastructure. In recent years some small projects have been implemented such as cleaning the River Shushica - Istog, regulation of Rivers Mirusha–Gjilan, Trstena Vushtrri and Klina - Skenderaj.

Data on erosion and the smaller streams are also presented in the Water Master Plan (1983-2000). Since 1999-2010, no further activities have taken place.

Objectives of the Water Sector

These are as follows:

- Completing and harmonisation of legislation with the EU acquis;
- Administration of the strategies and plans for the river basins;
- Constructing of wastewater treatment plants (WWTPs) and related canalisation;
- Repair and new constructions for drinking water supply networks;
- Management for the protection and regulation of river beds;
- Upgrading surface water monitoring networks;
- Creating a groundwater monitoring network.

Priorities for the water sector

These are:

- Drafting the relevant bylaws;
- Drafting strategies and plans for administration of the river basins;
- Upgrading the Water Information System;
- Preventing the degradation of river ecosystems from gravel and sand extraction;
- Provision of water through a suitable strategy, including the provision of dams and water supply networks in such a way that bio-diversity aspects are included;
- Increasing co-operation between the water and nature inspectorates in implementation of nature protection legislation;
- Implementation of SEA and EIA procedures, especially when the activities are planned to be undertaken in wetlands and water protected areas;
- Building urban and rural WWTPs and where possible, including informal settlements into the public sewage and water supply networks.

3. SOIL

State

High poverty levels and an informal economy are adding pressure to the soil in terms of its 'economic and environmental' capacity. This is reflected through unsustainable use of mineral and timber resources and exacerbated by poor forestry and agricultural practices. The consequences of such activities are reflected by soil damage throughout the country including erosion, compaction and reduction in soil fertility.

The overall impact is to reduce the economic and environmental viability of the rural areas which strongly depend upon good soil conditions for their livelihood and overall socio-economic development. Kosovo's total land area is about 1.1 million ha, 53% of which is arable, 41% covered with forests and 6% 'other'. Around 87% of arable land is privately owned, and the other part 10-13% is owned by the state, of which about 70% are privatised. About 51 000 ha of arable agricultural land is irrigated (less than 10%).

There are also about 180 000 agricultural families, with average farms of about 2.2-2.4 ha arable land typically divided into 6-8 parcels. About 80% of farms are around 0.5-2 ha size⁹. Around 47.6% of arable land is cultivated with grain (corn, wheat, barley), silage (2.3%), fodder crops (41.1%), vegetables (6.8%), fruit (2%) and 'other' (1%)¹⁰.

The soil types are: humus, humus silicates, black soil, skeletal and skeletoid acid grey soil, purple red soil, pseudo soil, alluvial, dilluvial and rocky soil.

The major environmental problems affecting the soil surface are mainly related to interim and permanent soil loss caused by illegal constructions, the impact of industry, erosion, mined surfaces, sanitary municipal landfills and industrial wastes.

Table 4: Degraded soil surfaces per Municipality

Code and Municipality		Soil categories/ha			
Code	Municipality	land, wasteland used as pastures (ha)	un-used land, wasteland (ha)	contaminated soil (ha)	Total (ha)
01	Deçan	960			960
02	Gjakovo	800	420		1220
03	Gillogoc	1600			1600
04	Gjilan		2332.4		2332.4
05	Dragash		60		60
06	Istog	4000	410	48	4458
07	Kaçanik	300	116		416
08	Klinë	800			800
09	Fushë Kosovë	360	228	157	745
10	Kamenicë	3583			3583
11	Mitrovicë	2532.9			2532.9
12	Leposaviq				
13	Lipjan	350			350
14	Novo Bërdë				

⁹ Draft Strategy on Soil Consolidation 2010 -2020

¹⁰ Household Resources Survey 2008

15	Obiliq	1400	1350	147	2897
16	Rahovec	3513	1520		5033
17	Pejë	1020	4493		5513
18	Podujevë	1805	1478		3283
19	Prishtinë				
20	Prizren	200	150	5	355
21	Skenderaj	1600			1600
22	Shtime	149		1	150
23	Shtërpçë		215		215
24	Suharekë	3550	900	17	4467
25	Ferizaj				
26	Viti	500	12		512
27	Vushtrri	450	271.7		721.7
28	Zubim Potok				
29	Zveçan			20	20
30	Malishevë	2217.05			2217.05
Total		31 689.95	13 956.1	375	46 021.05

Source: the State of Environment Report, Kosovo 2008-2009

Of particular importance is the soil contamination in urban areas such as in Mitrovica. The data is given in Table 5. The problems are again exacerbated by imperfect legislation and inadequate policies for land protection.

Table 5: Sample soil/dust results, taken in November – December 2002¹¹

Location	Pb µg/g	Cadmium µg/g	Arsenic µg/g	Zinc µg/g	Nickel µg/g	Copper µg/g
Standards (BM)	300	3	50	220	75	50
Zveçan – school courtyard	1206	<4.6	50.7	574.7	139.1	63.5
Zveçan – nursery	776	<4.4	41.8	69.1	113.5	23.6
Zveçan – nursery - courtyard	1407	<5.4	51.2	689.4	234.6	95.2
Mitrovicë-nursery courtyard	3964	6	156.1	1077	96.2	93.9
Mitrovicë-P.School"N. Bulka"	4117	4.8	66.1	955.2	94.1	111.6
Boshnjak Neighbourhood	2391	5.0	43.3	681.2	137	85.7
Bajr-P.Shcool"M. Bajraktari"	3348	11.3	73.4	1330	135.4	100.5
P. School "Bedri Gjina"	3899	9.9	81.8	2912	178.9	142.9
Big Kqiq	756.7	15.5	27.6	1273	112.8	49.8

From 308 soil samples taken between November and December 2002 by WHO in Mitrovica and Zveçan, Maximum Limit Values (MLV) were recorded for 293 (95.1%) of the samples.

Objectives for soil

Land/soil protection is primarily the responsibility of the Government through legislation prohibiting the building on land designated for agricultural purposes. The objectives are:

- To prepare the strategy on sustainable use and management of soil as a natural resource;
- Completing and harmonisation of soil legislation with the EU acquis;
- Prevention and reduction of further degradation of soil from pollutants and erosion;
- Inter-agency co-ordination to protect agricultural land;
- Eliminating the existing problems on soil administration;

¹¹ World Health Organization - WHO, Mitrovica, 2002.

- Including all of society and NGO's in soil protection.

Priorities

These are as follows:

- Drafting and preparing a comprehensive land cadastre;
- Compilation of policies for soil protection;
- Raising public awareness about the importance of land protection and promoting positive actions by civil society on this issue;
- Establishment of good land monitoring and spatial and environmental monitoring systems;
- Establishment and enforcement of strict fines for non-compliance with legal regulations for land protection;
- To reconcile soil consolidation projects with solutions for comprehensive municipal plans with spatial planning documents (e.g. Municipal Development Plans).

4. NATURAL HERITAGE

State

Kosovo is characterised with rich bio-diversity and natural heritage. About 4.39%¹² of the area is under legal protection, with a major part being under the National Park 'Malet e Sharrit'¹³.

Table 6: Nature protected areas in Kosovo

Nature protected areas	Number	Surface (ha)
Strict nature preservation (I – IUCN)	11	846,92
National park (II – IUCN)	1	39 000,00
Nature monuments (III -IUCN)	82	6.296,93
Protected landscapes (V - IUCN)	2	1 683,49
Forest parks	1	15,00
Total	97	47 842.34

In the past, legislation on nature protection was incomplete and not harmonised with international standards. The authorities were equally lax in applying any protection measures and as a consequence there was widespread illegal logging and soil degradation as well as destruction of the protected areas. There was also uncontrolled disposal of solid waste in the most representative natural areas. The spatial planning for the National Park 'Mali Sharr' was prepared by the Institute for Spatial Planning within MESP but it has not been approved yet by the competent authority. Lack of investment in protection measures and protected areas is evident. The level of public awareness for protection of protected areas and their possible economic source for income generation and rural poverty reduction is also low.

Objectives for Natural heritage

These are as follows:

- Completing new legislation for nature protection and enforcement of existing legislation;
- Sound management of protected areas with high biodiversity (strict preservation and conservation of national parks);
- Improved co-operation with scientific bodies in Prishtina University in order to boost scientific research within areas with high natural values;

¹² This does not include the surface of National Park Bjeshkët e Nemuna (about 62 000 ha).

¹³ Law on the Sharr Mountain national park OGK.

- Drafting of protection programmes for improved protection measures and working with the population to increase public awareness in the role of natural heritage and income generation.

Priorities

These involve:

- Enforcement of the Law on Nature Protection 03/L-233 dated 30.09.2010 by supplementing it with bylaws;
- Strengthening the management authorities for protected areas;
- Preparation of spatial and management plans for protected areas whilst observing practical conditions for nature protection;
- Increase of capacities for monitoring and efficient management and protection of protected areas;
- Changing behaviour of the population towards protected areas through education and awareness raising.

