



Prizren Municipal Development Plan 2025 Strategic Environmental Assessment (SEA) Report (draft)

**KOSOVO-ESTONIA
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Summary

Current strategic environmental assessment (SEA) Report is prepared as a conclusive document of the SEA process for Prizren municipality municipal development plan (MDP/PMDP2025). It is the main output of SEA and outlines the findings of the assessment process. The MDP is a statutory document prepared on behalf of the Prizren local authorities with the support provided by the UN-Habitat Kosovo.

The European Directive on SEA (2001/42/EC) was adopted into Kosovos legislation by Kosovo's Law on Strategic Environmental Assessment in 2010. According to that law, 'the purpose of Law on SEA is to ensure that environmental consequences are identified and assessed during preparation and before the adoption of certain plans and programmes, the law lists municipal development plans as ones with statutory requirement to conduct SEA (due to that fact the screening process to assess if the plan is a subject of SEA was not performed within current assessment). Kosovo's SEA legislation follows the general principle that the SEA process should be carried out in parallel with the assessed plan preparation process and it should be finalized prior to plan's approval in order to include necessary changes or corrections into the plan. Due to the fact that the Prizren MDP was prepared (not finally approved) before the Law on Strategic Environmental Assessment came into force the current SEA process was carried out after the PMDP 2025 preparation (before final approval by the municipality), the process went of from May to October 2012.

The first stage of the current SEA was the scoping, which included the analysis of relevant other plans and programs from various governance levels (international, national, local, sub-local) and collection of environmental baseline data. According to that information there were a number of issues highlighted at the scoping phase which are of concern and critical to sustainable development within the Prizren area, such as ground water and surface water quality, wastewater treatment, solid waste management and sustainable land use patterns. Within the scoping phase of the SEA three environmental alternatives to be further analysed during the assessment stage of the SEA were also proposed – zero scenario/do-nothing scenario, full implementation of the MDP-scenario and integrated functional zoning scenario. The environmental objectives, targets and indicators were also prepared during the scoping phase in order to predict impacts, and describe and monitor change of PMDP 2020s on the environment. The objectives are divided into four groups: I biodiversity, landscape and land use, II solid waste management, III water protection and IV climate change and energy efficiency. They are mainly characterized by the aim to improve the current environmental situation in Prizren, most of the indicator and targets are measurable and they should be used to monitor the progress of achievement the set objectives periodically.

During the assessment phase it was evaluated how the enforcement of the PMDP 2025 would influence the environmental situation and what aspects should be considered while the plan is going to be implemented to minimize the potential environmental risks. The special attention should be paid on locating the new development areas, both industrial and residential. It is likely, that the intensification of the current industrial areas is more sustainable than establishing new ones, as the relevant infrastructure is already present, new industrial facilities should be carefully and compactly located to allow to collect possible negative impacts on environment and therefore the range of the environment under the impact will be smaller than in the case of several different industrial areas. If planned industrial or other facilities are evaluated to create an additional point pollution source, especially for water, relevant means and measures (proper wastewater/waste collection and treatment facilities, air

filtration systems etc) are needed to establish in line with carefully planned industrial objects. When it comes to new or expanded residential areas, it is important to bear in mind that these will be located in the way that the high-living quality is guaranteed for the potential inhabitants and on the other hand, the potential negative impacts of the establishment of the new settlement on the natural environment would be as minimal as possible. A proper planning of relevant infrastructure (water/wastewater management, energy infrastructure, conditions for effective and sustainable transport etc) for new settlement areas helps to minimize the potential environmental risks. The vital environmental issue while implementing the plan is the sustainable use of natural resources, in addition to the need to protect valuable landscapes, agricultural areas, soil and water resources while establishing new development areas, there is a need to draw attention to mineral resources as mining is economic activity which strongly affects natural resources and landscape. Although there is no adequate data about the mineral resources of Prizren the current knowledge indicates different mineral resources are present and the interest for mining within the area might occur. Through safeguarding the balanced land use patterns with current MDP and other spatial planning documents it is possible to avoid and mitigate potential negative environmental effects. Properly planned and implemented development areas (both residential and industrial) help to decrease biodiversity loss and protect valuable habitats. It also provides possibilities to establish relevant infrastructure and set up systems to prevent pollution from sewage and waste. In the case of Prizren MDP, it is important to mention, that not all vital environmental issues (i.e. water protection, solid waste management) could not be handled fully on local governance level. The complex issues of point (landfill) and non-point (untreated sewage) sources based pollution needs more general planning activities from national authorities.