5. SUSTAINABLE USE OF NATURAL RESOURCES

State

There is a lack of data regarding the current use of natural resources. Similarly, there is no reliable information as to the degree of environmental degradation due to such operations. It has been recognised that the current level of exploitation is not appropriate to the criteria given in the law, and there is damage and degradation to the environment above the limit values stipulated by the legislation. Another special problem is the large number of illegal operators extracting sand and gravel from the river beds.

An analysis of the environmental situation in Kosovo shows that all the essential elements for life (air, water, soil) are endangered by pollution and degradation. The environment is under threat due to uncontrolled constructions, inadequate urban planning and the use of antiquated technologies in some industrial sectors.

However, because Kosovo is lacking a monitoring system with relevant data, there is only anecdotal identification of the potential sources of pollution and limited impact assessment for such sources upon the environment.

Objectives

These are as follows:

- Strengthened legislation and Administrative Instructions for enhanced co-operation amongst the different ministries;
- Support to an environmental development policy in protecting the environment and sustainable development of all natural resources (water, minerals, forests);
- Improved inter-institutional co-operation;
- Preventing degradation caused by licensed operators (i) forcing rehabilitation measures to be taken to remediate the damage they cause, (ii) implementing enforcement mechanisms for compliance with the environmental standards;
- Effective penalties applied to the large number of illegal operators working in different locations, including the protected areas where such activities are strictly forbidden.

Priorities

These involve:

- Preparation of a strategy for the use of natural resources;
- Creation of a fully functional environmental monitoring system;
- Rational use of natural resources, soil, water, minerals, forests;
- Increase of protected areas and their efficient management;
- Sustainable use of natural resources to be integrated into policies and legislation with other sectors;
- Application of effective penalties against illegal operators working inside the protected areas, where such activities are strictly prohibited.

6. BIO-DIVERSITY

State

Loss of bio-diversity is recognised as a major problem for the 21st Century, at global and also national level. Based upon expert assessments, every day several species are made extinct and many more are threatened with extinction. Furthermore, loss of bio-diversity is strongly associated with an increase in human poverty.

In Kosovo there are significant trends for loss of bio-diversity especially in the transition period from a centralised to a more market oriented economy. Excessive and uncontrolled logging, the opening of many quarries, change of river flows for hydro-energy, excessive hunting and fishing, all have an irreversible impact.

Based upon research, Kosovo has about 1 800 species of flora classified into 139 kingdoms, 63 phyla, 35 orders and 20 classes. More recent data shows there could be as many as 2 500 species. What makes Kosovo flora and fauna important and attractive is the large number (over 200) of endemic, endemic-relict and sub-endemic species. Especially important is a local endemic group of 13 plant species, found only on the mountains. There are also about 250 species of wild vertebrates. Although data is sparse for invertebrate species, about 200 species of butterflies and 500 species of aquatic macrobentos have been recorded. The richest areas with fauna are in Malet e Sharrit and Bjeshkët e Nemuna where it is estimated that there are 8 fish species, 13 terraqueous, 12 species of elusory, 180 bird species, 37 species of mammals and 147 butterfly species.

To date, there is no inventory for bio-diversity. Legal mechanisms did not protect bio-diversity which leads to the uncontrolled loss of several important species. In some cases, rare and exotic plants vital for medicinal research are unprotected. In addition, no Red List or Red Book has been drafted. This loss in bio-diversity is also exacerbated by the steady decline and destruction of the forestry areas.

Objectives for bio-diversity

The objectives for bio-diversity are:

- Completing and harmonising bio-diversity legislation with EU acquis;
- Research, preparation of an inventory and mapping of species, habitats and landscapes;
- Protection of rare flora and fauna and endangered species as well as their genetic pool, especially for endemic, endemic-relict and sub-endemic species;
- Reduction of bio-diversity loss through increase in protected areas by over 10%;
- Development of national bio-diversity indicators.

Priorities

These involve:

- Implementation of the NEAP Biodiversity (2011- 2015);
- Establishment of the Red Book for flora and fauna;
- Protection of the Sharr Mountains and Bjeshkëve të Nemuna as ornithological reserves (IBA Regions) in accordance with the international standards for the birds protection;
- Proceeding with creating Sharr Mountains National Park as a biosphere reserve within the UNESCO programme;
- Increasing inter-agency co-operation with NGO's on education and awareness raising about the importance of bio-diversity.

7. AGRICULTURE

State

Agriculture has both a direct and indirect effect upon bio-diversity. It is a sector that contributes about 25% to Kosovo GDP (19% in 2005). Around 53% (585 000 ha) is arable land, 42% (464 800 ha) forest and forestry land, and 7% 'rest'.

From MAFRD data (2008), Kosovo is characterised as a rural region with around 60% of the population living in rural areas. Based on the 2008 survey, some 50% of farms are small (up to 1 ha), whilst the highly fragmented structure hinders development for commercial/intensive agriculture.

There are also considerable surface areas degraded by mining activities and their associated wastes from industries such as KEK, Trepça and Ferronikel. As a result, the major part of occupied land is no longer used for agricultural purposes, which again, indirectly impacts the loss of bio-diversity.

Agricultural activities adjacent to industrial wastes are heavily affected by pollution. Analyses carried out on the cultivated plants in these areas show a high concentration of heavy metals. Apart from industrial wastes, urban waste is also a major threat to the loss of agricultural land.

The environmental impacts from the current level of agricultural activity in Kosovo are less than with neighbouring countries. Fertilizer and agro-chemical use are low, thus not severely polluting the soil and underground aquifers. However, the quantities used are not recorded and since 1999 only their import has been reported to MAFRD. There is no fertilizer and pesticide production in Kosovo.

The level of agricultural mechanisation is also low, so small-scale agriculture is characterised by relatively light machinery and mainly manual labour. This implies a low impact upon the environment and bio-diversity.

MAFRD (2008) also identified the following constraints for the sector:

- Change of use of agricultural land. It is unofficially estimated that since the war, around 1 000 ha/year of agricultural land is converted to construction land. This conversion is irreversible;
- Water and soil contamination from the use of agro-chemicals;
- Uncontrolled soil erosion;
- There are no minimum standards for 'Good Agricultural Practices' for Kosovo, and thus no harmony with EU standards;
- Organic agriculture is little developed and there are few organisations for certification of organic agriculture;
- Institutional co-operation for agro-environmental issues is poor;
- Education in agro-issues is underdeveloped e.g. lack of materials for schools.

Objectives for agriculture

These are as follows:

- Completing and harmonising agricultural legislation with EU acquis;
- Protection and rational use of agricultural lands;
- Orientation and support for organic production (reviewing the human and funding needs and resources);
- Proper control of imports and use of fertilizer and pesticides;
- Adequate post treatment of natural and artificial fertilizers i.e. 'applying 'best practices';

- Strict implementation of measures for plant protection;
- Protection of local endangered species;
- Water protection, diligence for continuation of agricultural activities that may impact upon surface and groundwater quality;
- Reducing/eliminating the leaching of nitrates and pesticides in soil layers where drinking water is abstracted.

Priorities

The priorities include:

- Development and strict implementation of the legislation;
- Assisting farmers to meet the EU acquis and international standards for certification and quality control of their products;
- Increase in public awareness about the importance of protecting agricultural land;
- Increase of awareness amongst farmers concerning the risks associated with using fertilizers and pesticides, as well as the disposal of the packaging materials;
- Applying alternative methods for agricultural production and composting as well as supporting organic agriculture;

8. FORESTRY

State

Kosovo has about 464 800 ha of forests, an increase of 6–8% over previous estimates. Some 278 880 ha are public forests and 185 920 ha privately owned. Deciduous forests cover over 90% of the forest area with the dominant species being oak and beech. Coniferous forests cover 7% of forest lands and are mostly fir and pine.

Table 7: Forested areas in Kosovo

Data source	Public forest (ha)	Private forest (ha)	Total Forest (ha)
Old statistics	266 000	162 000	428 000
Cadastral Data 2004	196 000	198 000	394 000
National Forest Inventory (by FAO, 2003)			
Visited area	202 800	176 400	379 200
Non-visited area	76 080	9 520	85 600
Total	278 880	185 920	464 800

Around 20 000–30 000 ha are treeless forest lands and a considerable portion of these areas are considered suitable for afforestation. However, according to MAFRD (2008), only limited afforestation has been undertaken up to 2010.

Table 8: Afforestation areas by year

Year	2004	2005	2006	2007	2008	2009	2010
Afforestation areas (ha)	18	390	196	67	512	830	240

Data show that about 40% of public forests and 29% of private forests are subject to uncontrolled activities or illegal use. Most at risk from illegal activities are public coniferous forests in low lying regions and near to roads.

Official and legal logging accounts for some 200 000 m³/year with most wood used for heating. It is estimated that Kosovo needs around 1 000 000 m³/year to meet the heating needs. The difference between supply and demand is 4 times and this creates a pressure to increase illegal logging, thus adding further damage to the forests and forest ecosystems. Deforestation impacts are also visible in increased land/soil erosion in mountain areas, the reduction of floral and faunal species, the increased risk of flooding from run-off and changes to the landscape.

Generally, around 8–10% of the population earn income or make their living from the forestry and timber sector. The total value of goods is estimated at EUR 50-75 million and contributing 1.8-2.6% to GDP.

Objectives for forestry

These are as follows:

- Completing and harmonising forestry legislation with EU acquis;
- Improved forest management (silviculture);
- Improved forestry planning;
- Co-ordinated forestry use;
- Increase in management capacities;
- Protection of forest ecosystems and protection of bio-diversity;
- Wood exploitation better organised;
- Development of the private sector;
- Incentives for non-ligneous forestry products;
- Strategy for Forestry Development (2010-2020) implemented.

Priorities

These involve the following:

- Strict implementation of the legislation;
- Proper forestry management;
- Increase of professional capacities for forest management;
- Monitoring illegal woodcutting and applying strict penalties for non-compliance with the legislation;
- Sustainable use of the forest and forestry products;
- Drafting of plans for fire prevention and protection from forest/land erosion;
- Increase of public awareness for forestry protection.

9. SOLID WASTE

State

Waste management in Kosovo remains a serious challenge. From six capital projects identified by the KEAP (2006-2010), by 2011 four (4) started or are near completion but two (2) have not started. In addition, despite the initiative for developing a central information and database system necessary for efficient waste management, it has also not yet been completed. Moreover, there are no conditions for applying economic instruments other than from the Kosovo Budget and donor contributions, mainly targeted towards rehabilitation and closure of the landfills.

Delays in finding solutions for all types of waste has aggravated the situation, which is now critical. Special problems are found at municipal level mainly with difficulties for establishing a proper waste collection system. Private and public companies are also facing operational problems. There is also confusion from the legislation and central policies in delegating tasks and responsibilities, and also in agreeing practical solutions. All types of waste including industrial, hazardous and municipal waste require immediate solutions. In addition, the

quantity of waste is increasing and the existing infrastructure is insufficient, inadequate and unable to meet the EU standards. The main problems can be summarised as follows:

- Insufficient implementation of waste legislation;
- Lack of public and private awareness and education;
- Lack of knowledge about ‘best practices’ and current trends applied in the EU;
- Lack of capacities on waste collection in all settlements;
- Lack of the collection, classification, recycling and treatment system and infrastructure for municipal waste;
- Lack of data and accessible waste information system;
- Unclear definition of responsibilities and competencies between the interested parties involved with management and administration activities;
- The low level of cost recovery for services (40-60% depending on the municipality);
- The large number of illegal landfills;
- Lack of hazardous waste landfills and facilities;
- The existence of a large number of industrial landfills;
- No implementation of the ‘polluter pays principle’;
- Difficulties in operation of the regional systems on waste administration.

Public and private initiatives to reduce creating waste at source and for recycling are part of modern waste management. In Kosovo, there is a lack of support and incentives for waste recycling, and thus there is an urgent need to create a system with the necessary infrastructure and suitable for collection facilities. There are in fact seven (7) sanitary landfills at present which are not managed well and as such do not meet the minimum environmental standards.

Medical wastes are also a major problem. MESP has invested in projects for the sterilisation of infectious hospital waste in five regional centres. Other waste from packaging, electrical and electronic equipment, batteries, used tyres, used oil, discarded vehicles, PCB and PCT, animal waste and other hazardous materials are all not adequately managed nor treated. Another concern is that service fees and poor collection of payments from consumers are constraining the viability of a sustainable financial system for waste management. Lack of an Eco- Fund and other economic instruments to stimulate advanced technologies alongside no implementation of the legislation in force are other limitations.

MESP is in the process of drafting and revising the waste management legislation in harmony with the EU legislation and standards. To date, the Law on Waste and accompanying acts of waste administration have already been drafted. Based on the SoE Report published by KEPA (2008/2009), data on the quantities of waste generated in Kosovo are shown below.

Table 9: Waste generated in Kosovo per year (SoE Report, 2008)

Waste type	Average daily/kg/capita	Average daily/kg/capita	Annual quantities/ton
Household waste	0.277	101	232 541
Commercial waste	0.250	91.25	209 875
Medical waste	0.0024	0.876	2 014.5
Ash and cinder waste	0.907	331	761 426.5
Construction and demolition waste	0.200	73	167 900
Other waste (packaging), plastic, rubber, pesticide, electronic, wood etc.)	0.360	131.4	302 220
Total	2.05	729	1 675 977

About 90-95% of the urban population have a waste collection system. However, all services are of a low standard due to the lack of adequate facilities and equipment. The rural areas are serviced by approximately 20%. Fees for waste collection are around 4€/per household/month, and payment of bills is 40-50%.

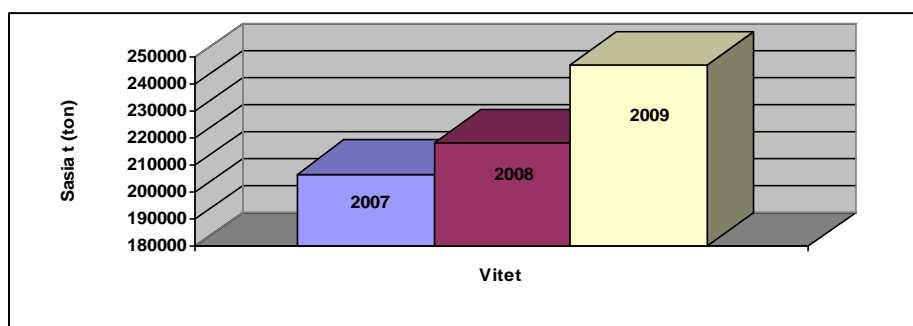


Figure 2: The amount of waste produced by year (source:KEPA,2008)

The collection of municipal waste is carried out by seven (7) regional public enterprises, which are organised into the 37 Municipalities of Kosovo through operational units. All the old landfills for municipal waste have been closed and rehabilitated.

Table 10: Municipal waste landfills (KEPA, 2009)

Landfills	Region	Landfill type	Area (ha)	Residents	Time period (years)
Prishtina	Prishtina, F. Kosova, Lipjan, Obiliq, Glogoc,	Regional	40	724.251	15
Gjilan	Gjilan, Kamenica, Viti, Ferizaj, Novobërda	Regional	24	242.195	15
Prizren	Prizren, Suhareka Malisheva, Rahovec, Gjakova	Regional	24	316.728	15
Podujeva	Podujeva	Municipal	5	131.300	15
Mitrovica	Mitrovica, Vushtrri, Skenderaj	Regional	7	250.000	15
Peja	Peja, Deçan, Klina, Istog	Regional	3.6	250.000	
Sharr	Sharr	Municipal	1.2	27.000	16
Ferizaj	Ferizaj, Shtime, Kaçanik, Shtërpcë, Hani i Elezit	Transfer station		210.120	
Zveçan	Zveçan	Municipal			15
Total				2 151 159	

Hazardous waste is generated mainly by the industrial units in Trepça, KEK, Gjilan (batteries), vehicle parts in Peja, Jatex in Gjakova. These are considered as 'hot spots' in Kosovo.

Table 11 below gives records on the waste quantities found in the industrial landfills of Trepça.

Table 11: Trepça industrial landfills

Location	Deposited material	Landfill status	Landfill surface (ha)	Quantity (tonnes)
Mitrovica - PIM	Phosphorinous gypsum	Not active	10	4x10 ⁵
Mitrovica- PIM	Pyrite, pirotin	Not active	9	5x10 ⁵
Mitrovica- PIM	Precipitation	Not active	10	5x10 ⁵
Mitrovica- PIM	Jarosit	Not active	5,4	1.2x10 ⁵
Leposaviq	Precipitation	Not active	6,5	2.6 x10 ⁶
Leposaviq	Precipitation	Active	8-10	3.6x10 ⁶
Zveçan	Precipitation	Not active	26	8.5x10 ⁶
Zveçan	Precipitation	Not active	50	12x 10 ⁶
Kelmend	Precipitation	Active	8-10	3.6x10 ⁶
Graçanica	Precipitation	Not active	40	11x10 ⁶
Badovc	Precipitation	Active	18	7.7x10 ⁶
Artana	Precipitation	Not active	4	1.8x10 ⁶
Zveçan	Cinder Pb	Not active	4-6	2.5x10 ⁶
Zveçan	Ash	Not active	10-15	10x10 ³

Objectives for solid waste

These are as follows:

- Completing the waste legislation and manuals;
- Gradual reduction of waste at source before disposal, reducing the amount of waste disposal, reducing risk;
- Waste incineration with energy recovery;
- Infrastructure development for an integrated waste management system (Reduction–Reuse–Recycling–Disposal);
- Gradual increase of inclusion of the population in the waste treatment system;
- Policy objectives for waste management as foreseen in EU programmes are as follows;
 - Reduction of waste generation in relation to economic activity and a substantial reduction in the volume of wastes created;
 - Wastes that are being generated shall be in a non-dangerous state or with least impact upon the environment and human health;
 - Wastes should either be reused, especially from recycling processes, or returned to the environment in a useful form (e.g. compost), and/or rendered harmless;
 - Waste requiring disposal shall be reduced to an absolute minimum and its disposal shall be carried out in a safe manner;
 - Wastes shall be treated as close as possible to their source of generation.