PMDP2025 includes the proposals for further implementation projects mainly for the forthcoming 2-5 years, the possible impacts of all the project proposals were assessed. The general conclusion of the implementation suggestions assessment is that there are no major negative environmental impacts foreseen. This is partly caused by the fact that the implementation projects are rather general by nature and consist a lot of proposals to prepare further plans and programmes for the Prizren area. Among the projects a few of them identified within the evaluation matrix to be with strong or very strong environmental impacts. Both positive and negative environmental aspects were analysed together with economic and other possible relevant impacts. From the positive side the projects of natural tourism development plan, river basin management plan, construction of treatment facilities and sustainable residential planning/design guideline could be mentioned. It was assessed that projects such as agricultural development project, agricultural industrial zone project and Prevala ski center project might include moderate to strong negative environmental impact, therefore, in order to gain expected socio-economic benefits they should be implemented by carefully considering environmental impacts and relevant mitigation measures. The purpose of the latter is to avoid or to decrease any potential negative impact on environment. The selection of the most suitable mitigation measures in an on-going process during the whole period of plan development and it should be carried out in the close co-operation of all the relevant stakeholders (decision-makers, experts, investors, local inhabitants, NGO-s). Current report proposes a set of mitigation measures to consider if new industrial areas, tourism attractions, settlements or infrastructure facilities are going to be planned and established.

The general conclusion of the SEA states that the assessed municipal development plan serves a purpose to improve the current socio-economic and environmental situation and does not include any major negative environmental impacts. The fact that the assessed MDP had been

prepared and will likely to be approved itself has therefore a positive environmental impact. This very comprehensive document with the collection and analysis of the current data and situation of the municipality will form a good analytical basis for further sustainable decision-making processes. Sustainability issue is included as a priority policy into the area's strategy - objectives, implementation provisions derived accordingly.

From the three proposed alternative environmental scenarios (do-nothing, full implementation and combined scenarios) the integrated functional zoning scenario is proposed as a suggested scenario. According to that alternative the current MDP is going to be supplemented with more specific spatial framework to ease the implementation process of the MDP. It proposes that adequate amount of reasonably located development areas would be designated with MDP in order to provide clear development perspectives for the future and spatial guidelines for lower level planning documents. It also prevents developments (with potentially negative environmental impacts) to be located improperly or too scarcely and helps to plan and establish necessary infrastructure, as well as public and private services. For the same purpose – to create effective basis for the plan's implementation – it is suggested that either before the final approval of the MDP or during the next revision of the plan the project list will be revised and amended with short-medium-and long term projects with responsible bodies to achieve the plans strategic goals. Including clear steps will safeguard the achievement both economic and environmental objectives of the plan.

1. Background

1.1 Introduction

Spatial planning has a vital and growing role for countries and regions. ‘Spatial planning can help to deliver economic, social and environmental benefits. Correctly administered, it is an important tool for promoting investment, development, environmental improvements and quality of life’ (United Nations..., 2008; 40). Therefore it is essential to ensure that relevant planning procedures at all governance levels and activities are conducted in the way to support the well-balanced development perspectives. Considering the significant influence of spatial planning decisions, one cannot imagine that policy-making in this area could be carried out without taking into account interconnections between policy areas, territories and all the relevant stakeholders. Therefore it is evident that the role of any governance level – international, national, regional or local – cannot be underestimated in the spatial planning.

SEA is a process for evaluating at the earliest appropriate stage, the environmental impact, and consequences, of policies, plan or programmes initiatives. The purpose is to ensure that the environmental consequences of plans or programmes are assessed during their preparation and before they are finally adopted. It also gives the public and other interested parties an opportunity to comment and to be kept informed of decisions and how they were made. SEA is often defined using the definition by Therivel as ‘the formal, systematic and comprehensive process of evaluating the effects of a proposed policy, plan or programme or its alternatives, including the written report on the findings of that evaluation, and using the findings in publicly accountable decision making’ (Therivel et al 1992).

Current SEA Report is prepared as a conclusive document of the strategic environmental assessment process for Prizren municipality municipal development plan (MDP) it is the main output of SEA, which outlines the findings of the assessment process. The MDP is a statutory document prepared on behalf of the constituent local authorities with the support provided by the UN-Habitat Kosovo.

The European Directive on SEA (2001/42/EC) was adopted into Kosovos legislation by Kosovo’s Law on Strategic Environmental Assessment in 2010. According to that law , ‘the purpose of Law on SEA is to ensure that environmental consequences of certain PP’s are identified and assessed during their preparation and before their adoption. Certain plans and programmes prepared by statutory bodies and which are likely to have a significant impact on the environment will now require an SEA to be carried out, where the preparation of such plans and programmes is started after that date’.

1.2 International legislation, plans, programmes, conventions and protocols

1.2.1 EU SEA Directive

The Council Directive 2001/42/EC on assessment of the effects of certain plans and programmes on the environment (SEA Directive) was adopted on 27.06.2001. The SEA Directive applies to a wide range of public plans and programmes (e.g. on land use, transport, energy, waste, agriculture, etc). The SEA Directive does not refer to policies. The Directive (European Parliament..., 2001) states that ‘plans and programmes in the sense of the SEA Directive must be prepared or adopted by an authority (at national, regional or local level) and be required by legislative, regulatory or administrative provisions’.

An SEA is mandatory for plans/programmes which are listed at the Directive as follows:

- 'are prepared for agriculture, forestry, fisheries, energy, industry, transport, waste/water management, telecommunications, tourism, town & country planning or land use and which set the framework for future development consent of projects listed in the EIA Directive;
- have been determined to require an assessment under the Habitats Directive'.

Broadly speaking, for the plans/programmes not included above, the Member States have to carry out a screening procedure to determine whether the plans/programmes are likely to have significant environmental effects. If there are significant effects, an SEA is needed. The screening procedure is based on criteria set out in Annex II of the Directive.

The SEA procedure can be summarized as follows: the SEA report is prepared in which the likely significant effects on the environment and the reasonable alternatives of the proposed plan or programme are identified. The public and the environmental authorities are informed and consulted on the draft plan or programme and the SEA report prepared. The SEA report and the results of the consultations are taken into account before adoption. Once the plan or programme is adopted, the environmental authorities and the public are informed and relevant information is made available to them. In order to identify unforeseen adverse effects at an early stage, significant environmental effects of the plan or programme are to be monitored.

1.2.2 Other EU Directives

There are numerous other EU directives the SEA Directive has clear relations and which are relevant if environmental and sustainability issues are under the consideration (see list in Annex 1). According to Marsden (2008) 'the SEA has close procedural links to the EIA Directive, especially as EA for listed sectors under the latter must set the framework for projects listed under the former. It also has close procedural links with the Habitats Directive, which is explicitly mentioned in the SEA directive. The Water Framework Directive, in common with the Habitats Directive contains its own requirements not just for the production of plans (and programmes) but also assessment, triggering the need for coordination procedures between the different laws'.