As far as management of hazardous waste is concerned, the following shall apply:

- Proper identification and inventory of hazardous waste;
- Encouraging use of economic instruments;
- Producers shall be responsible for their products;
- Impact of consumer demand in favour of products and processes creating less waste.

Priorities

In order to implement the strategy the following priorities are foreseen:

- Harmonisation of national legislation with the EU and assurances given for their implementation;
- Establishment of guidelines for interpreting and implementing the legislation;
- Increase in public awareness for environmental protection and waste management;
- Reduction in waste generation at source;

- Increase in the level of controlled waste collection and disposal;
- Rehabilitation of areas polluted by waste;
- More sanitary and hygienic management practices to reduce and eliminate the risk of possible diseases and epidemics associated with municipal waste;
- Reduction of emissions to air, water, and soil from waste activities;
- Re-use of waste materials for energy production;
- Increase of efficiency in the use of waste for recycling;
- Improved monitoring of waste management activities;
- Improvement in management of existing landfills;
- Construction of facilities and installations for waste treatment;
- Increase collection of payment by households and companies for waste collection services.

10. CHEMICALS

State

There is minimal production of chemical products and substances in Kosovo. The chemical industry in general has not been functioning since 1989. Chemicals are mainly being imported for the needs of industry and other activities. Most of the imported chemicals are for the treatment of drinking and industrial water, refrigerants, biocide products, and products for plant protection. There is no supervision of imports and use of hazardous chemicals. Competences and responsibilities are divided between MESP, Ministry of Health, MoF, Ministry of Labour and Ministry of Public Services. Prior to the import of any chemicals a permit should be issued by MESP.

As economic activity increases, there is a growing demand for imported chemicals compared to the last years. This triggers the need to establish a system for hazardous chemical management in order to protect the environment and human health. It is necessary then, in co-operation with the relevant institutions, to proceed with the control of import, export, transit and use of hazardous chemicals.

The Maximum Limit Value (MLV) for concentration of substances are defined by legislation on chemicals used in food, animal feed and drinking water. Also, the values for air emissions and quantities of permissible chemicals in the garbage are also established. There are also mandatory rules which stipulate that any chemical that is transported, must be accompanied by supporting documentation under 'Technical List of Protection from Chemicals'.

Objectives for chemicals

These are as follows:

- Drafting legislation in harmony with EU acquis and 'GHS' standards;
- Creation of a comprehensive plan for safety, monitoring and control of chemicals;
- Development of activities for integration and participation of the chemical administration with international institutions.

Priorities

The main priority is to create a system with an overall improved level of health and environmental protection against the possible harmful effects of hazardous chemicals. This takes into account EU Regulation 1907/2006 (registration, assessment, permission, and restriction of the use of hazardous chemicals) and other binding international instruments such as implementation of EU 'Seveso' Directives I and II.

The priorities will also involve:

- Drafting legislation and harmonisation with the EU acquis;

- Compilation of a register for banned chemicals and those with restricted use;
- Establishment of a sustainable system to improve the conditions for protection of environmental and human health from the harmful effects of hazardous chemicals;
- Establishment of a competent body as the chemical administration;
- Signing co-operation agreements with the EU and international institutions concerning hazardous chemicals;
- Creating a comprehensive plan for direct intervention and rehabilitation measures in accidents caused by hazardous waste;
- Monitoring and establishing control over manufacturers, importers and users of hazardous chemicals;
- Awareness raising for the population and industry with regards to hazardous waste.

11. MINING AND MINERAL RESOURCES

State

In the present period of transition that Kosovo is experiencing, with its primary aspiration for EU integration, it has resulted in a steady yet determined change in socio-economic activities. Nowhere is this better demonstrated than with mining and the use of mineral resources. The scope of work in the mines has started to increase in recent years and this development implies enforcement of environmental policies and legislation, strengthening institutions, as well as rehabilitation of the degraded environment inherited from the past.

Previous exploitation of mines and open pit mines, metal and non-metal processing, left behind huge waste deposits, including solid and liquid industrial waste and hazardous materials. Windblown dust also causes continuous and massive degradation of the environment and seriously impacts upon the health of the population. Degraded areas only within 'Trepça' occupy an area of about 200 ha with an amount of 55 million tonnes of waste (see Table 12). These wastes contain a considerable amount of heavy metals and as such have a continuous impact upon the air, soil and water and also threaten human health. Ash disposal at KEK and Ferronikel landfills are also serious problems. Even though the Ferronikel landfill is already in use, rehabilitation must be concluded in order to stop windblown particles which impact upon the population and settlements in the neighbouring areas.

Table 12: Industrial waste landfills within 'Trepça'

Location	Name of the landfill	Substance	Active or abandoned	Area (ha)	Weight (x10 ⁶ ton)
Leposaviq	Gornji Kmjin	Precipitation	Abandoned	6.5	2.6
Leposaviq	Bostanishte	Precipitation	Active	8-10	3.6
Zveçan	Zhitkovc	Precipitation	Abandoned	26	8.5
Zve/Mitro	Gornje Pole	Precipitation	Abandoned	50	12
First tunel	Zarkov Potok	Precipitation	Active	8-10	3.6
Graçanica	Staro Jaloviste	Precipitation	Abandoned	40	11
Badovc	Badovc	Precipitation	Active	18	7.7
Artana	Artane	Precipitation	Abandoned	4	1,8
Zve/Mitro	Gornje Pole	Cinder pb.	Abandoned	4-6	2.5
Zveçan	Depozit hiri	Ash	Abandoned	10-15	0,010
Mitrovica	MIP deposit	Gyps	Abandoned	10	0,4
Mitrovica	MIP deposit	Oxide Fe	Abandoned	9	0,5
Mitrovica	MIP deposit	EM CO-precip.	Abandoned	10	0.5
Mitrovica	MIP deposit	Jarosit	Not active	5,4	0,12
Total				ca. 213	ca. 55

Demands for new constructions, especially road works, require mineral resources such as limestone, gravel, and sand. Those deposits located near cities and settlements have already been over-exploited which means new deposits are exploited deep in rural areas. There are also cases of mines being exploited in protected areas, zones with special protection or special sites of natural heritage.

In order to have a controlled and managed mining and mineral sector, pollution must be prevented and operators must comply with all legal obligations including having the necessary licenses.

Objectives of the mining and minerals

The main objective is profitable mining with sustainable use of mineral resources and with minimum impact upon the environment. This also means minimum loss and minimum generation of waste. The concept of sustainable mines in relation to the environment implies that (i) the mineral resources are extracted for a short period of time, (ii) underground water is influenced to a minimum level, (iii) noise, dust and seismic effects are prevented, (iv) mined out areas are rehabilitated quickly and in accordance with projected plans and specifications prepared for the mining area.

Priorities

These involve the following:

- Long-term plans for national development in terms of extraction and exploitation of mineral resources are needed based upon schemes for optional use of resources in compliance with domestic needs and based upon scientific data;
- Legislation needs to be completed in harmony with EU acquis;
- Inter-institutional co-operation should be strengthened for control of mining and mineral extraction activities;
- Environmental problems caused by mining activities must be mitigated as a matter of urgency. Funding sources for remediation of the large deposits near cities and settlements should be sought by the relevant authorities;
- Acid and heavy metal leachates from the lead and zinc mines must be prevented from causing further environmental damage;
- Coverage of agricultural land with industrial wastes should be mitigated;
- Rehabilitation of mines and exploited areas (quarries) should be part of the licensing permits;
- A clear strategy is needed to determination areas for exploitation of construction material.

12. ENERGY

State

As economic development increases this will also trigger an increased demand for energy and the recent energy indicators (MEM, 2010) already support this. The primary sources are from coal, petroleum products (gasoline, diesel, fuel oil, kerosene and liquefied petroleum gas LPG), firewood, hydro-energy and solar energy.

A review of trends in energy supply is shown below. The data shows that compared with 2008, in 2009 there was an increase in primary energy production of about 11%.

Table 13: Primary sources of energy (kilotonne equivalent)¹⁴

	2003	2004	2005	2006	2007	2008	2009
Coal	1 293	1,289	1 231	1 226.1	1 251.3	1 421.18	1 590.81
Petroleum products	540.3	455	576	595.26	518.93	469.75	519.79
Biomass	172.7	173.86	175.03	176.21	177.40	178.59	180.72
electricity					19.89	35.47	42.44
Hydro-energy	5.9	12.14	11.99	10.90	10.14	8.18	12.86
Solar energy	0.16	0.18	0.19	0.26	0.29	0.56	0.58
Bio fuels						0.24	0.11
Total	2 012.06	1 930.18	1 994.21	2 008.74	1 977.94	2 113.97	2 347.33

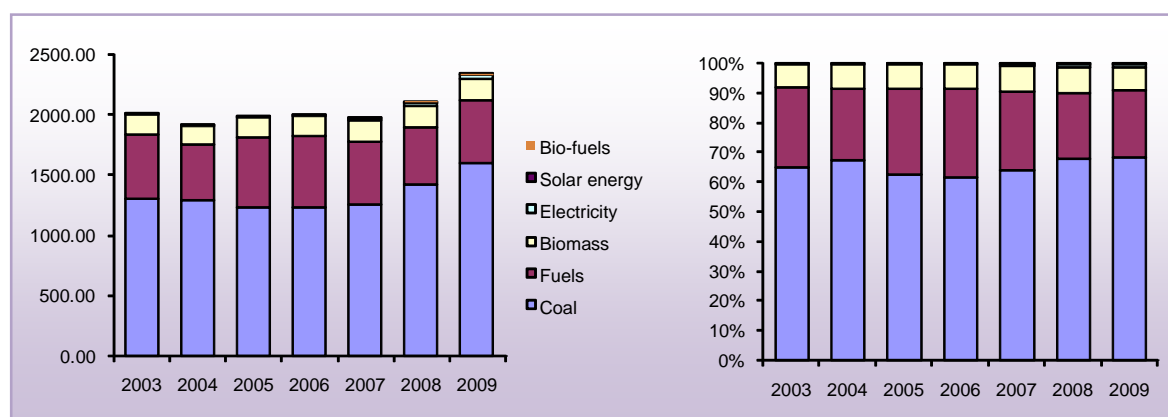


Figure 3: Quantity of energy available from primary sources¹⁵

Compared with 2008, in 2009 the use of coal increased by 12%. Oil imports also rose. The energy generated from the power plants increased of 9%, whilst electricity generated from hydro-power plants increase of 57%¹⁶.

Based upon the data from MEM (comparing 2008 and 2009), energy consumption increased by 4%. Table 14 shows energy consumption during 2003-2009 and there is an overall increase in all resources.

Table 14: Consumption revue of all energy sources (kilotonne equivalent)¹⁷

	2003	2004	2005	2006	2007	2008	2009
Coal	107.20	109.38	111.60	113.89	116.22	118.59	116.76
Petroleum products	409.84	357.91	442.09	451.35	415.56	486.34	503.60
Biomass	389.05	387.10	403.97	410.47	421.07	418.41	428.56
bio fuels						0.24	0.11
Electricity	240.01	298.95	342.42	345.01	336.36	336.52	368.32
Solar- energy	0.22	0.23	0.25	0.27	0.29	0.31	0.322
Heating	7.87	7.85	8.77	9.05	8.00	8.68	8.86
Total	1 154.18	1 161.43	1 309.10	1 330.04	1 297.50	1 369.09	1 426.53

¹⁴ MEM Report on energy balance

¹⁵ MEM Report on energy balance

¹⁶ MEM Report on energy balance

¹⁷ MEM Report on energy balance

From the total energy consumption, 46% is by households and 26% by agriculture. Other sectors are shown in Figure 4.

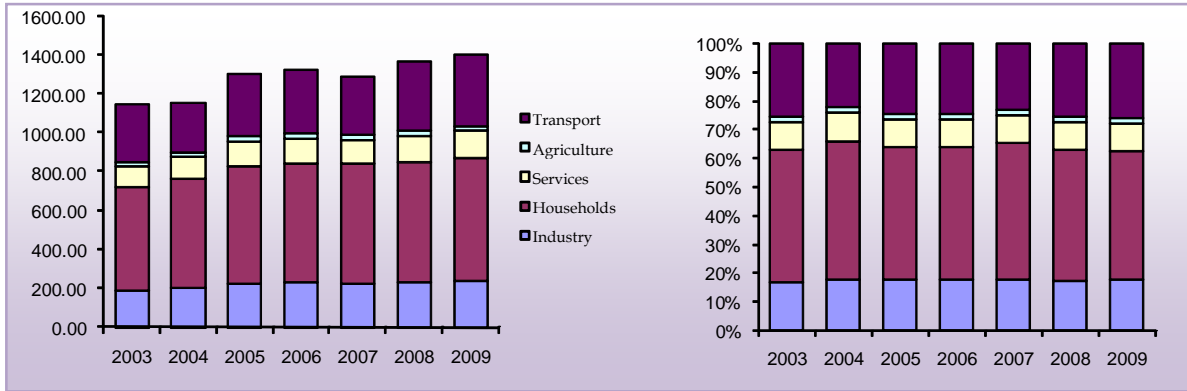


Figure 4: Energy consumption by the sector (2003-2009)¹⁸

The emissions (SO₂, CO₂, NO_x and particulates) resulting from fuel combustion have a great environmental impact. Analyses of emissions from Kosova A and Kosova B power plants during 2009¹⁹ shows an increase compared with 2008 of 11% for CO₂ and about 55% for SO₂.

Table 15: Kosova A (TCA) and B (TCB) emissions

Emission	Unit	TC A	TC B	Total
Particulates	ktonne	10.78	5.97	16.76
SO ₂	ktonne	6.75	13.47	20.22
NO _x	ktonne	6.24	14.52	20.76
CO ₂	ktonne	2 364.25	4 689.62	7 053.87

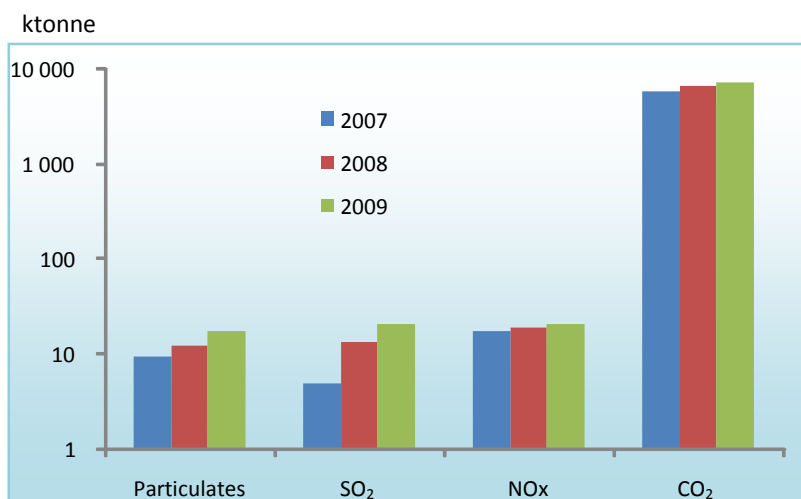


Figure 5: Total emissions from power plants

¹⁸ MEM documents on energy balance

¹⁹ The basic data for emissions from Kosovo powerplants are taken from KEK

The use of petroleum products also causes large environmental pollution. For every litre of fuel burned approximately 100g CO, 20g VOC, 30g NO_x and 2.5kg CO₂ are produced²⁰ and during 2009 it is recorded that 336 532 190 litres of fuel were used resulting in emissions as shown in Table 16. Table 17 shows total emissions from power plants and vehicles per year.

Table 16: Emission from petroleum derivatives from vehicles

	From 1 litre of fuel (g)	From 1vehicle/yr (kg)	Total (ktonne)
CO	100	100	33.65
VOC	20	20	6.73
NO _x (NO and NO ₂)	30	30	10.10
CO ₂	2500	2500	841.33

Source: MEM documents on energy balance and air pollution

Table 17: Emissions from power plants and vehicles (ktonne/yr)

	Power plants	Vehicles	Total pollution
CO		32.16	33.65
VOC		6.43	6.73
NO _x (NO and NO ₂)	14.52	10.10	33.48
CO ₂	7 053.87	841.33	9 128.13
SO ₂	20.22		17.12
Particulates	16.76		19.34

Objectives

- Completing and harmonization the legislation in line with EU acquis;
- Promoting cleaner technologies for electricity generation from fossil sources;
- Power generation in accordance with the requirements of domestic consumption;
- Encouraging energy generation from alternative sources;
- Raising efficiency levels in energy generation and consumption.

Priorities

- Drafting and implementation the necessary legislation;
- Rehabilitation of contaminated land surfaces in the area of KEK;
- Activities and measures for capacity building for utilisation of renewable energy sources;
- Use of lignite, in accordance with all the requirements for environmental protection (e.g. construction of new power plants with cleaner technologies);
- Creating conditions for energy co-generation;
- Development of economic instruments for stimulating energy saving and efficiency measures;
- Reducing energy consumption per unit per year;
- Public awareness on energy efficiency (in generation and use).

²⁰ Air pollution. KEK page 127

13. INDUSTRY

State

The negative impact of industry upon the environment in Kosovo is mainly caused by the continued use of obsolete technologies with low energy efficiency, the irrational use of resources and the generation of large amounts of waste. There are more than 200 industrial facilities, out of which a certain part has been privatised and are not working or, are operational but to a limited extent. Key environmental problems associated with industry are air, water, soil pollution, industrial and urban wastes and the generation of hazardous materials. The emissions to the atmosphere of many polluters exceeds several recognised international standards This is especially in the Prishtina and Mitrovica regions from KEK and Trepça mines. However, they are not the only cause and source of air pollution. There are central heating systems, the food industry, chemical industry, stone quarries as well as operations related to the crushing and separation of limestone, sand and gravel, and cement and asphalt factories.