1.2.3 EU 2020 Strategy

In addition to abovementioned EU legislative documents the EU 2020 strategy with its priorities, targets and flagship initiatives¹ is important policy document for both the EU itself but also for the neighboring regions, especially Western Balkans as the regional cooperation with this region has been identified as one of the policy priorities for EU. Within EU 2020 strategy (European Commission, 2010) the potential enlargement of EU with Western Balkans countries as identified as an external policy tool for growth and jobs. The priorities of the strategy are 'smart, sustainable and inclusive growth'. There are seven flagship initiatives, out of which *resource efficient Europe* and *An industrial policy for the globalization era* are the ones directly connected with sustainability issues, but other initiatives such as *Digital agenda for Europe*, *Innovation Union*, *Youth on the move*, *An agenda for new skills and jobs* and *Europeal platform against poverty*, could also, if implemented efficiently, contribute into sustainable growth principle. The strategy also includes measurable targets to achieve during the implementation period, there is no doubt that it is fully beneficial for both current and

¹ Further information about the strategy and its implementation progress can be found: http://ec.europa.eu/europe2020/index_en.htm

perspective member states to co-operate in order to achieve strategy's environmental targets such as 20% reduction of greenhouse gas emissions, 20% growth of the rate of energy from the renewables and energy efficiency. Therefore it is reasonable to integrate the direction of this targets into national, regional and local environmental strategies and action plan, strategic environmental assessment procedures included.

1.2.4 UN Millennium Development Goals

UN has an active role in Kosovo's development, although Kosovo is not a member state, UN operates in Kosovo under the mandate of UNMIK mission in order to ensure conditions for the peaceful and normal life for all inhabitants of Kosovo and advance regional stability in the Western Balkans. The UN strategic goals were adopted in 2000, when world leaders gathered in New York to attend the Millennium Summit, the participants approved the UN Millennium Declaration (UN General Assembly, 2000) with a main general aim to reduce poverty with the deadline of 2015. This initiative have become known as Millennium Development Goals². There are 7 goals with specific targets, one of the goals is dedicated to the environmental sustainability, in order to ensure that following targets are set:

- 'integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources;
- reduce biodiversity loss, achieving, by 2010, a significant reduction on the rate of loss;
- halve, by 2015, the proportion of the population without sustainable access to safe drinking water and basic sanitation;
- by 2020, to have achieved a significant improvement in the lives of at least 100 slum dwellers'.

1.2.5 Århus Convention, Espoo Convention and Kiev Protocol

Århus Convention

This Convention (Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matter) was adopted on 25 June 1998 in the Danish city of Aarhus (Århus) at the Fourth Ministerial Conference as part of the "Environment for Europe" process. It entered into force on 30 October 2001.

The Århus Convention establishes a number of rights of the public with regard to the environment. According to the convention (The UNECE Convention on Access ..., 1998) 'the Parties to the Convention are required to make the necessary provisions so that public authorities (at national, regional or local level) will contribute to these rights to become effective. The Convention provides for:

- the right of everyone to receive environmental information that is held by public authorities. This can include information on the state of the environment, but also on policies or measures taken. Applicants are entitled to obtain this information within one month of the request and without having to say why they require it. In addition, public authorities are obliged, under the Convention, to actively disseminate environmental information in their possession;

² Further information about the goals and implementation progress can be found:
<http://www.un.org/millenniumgoals/bkgd.shtml>

- the right to participate in environmental decision-making. Arrangements are to be made by public authorities to enable the public affected and environmental non-governmental organisations to comment on, for example, proposals for projects affecting the environment, or plans and programmes relating to the environment, these comments to be taken into due account in decision-making, and information to be provided on the final decisions and the reasons for it
- the right to review procedures to challenge public decisions that have been made without respecting the two aforementioned rights or environmental law in general.'

The Espoo Convention and Kiev Protocol

The Espoo (EIA) Convention (The UNECE Convention on Environmental..., 1991) sets out the 'obligations of parties to assess the environmental impact of certain activities at an early stage of planning'. It also lays down 'the general obligation of States to notify and consult each other on all major projects under consideration that are likely to have a significant adverse environmental impact across boundaries'. The Convention was adopted in 1991 and entered into force on 10 September 1997.