Another problem is the lack of industrial WWTPs and non-treatment of wastewater and storm water collected from operational surfaces such as sedimentation ponds, oil-water separators and septic tanks/pits. Furthermore, there is limited solid waste treatment, a low efficiency of electrostatic precipitators and lack of desulphurisation and de-Noxing catalyst equipment. The land surfaces adjacent to mines are degraded and just a small part have so far been rehabilitated.

As Kosovo is aiming towards European integration, it is obliged to harmonise legislation with the EU acquis, to fulfil environmental standards and also to comply with good environmental governance mechanisms. One major issue is whether harmonisation with the environmental acquis and structural reforms such as institutional arrangements, are sufficient for real improvement of the environmental state.

Industries, which by their activities can cause emissions that are polluting the air, water and soil are obliged to obtain an integrated permit in conformity with the Law on IPPC. For new premises this must be before construction or operation of the plant. For existing premises is it required for alterations or reconstruction of facilities. Integrated conditions are defined for environmental protection by preventing and/or eliminating pollution from source and providing natural resources management. It includes pollution control and the creation of a sustainable balance between human activity and socio-economic development. It involves rational use of natural resource promoting the regenerative capacities to their full extent.

Objectives of the industrial sector

A key target is improving the environmental performance of industrial units by ensuring they prepare, develop and implement an Environmental Management System (EMS) for their respective facility. Other objectives are:

- Completing legislation in line with the EU acquis;
- Creating mitigation mechanisms to meet the environmental standards;
- Encouraging improvements and advanced technologies through the application of 'best practices' on environmental management.

13.4. Priorities

These involve the following:

- Drafting and implementing the legislation;
- Institutional support of the projects based on clean technologies and renewable resources;
- Determination of management mechanisms for effective implementation of the Law on IPPC;
- Addressing environmental issues inherited from the privatisation process.

14. TRANSPORT

State

Kosovo has today a relatively large road network. In recent years the state of road infrastructure has significantly improved with new road construction and improved maintenance management for existing structures. However it cannot be stated that the infrastructure meets EU standards.

The overall length of the road network is about 1 700km with highways, main streets with two lanes and secondary (regional) roads. The total number of the registered vehicles from 2000 to 2006 is 332 378, and this number is growing. Road transportation is considered to be the major contributor of air pollution in Kosovo, especially in the larger cities. Emissions from vehicles are SO₂, CO, NO_x and particulate matter. Sulphur pollution represents a special problem due to low quality diesel fuel with a high sulphur content. As the number of vehicles has increased, so has air pollution become a major concern for policy makers.

Kosovo Railways operate a total length of 333.451 km of open railway line, 105.784 km at stations and 103.4 km industrial lines. The railway infrastructure situation has deteriorated due to lack of maintenance and investment. Railway passenger numbers and freight transportation have declined significantly during the last decade.

Air transportation is based at Prishtina International Airport 'Adem Jashari' (civil and military flights) and Gjakova Airport (military flights). International flights have increased rapidly in recent years.

Objectives of the transport sector

The main objective is to design, develop and operate a safe and sustainable transportation system for citizens, business, visitors and the environment in general.

Priorities

These involve:

- Co-ordinated mass transport system incorporating road, rail and air transport with public amenities, PPP and PSP;
- Reduction in air pollution caused by road traffic by implementing fuel quality standards and promoting catalytic converters on vehicles;
- Ensuring the import of old vehicles is restricted to 'fit for purpose' only;
- Encouraging more services delivered through non-road transportation;
- Improving and investing in inter-city and trans-boundary railway system, using latest technologies for environmental protection (electrification, bio-degradable construction materials, energy efficient designs);
- Promoting the use of natural gas and other alternative fuels, as well as hybrid vehicles;
- National and urban road network upgraded for increased volume of traffic;
- Upgrading public transportation and decommission obsolete public transportation vehicles;
- Implementing noise and vibration protection measures for vehicular traffic in urban and inner city areas;
- More urban planning for pedestrian zones and special bicycle paths.

15. TOURISM

Status

As mentioned under 'bio-diversity', Kosovo is rich in flora and fauna, forests and herbaceous vegetation, beautiful landscapes, flowing streams and numerous lakes. These natural conditions are favourable for the development of different types of tourist activities such as sports (winter and summer), health spas, hunting, rural tourism, works outings, general vacations, recreational adventure holidays and mountain walking.

These different types of sustainable tourism and eco-tourism represent an ideal framework for future development. Eco-tourism and agro-tourism in particular include all tourism types and it provides possibilities for income generation throughout the year and with minimum environmental impact. However, although potential is there, it is still in the initial phases.

Tourism development will also result in an increased number of visitors to the protected areas and natural monuments. Unfortunately, the capacities have not reached a satisfactory level at the moment to make this sustainable. There is also more need for tourism support literature such as leaflets, maps and tourist companions.

Mountain tourism has great potential with sports in the winter and walking holidays in the summer. The Albanian Alps and Sharr Mountain regions both have good opportunities to develop these types of activity. Their natural beauty with vast untouched landscapes have great charm, with peaks reaching over 2 600m and dotted by rare and natural flora and fauna.

Health tourism is another activity that needs developing. There are thermal spas in Peja, Klllokot and Banjska. Other sources are ready for further development. There are also natural attractions such as the Mirusha canyon and waterfalls, Rugova ravine and canyon, Drini i Bardhë source, bifurcation of Nerodime, the Marble Cave in Gadime, Radavc Cave, Petreshtica, Panorc and Bresalc just to mention a few.

Table 18: Tourist places in Kosovo (2000-2006)

Year	hotel/motel with restaurant	Hotel/motel without restaurant	Hotels/camps in mountains	camping and auto stops	Short stay places	Restaurants	Night clubs/bars	Canteens and kitchens	Fast-food outlets	Tourist agencies 6330	Total
2000	95	36	11	3	153	1751	152	226	82	195	2704
2001	132	53	16	7	241	2226	223	287	218	214	3617
2002	202	74	22	23	347	2459	382	342	848	346	5045
2003	122	16	18	2	150	1121	75	168	342	183	2197
2004	190	41	28	8	181	1669	148	235	522	263	3285
2005	250	53	32	13	413	2238	503	338	886	376	5102
2006	284	64	26	8	217	2078	831	334	951	348	5141

Source: Business Registration Agency at Ministry of Trade and Industry

However, unless properly managed and regulated, tourism development can lead to negative impacts upon the environment. The very attraction for tourists is often damaged rendering further investment of little value. But the positive side is that income and economic instruments can be targeted to support nature and environmental protection activities, on building adequate infrastructure as well as supporting monitoring and scientific research.

Objectives

The sector is characterised by lack of tourism strategy, tourist facilities built without respecting the environmental procedures and still incomplete tourist support infrastructure. The objectives should be as follows:

- Completing and harmonisation of tourism legislation with the EU acquis;
- Development of tourism strategy by respecting environmental conditions;
- The development of the tourism sector;
- Capacity building and education about the impact of environmental tourism.

Priorities

These are as follows:

- Developing and implementing the legislation;
- A tourism strategy co-ordinated also with air, water and soil environmental protection measures;
- A public awareness and promotion campaign put in place to advertise the beauty and unique natural and cultural heritage of Kosovo;
- Economic instruments to upgrade tourism infrastructure depending upon compliance with the initial EIA permitting processes;
- Support to eco- and agro-tourism initiatives from the private sector;
- Collection of eco-tax on the border crossing (e.g. as for Montenegro) dedicated to the management of protected zones, forestry and rivers, and for sustainable environmental planning in the future.

CHAPTER III

This final Chapter is concerned with environmental policy issues and particularly environmental education, public awareness, research & development as well as the establishment of economic instruments. It then highlights the priority sectors where these economic instruments can be applied. Again, all these objectives and priorities will be further developed in the NEAP (2011-2015).

1. ENVIRONMENTAL EDUCATION

1.1. State

Plans and programmes for environmental education at different school levels were drafted several years ago. At present, a standard curriculum covering all levels of education is under preparation. This foresees incorporating environmental issues and sustainable development as extra-curricula (or facultative subjects). At the same time, the 'Green Package' is at the implementation stage where initially personnel training throughout Kosovo took place. However, there is little education nor awareness training for specific special interest groups such as farmers, consumers and households.

Unfortunately, educational programme are not sufficient in themselves for managing environmental problems in a systematic manner and according to a modern critical concepts. Environmental NGOs have a rather limited impact due to lack of experience and financial resources. In addition, the media are not paying adequate attention to environmental issues and rarely follow-up key issues of public importance. Often, environmental problems are approached in a more sensational manner and informed debate on radio or television is inadequate.

1.2. Educational objectives

These include:

- Integration of environmental issues into the curricula at all levels of education. Selected lectures with content related to environmental issues could be encouraged;
- Institutional and financial support in order to increase public awareness, including the dissemination of information and education concerning environmental issues.