As Marsden (2008) states, 'the Kiev Protocol is relevant to mention in the context of strategic environmental assessment, as the as it could be considered to be one of the most significant international legal instruments making provision for the assessment of strategic proposals (Marsden, 2008)'. The Protocol was adopted by an extraordinary meeting of the Parties to the Espoo Convention, held on 21 May 2003 and it requires its Parties to evaluate the environmental consequences of their official draft plans and programmes. Strategic environmental assessment (SEA) is undertaken much earlier in the decision-making process than project environmental impact assessment (EIA), and it is therefore seen as a key tool for sustainable development. The Protocol also provides for extensive public participation in government decision-making in numerous development sectors. The protocol requires that a strategic environmental assessment shall be carried out for plans and programmes which are prepared for agriculture, forestry, fisheries, energy, industry including mining, transport, regional development, waste management, water management, telecommunications, tourism, town and country planning or land use, and which set the framework for future development consent for projects. Suggestions to promote public participation and stakeholder involvement are also agreed with the protocol.

1.3 Spatial planning and SEA in Kosovo

1.3.1 Kosovo's background information

The REC strategic environmental analysis of Kosovo (The Regional ..., 2008; 5, 8,18) describes Kosovo with 'an area of 10,887 square kilometers. It covers an area of 1.1 million ha. About 430,000 ha are forested (39.1%) and 577,000 ha are classified as agricultural land (52%). Of the latter, 31% are pastures and about 69% is arable. It is a geographical basin, situated at an altitude of about 500 meters, surrounded by mountains, and divided by a central north/south ridge into two sub-regions of roughly equal size and population. It is a part of the South East European (or Balkan) region and borders Serbia to the North and East, Montenegro on the West, Albania on the South West, and FYR Macedonia on the South East. There is a continental climate, recognized by temperature extremes and in winter thermal inversions occur frequently.



Figure 1. Kosovo's location

The concentration of the local endemic species is located at the border of southwest Kosovo, northeast of Albania and northwest of FYR Macedonia, namely at Sar planina. This mountainous area is linked with Prokletije, Durmitor and the coastal Dinara mountains and represents the Balkan centre of endemic biodiversity. The territory of Kosovo has one national park (Sar planina Mt.), two regional parks, 11 nature reserves, 32 monuments of nature, etc. Nonetheless only one-half percent of its territory is under protection.

Within this small space a huge diversity of both species and habitats exists. There are more than 2000 species of vascular flora in Sarplanina. This is about 26% of Balkan and 18 % of European flora. This wealth of species is an example of exceptional floristic richness. Analysis of the area-range shows that most numerous are the endemic (about 29 %) and sub-endemic taxa (about 10%), accounting for almost 40 % of endemic flora of Sarplanina. These figures place Sar planina at the very centre of European and global gene and species diversity. Kosovo is relatively rich in natural resources. It has one of the largest reserves of usable coal (lignite) in Europe, plus other minerals. Also it is hosting a very rich biodiversity, concentrated in the area around Sharr mountain in the South West of Kosovo'.

Although the sustainable growth principle is integrated into the Kosovo's Development Strategy and Plan (KDSP) the most important development activity concerning environmental matters could be estimated to be Kosovo's Environmental Strategy (KES) , which was adopted in 2004 by the Government of Kosovo. The Kosovo Environment and Climate Analysis prepared by School of Business, Economics and Law University of Gothenburg Department of Economics Environmental Economics Unit (School of..., 2008; 9) sets the strategies long term goals as follows:

‘improvement of quality of life for people; rational and sustainable use of natural resources; and avoid harmful effect on the environment. The KES has seven strategic areas: 1) air (including climate change and acidification); 2) water; 3) soil; 4) natural heritage; 5) biodiversity; 6) waste; and 7) risk and disaster management’. Related to climate change some of the priorities are to establish a coordinating body, monitor emissions of greenhouse gases, and being active in international discussions on climate change. Climate change is thus mentioned in terms of mitigation rather than adaptation. The same is valid for the Kosovo Environmental Action Plan (KEAP), which was launched by MESP in May 2006 and approved by PISG in January 2007. It highlights that KEAP should assist in strengthening the future process of Kosovo’s accession into the EU ‘