1.3. Priorities

These can be listed as follows:

- Inclusion of environmental issues and sustainable development into the curricula;
- Increase in inter-ministerial co-operation for common environmental programmes;
- Support to environmental NGO's regarding the education and increase in public awareness for environmental issues;
- Creation of conditions for the comprehensive media coverage concerning environmental aspects of national importance.

More educational programme and public awareness campaigns are urgently needed. The population in Kosovo is young which would facilitate the behavioural changes needed. The country faces diverse socio-economic challenges and although educational institutions are still being established within a sustainable structure, environmental education is still treated as a secondary issue.

2. RESEARCH AND DEVELOPMENT (R&D)

2.1. State

Currently, Kosovo has no institutions that deal exclusively with scientific problems within environmental protection. There is a lack of scientific institutions, R&D projects, as well as a lack of a specialised scientific cadre dedicated to the environment.

The limited environmental research that was performed in the past and in the post war period was mainly carried out on an individual basis and often not related to the needs of environmental protection. Today, the undefined political status of Kosovo has also halted any involvement by the scientific community in international conventions and research projects.

2.2. R&D objectives

These are:

- Further development of 'centres of excellence' for strengthening institutional and human capacities dealing with environmental research;
- Increased co-operation between scientific institutions and economic sectors (PPP and PSP) in Kosovo;
- Added co-operation of scientific institutions with international institutions, particularly for scientific research projects.

2.3. Priorities

These are identified as:

- Establishment of specialised scientific institutional capacities;
- Financial support to scientific institutions and especially their personnel development;
- Targeted scientific research for the transfer of cleaner technologies and exploitation of new, environmentally friendly energy resources.

3. ECONOMIC INSTRUMENTS

3.1. State

To date, economic instruments for efficient environmental protection are not established in Kosovo. In other words, there is no financing mechanism i.e. no reliable source of funds, for implementing the environmental protection measures that are considered as a priority for the country.

In addition, due to the limited monitoring of polluters, the 'polluter pays' principle will be difficult to apply over the short term. Additional obstacles are the untrained level of administrators that would be capable of applying and supervising the implementation of the economic instruments. Eco-awareness by enterprises (the business community) and the general population is still low.

EU policy clearly defines the application of economic instruments as the best way for economic and ecological integration. However, presently in Kosovo the legal framework does not sufficiently encourage the economic subjects to pay special attention to the environment, particularly in the application of cleaner technologies or for better control of existing technology.

3.2. Objectives

These are:

- Reducing pollutant emissions through additional financial payments;
- Creation of funds for environmental protection projects and for rehabilitation of environmental damage;

- Application of the 'polluter pays' and 'user pays' principles;
- Changing the behaviour of producers and consumers.

3.3. Priorities

These include:

- Establishment of the Environmental Protection Fund (the 'Eco-Fund') as given in the Law on Environmental Protection;
- Develop indicators for successful implementation of the economic instruments;
- Evaluation of possible effects of the policy package, especially the calculation of costs for reducing pollution in each sector, with their consequences (cost/benefits) and legitimacy;
- Consultation with the public in order to raise environmental awareness and disseminate to business and industry the benefits of introducing these economic instruments.

4. ECONOMIC INSTRUMENTS IN PRIORITY SECTORS

4.1. Energy

The energy sector is characterised by the production waste, emission of pollutants and the use of non-renewable fuels and resources.

The main priorities for the Eco-Fund are:

- Co-financing of projects to increase the energy efficiency of existing buildings;
- Reducing general costs for those who improve energy efficiency through their own investments;
- Stimulating the use of renewable energy resources;
- Subsidising the use of natural gas and 'green fuels';
- Applying additional taxes for the use of fossil fuels harmful to the environment;
- Clear differentiation of energy fuel prices;
- Differentiated tax charges for fuels according to CO₂ emissions;
- Incentives for household appliances with high energy efficiency.

4.2. Solid Waste

The solid waste sector is characterised by the high production of household waste, over-use of packaging, non-collection, non-treatment and non-re-use of waste materials, illegal dumping and waste facilities in need of upgrading.

Implementation of the Eco-Fund would have a dramatic impact upon solid waste management in Kosovo. The main priorities are:

- Increase in public awareness for environmental protection and waste management;
- Supporting new technologies for re-use and recycling solid waste;
- Providing incentives to households and industry for reducing waste production at source;
- Supporting enterprises to develop innovative packaging and storage technologies;
- Placing a tax on the use of plastic materials (e.g. non-deposit bottles, carrying bags);
- Incentives for rehabilitation of places polluted by waste (e.g. tax reduction for costs);
- Construction of local facilities and installations for waste treatment, including incineration of hazardous waste materials;
- Incentives for prompt payment by households and industry for their waste collection services.

4.3. Transportation

The main priorities for the Eco-Fund are:

- Subsidies for railways (passenger and freight transportation);
- Subsidies for public transportation, especially in the cities, and supporting the non-use of personal vehicles;
- Differentiation of tax charges including custom and excise rates when importing motor vehicles (personal and commercial), taking into account amortisation, fuel costs, hybrids, whether or not they are equipped with catalytic exhaust systems;
- Increase of taxes for the use of motor vehicles;
- Increase of taxes for fuels containing high sulphur and lead content;
- Setting taxes for obsolete vehicles and scrap tyres in accordance with EU acquis.

4.4. Industry

The impact of industry as a result of using the environment, pollutant emissions to the air, water and soil, and the generation of waste, shall be managed through 'loaded' measures.

The main priorities for the Eco-Fund are:

- Development of suitable loans for industries focused upon technological changes (concerning the process, energy saving, new products, waste reduction, use of recycled products), which reduce their impact upon the environment;
- Customs and excise exemption for the import of equipment that directly or indirectly contributes to the reduction environmental pressures;
- Application of mitigation measures when delivering environmentally friendly products;
- Reduction of taxes (e.g. VAT) when financing environmental protection projects;
- Reduction of taxes for licensed pollutants (e.g. wastewater, emissions to air, solid waste treatment) to an equivalent amount that the polluter spends for solving these problems;
- Increase of existing taxes and application of additional taxes for those products that put pressure, or load the environment;
- Increase of taxes for industrial and hazardous waste disposal;
- Application of rigorous penalties for those violating the law.

4.5. Tourism

The main development options that are expected in Kosovo in the future include countryside, winter and mountain tourism.

The main priorities for the Eco-Fund are:

- Stimulating the construction of hotels and increasing accommodation capacities that use energy efficient technologies e.g. solar collectors;
- Setting planning conditions for hotels and accommodation for environmentally friendly infrastructure solutions;
- Providing suitable loans for investments in infrastructure that support tourism but with reduced impact upon the environment;
- Support to improved services e.g. wastewater treatment, solid waste disposal;
- Collection of eco-tax on the border crossing (e.g. as for Montenegro) dedicated to the management of protected zones, forestry and rivers, and for sustainable environmental planning in the future.

4.6. Agriculture

The realistic option for sustainable development in Kosovo is the promotion of organic agriculture and the development of value added market driven products. Given the undefined direction, the general (low) level of agricultural production, the use of artificial chemicals (fertilizer inputs up to 7 times less than the average in the EU), it is important to explore future economic instruments that would yield better results.

The main priorities for the Eco-Fund are:

- Provision of loans and credit facilities to support organic production, processing and food manufacturing. This will include assisting farmers to meet the EU acquis and international standards for certification and quality control of their products;
- Provision of incentives for the import of agricultural inputs for eco-agriculture and for delivery of foodstuffs produced in the eco-friendly manner;
- Subsidy for products that support bio-diversity within the agricultural system but which may not be economically viable in the short-term (e.g. production of rare species and certain varieties of vegetables and/or livestock products).