1.4 Legislative background, responsible administrative bodies

1.4.1 Kosovo’s Law on Spatial Planning

On September 2003 the new Law on Spatial Planning was approved and amended on November 2008 (Amending Law on Spatial Planning, Law no. 03/L-106) which main goal according to Nushi (2011) ‘is to regulate all issues related with spatial and urban planning’. During the preparation of the current SEA the new draft Law on Spatial Planning was being prepared and consulted with stakeholders with a perspective to come into force at the very end of 2012. According to this legal act spatial planning should ‘follow the principles of protecting Kosovo’s natural resources and advocating sustainable development, it also should promote an inclusive and participatory processes and should include all stakeholders and communities’. Promotion of harmonization with ongoing European spatial developments is also among the principles.

It is foreseen that professional expertise is integrated into the planning system by establishing the Committees of Planning Experts (local level) and Spatial Planning Council (national level). There are 2 levels of planning in Kosovo (national and local) and the types of plans are Spatial Plan of Kosovo, Spatial Plans for Special areas, Municipal Development Plans (MDP), Urban Development Plans, Urban Regulatory Plans. For all those types of plans public review and possibilities for public participation are obligatory. MDP as the most relevant type for current assignment is multi-sector plan for the whole territory of the municipality that determines the long-term goals for economic, social and spatial development. It should cover the period of at least 5 years and include a plan for development of urban areas and villages within the municipality. It should include a short summary of socio-economic and environmental impacts.

Nushi (2011) identifies the main institution in charge of implementing the above-mentioned law at national level to be the Ministry of Environment and Spatial Planning (MESP) which ‘in accordance with the Law on Spatial Planning is responsible for the coordination of spatial planning in Kosovo and the proposal of spatial development policy proposal in the field of spatial planning. MESP is also responsible for drafting of relevant documents and reports on spatial planning, review and monitor all of planning documents throughout the territory’.

Within the Kosovo’s two-level planning system local governance level have the significant role in implementing the planning principles and requirements set by the Law on Spatial planning. According to Tofaj et al (2010; 1137) ‘Kosovo municipalities play an important role on leading their communities, creating wealth and enforcing the local identity. The society needs to have a strong leadership that brings together all relevant stakeholders, community and business representatives, civil society and international organizations which

can contribute in developing a strategy based on an overall vision. This is one of the crucial activities that municipalities are expected to conduct. It is interesting to note that under current circumstances the role of international agencies (such as UN-HABITAT) is larger than expected due to donor grants, to a point that it is considered a stakeholder in the process. Nonetheless, as time passes and the municipalities show increased levels of professional and financial capacity, the role of international agencies will have to be reduced to only stimulate processes and projects. The experience in the past, pre-conflict planning (where most of assets were state owned) was that local government would facilitate and provide all these activities themselves. Whereas, contemporary strategic planning promotes the approach by which local government are expected to conduct most of its activities in partnership with private sector and international agencies, while consistently involving voices of community’.

1.4.2 Kosovo’s Law on Strategic Environmental Assessment

This law emphasizes the importance of integration of environmental protection principles in the preparation, approval and realization of relevant plans and programmes if it is evident that the latter have significant environmental effects. The list of obligatory plans and programs is set within the law. Those plans cannot be approved or submitted to the legislative body for approval without SEA report. If it is deliberated that SEA is not required the relevant decision has to be in writing and should include its reasons. The SEA report identifies, describes and evaluates the likely significant effects on the environment of implementing the plan or programme and evaluates reasonable alternatives. Requirements are set in the law to provide access of the SEA documents for the consultation bodies and for the general public. The draft SEA documents is an object for the public debate. Special requirements for the cases of transboundary consultations are set within the law. Prior to the adoption, the SEA report has to be reviewed and agreed by the Ministry. Procedures for informing about the adoption decisions, monitoring and supervising are also set. Law’s Annexes contain the criteria for determining the likely significance of effects on environment and the necessary information to be provided in SEA reports as well the criteria for assessment of SEA reports.