**ANNEX 1. 'DPSIR' FRAMEWORK
FOR BIO-DIVERSITY, AIR, WATER
AND SOIL**

Sector	Driving forces	Pressures	State	Impact	Response
Bio-diversity	<p>Population</p> <p>Agriculture</p> <p>Forestry</p> <p>Power Plants</p> <p>Industry</p> <p>Stone Quarries</p>	<ul style="list-style-type: none"> Increased number of population Increased demand for food and feed Intensification of Agriculture Use of fertilizes Use of pesticides Increase demand for wood Irrigated agricultural land Emission of pollutants (dust, ash) Increased number of stone quarries 	<ul style="list-style-type: none"> Lack of detailed inventory for bio-diversity 1 800 species of flora classified into 139 kingdoms, 63 phyla, 35 orders and 20 classes may be over 2 500 species 200 endemic, endemic-relict and sub-endemic plants 250 species of wild vertebral (little study for invertebrates) the richest areas with fauna are in Malet e Sharrit and Bjeshkët e Nemuna 	<ul style="list-style-type: none"> loss of bio-diversity loss/eradication of natural resources loss/eradication of landscapes destruction and damage to biodiversity loss of quality of life 	<ul style="list-style-type: none"> draft Strategy and Action plan for Biodiversity 2011-2015 increase area of protected zones inventory and GIS presentation of species, habitats and protected landscapes preparing Red Book for flora and fauna protected endemic species of plants and animals protected gene pool of flora and fauna develop national indicators for bio-diversity proceeding with establishment of National Park Malet e Sharrit as the biosphere reserves within UNESCO programme protection of Sharr and Nemuna mountains as Orinito wildlife sanctuary New afforested areas
Sector	Driving forces	Pressures	State	Impact	Response

Air	Population Transport Power Plants Industry	<ul style="list-style-type: none"> • increased number of population • increased density of population • increased number of cars • emission of pollutants (dust, ash) 	<ul style="list-style-type: none"> • air pollution in urban zones measured in different hot spots (Rilindja, Mitrovica) • no completed and integrated monitoring system for air quality • it is not known whether Kosovo is, or will be, influenced by the effects of climate change • Kosovo is not part of UNFCCC and Protocols because not a member of UN • air quality is monitored by governmental institutions and some private economic operators • only SO₂, PM10, NO_x, CO and O₃ parameters are monitored 	<ul style="list-style-type: none"> • loss of quality of life • diseases and pollution spread through the environment • environmental damage • poor quality of agricultural products • damage to cultural and natural heritage 	<ul style="list-style-type: none"> • further legislation according to the needs of the state and to requirements of EU acquis • improved enforcement mechanisms • integrated permit for the largest polluters • raised awareness (public and companies) • use of higher quality fuels • improved and advanced system of public transport • reduced emissions from industry and energy production
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Sector	Driving forces	Pressures	State	Impact	Response
Water	Population	<ul style="list-style-type: none"> increased number of population 	<ul style="list-style-type: none"> water and sewage services from 7 regional companies 	<ul style="list-style-type: none"> insufficient drinking water supplies 	<ul style="list-style-type: none"> construction of wastewater and drinking water treatment plants
	Power Plants	<ul style="list-style-type: none"> increased density of population 	<ul style="list-style-type: none"> lack of infrastructure for collection and treatment of wastewater 	<ul style="list-style-type: none"> insufficient services for sewage and wastewater 	<ul style="list-style-type: none"> control of rivers/ streams using (bio) indicators for remediation
	Industry	<ul style="list-style-type: none"> emission of pollutants (dust, ash) 	<ul style="list-style-type: none"> lack of infrastructure for drinking water supplies 	<ul style="list-style-type: none"> pollution of surface and groundwaters 	<ul style="list-style-type: none"> implementation of environmental procedures (EIAs) especially when activities are planned to be made on the water areas and wet lands
	Agriculture	<ul style="list-style-type: none"> increased demand for food and feed 		<ul style="list-style-type: none"> pollution of drinking/tap water 	
	Forestry	<ul style="list-style-type: none"> intensification of agriculture 		<ul style="list-style-type: none"> low quality of drinking water leading to associated health problems 	<ul style="list-style-type: none"> water provision through a strategy including safety of dams and water supply network so that the benefits can be maximised
	Transport	<ul style="list-style-type: none"> increased use of agri-chemicals (fertilizers, pesticides) increased number of cars 			<ul style="list-style-type: none"> Establishing programmes for monitoring water quality Application international standards for River Basin development

Sector	Driving forces	Pressures	State	Impact	Response
Soil	Population Agriculture Forestry Industry Power Plants Transport Mining	<ul style="list-style-type: none"> increased number of population increased density of population increased demand for food and feed intensification of agriculture increased use of agri-chemicals (fertilizers, pesticides) increased number of cars 	<ul style="list-style-type: none"> increased production of solid and liquid wastes production increased number of illegal constructions soil erosion and degradation large quantities of uncontrolled mine wastes 	<ul style="list-style-type: none"> degradation of soil pollution of soil change of landscape erosion flooding 	<ul style="list-style-type: none"> protection of agricultural land/soil from change of use (a top priority for the Government) establishing a system for monitoring soil quality legal follow-up for agricultural land degradation and damage to river bed from gravel exploitation preparing of a land cadastre re-cultivation of polluted soil and land introduction of 'Good Agricultural Practices' Support to organic agricultural production increased public awareness about the importance of land protection and actions by civil society

ANNEX 2. ENVIRONMENTAL LEGISLATION

RELEVANT TO THE

KOSOVO ENVIRONMENTAL STRATEGY

(KES, 2011-2015)

- Law on Environmental Protection No. 03/L-025
- Law on Strategic Environmental Assessment (SEA) No. 03/L-230
- Law on Environmental Impact Assessment (EIA) No. 03/L-214
- Law on Nature Protection No.03/L-233
- Administrative Instruction on development of Environmental Protection Inspectorate No.02/2004
- Administrative Instruction on organizing of Kosovo Environmental Protection Agency No.22/03
- Administrative Instruction for ecological permit No.26/05
- Administrative Instruction for licensing of persons and enterprises on drafting report related to environmental impact assessment No.03/2004
- Administrative Instruction for cadastre of emissions of polluters on environment No.2004/09

At the same time, the new laws on Water and on Construction have been drafted by MESP and are waiting approval

Air

- Law on Air Protection from Pollution no. 2004/30
- Administrative Instruction on rules and standards of the discharges on air by the stationary sources of pollution
- Draft Administrative Instruction for Air Quality Assessment
- Draft Administrative Instruction for the allowed norms of discharges in air by mobile sources
- Draft Administrative Instruction limited values – norms of air quality
- Draft Administrative Instruction for substances that harm the ozone layer
- Draft Administrative Instruction on the control of volatile organic compound (VOC) emissions resulting from storage, loading or unloading and transportation of petrol.

Waste

- Law on Waste no 02/-L-30
- Administrative Instruction on Conditions for Designation of Location and Construction of landfills Nr. 01/2009
- Administrative Instruction for landfill administration Nr. 10/07
- Administrative Instruction for competencies of the owner and operator on waste treatment Nr. 08/07
- Administrative Instruction on Package and waste packaging, Nr. 09/07
- Administrative Instruction on hazardous wastes, Nr.06-03/2008, date 27.02.2008
- Draft Administrative Instruction on import, export and waste transit
- Draft Administrative Instruction on Mandatory penalties
- Draft Administrative Instruction on Movement of the waste from public surface
- Draft Administrative Instruction for licensing and waste administration
- Administrative Instruction on Administration of the waste from electric equipments and electronic - Nr.39/07- MESP, date 12.07.2007
- Administrative Instruction on Administration of the Medicinal Waste – Nr.05/2008, date 27.02.2008
- Administrative Instruction on Liquidation of Medicinal Waste and Products -Nr. 08/25, date 03.07.2008
- Administrative Instruction on Administration of Waste and Oils that are used - Nr.03/07-MESP , date 20.01.2006
- Administrative Instruction on Construction and Demolition Wastes Nr.05/07-MESP, date 20.12 2006
- Administrative Instruction on Waste From Battery And Expended Accumulator Nr.02/07-MESP, date 20.12.2006

- Administrative Instruction on Administration of end of Life Vehicles and their Wastes Nr.04/07-MESP , date 20.12.2006
- Administrative Instruction on Poly-Chloral Biphenyls and Three-Phenyls - Nr.10/07-MESP, date 26.07.2007

Water

- Law on Water no. 02/L-24, UNMIK Regulation 2004/41
- Law on Fertilisation 02/L-24, UNMIK Regulation 2003/10
- Administrative Instruction on Testing and Enforcing Minimum Standards of Drinking Water Quality No. 2/99
- Administrative Instruction on the Content, Form, Conditions and Method of Issuing and Retaining the Water Permit - No.24/05-MESP , date 11 October 2005
- Administrative Instruction on the Structure for water payment - Nr.2006/06-MESP, date, February 2006
- Administrative Instruction on the Content of Water Infrastructure - No.06/07-MESP, date 08/06/2007
- Administrative Instruction on Limit Values of Effluents Discharged in Water Bodies and in Public Sewage Systems Nr.08/26, Government of Kosova, date 09.07.2008
- Administrative Instruction on the Determination of the Evidence Manner and the Legitimacy from Water Inspector - No.23/05-MMPH , date 11 October 2005
- Administrative Instruction on the Criteria's for defining the Water Protection Zones and their Protection Measures for Water Resources that are Used for Drinking Water - No.13/07-MESP, date 29 October 2007
- Draft Law on Water.

Nature

- Law for Nature Conservation 02/L-18, UNMIK Regulation 2006/22
- Law on Hunting 02/L-53, UNMIK Regulation 2006/41
- Law for "Sharr Mountain" National Park Nr.13/86
- Draft Law on Nature Protection
- Administrative Instruction for the way and form of central register kept of natural protection areas, No. 04 / 2006, September 2006
- Administrative Instruction for way of determination of natural protected areas- Nr.01/07, December 2006
- Administrative Instruction for management plan of natural protected areas

Chemicals

- Law on Chemicals No. 2007/02-L116 , UNMIK Reg. 2008/8
- Law on Biocide Products No. 03/L-119
- Draft Law on GMOs

Noise

- Law on Noise Protection