1.5 Other relevant plans and programs

In addition to the legislation and previously mentioned national spatial plan, environmental strategy and environmental action plan there are several different plans, programs and policy documents recently prepared and launched by national authorities and other institutions to go further with the implementation of the strategic objectives and legal requirements.

1.5.1 Kosovo Country Environmental Analysis. Cost Assessment of Environmental Degradation, Institutional Review and Public Environmental Expenditure Review

A comprehensive and up-to-date analysis prepared by World Bank and was presented in June 2012. The objective of this analysis is to report on the state of the environment and the key environmental issues, and to estimate these issues’ health and economic costs. Costs are measured as, for example, impacts on health (morbidity and early mortality), and are then expressed as annual economic damage costs in euros and as a share of gross domestic product (GDP). By assigning monetary values to environmental degradation, the analysis (World Bank, 2012) here achieves four main results: it provides a useful mechanism to rank the relative social costs of various forms of degradation and provides a tool for prioritization of environmental problems. It offers policy makers an instrument to integrate the environment into economic decision making. It expresses the damage costs as a share of GDP, allowing for

comparison with other economic indicators'. And it gives to different stakeholders a tool for discussing the importance of environmental protection in economic terms—useful in deciding on how to allocate scarce resources and to increase awareness of the “costs of doing nothing” about pressing environmental problems.

The annual cost of environmental degradation in Kosovo is estimated by the report (World Bank, 2012) 'at €123 million–€323 million in 2010, with a midpoint estimate of €221 million. This cost is equivalent to 2.9–7.7 percent of GDP, with the midpoint at 5.3 percent. Costs are indications rather than precise figures, as data gaps are many, some data have not been recently updated –due to country's turbulent history- and not all impacts can be monetized. With annual costs of environmental degradation of €221million, Kosovo faces serious social and economic impacts from poorly managed polluting activities and could make huge gains from remedial actions to protect and restore the quality of the environment. The cost of outdoor air pollution in urban areas, with the most significant health effects caused are evaluated to be the environmental issue with the highest impact - estimated damage costs ranging from €37 million to €158million per year (0.89–3.76 percent of GDP). Air pollution is estimated to cause 835 premature deaths, 310 new cases of chronic bronchitis, 600 hospital admissions and 11,600 emergency visits each year'. Another significant environmental issues in Kosovo further analysed and evaluated within the review are water quality, solid waste, forest/land resources and mining/manufacturing energy.

1.5.2 Governmental Strategy on Waste Management 2011 – 2020

Strategy prepared and issued by the Ministry of Environment and Spatial Planning (MESP) in 2011 and stated to be the first waste management strategy in Kosovo. The main objective of the Strategy (Ministry of..., 2011) is to 'create measures, based on which the Republic of Kosovo would have to reduce the amount of waste that currently creates as well waste management in a sustainable manner'. The strategy sets guidelines and goals in the field of waste management for the period of ten years (2011-2020), in accordance with the legislation on waste management and economic opportunities. The focus is on reduction of waste generation, reduction of the amount of waste at source and reduction of the amount of waste to be disposed, development of infrastructure for the establishment of an integrated approach for waste management, reduction of risk from waste, contribution to increasing employment in the country and education of officials, experts and public. Strategy is a document that includes the central and local administrative levels and various governmental and non-governmental sectors in the field of water, mining, health, veterinary, spatial planning, construction etc. This document which is based on EU documents and directives shall bring positive results with the beginning of negotiations between the Republic of Kosovo and EU for membership and shall also prepare the country for the waste management sector. The document lists basic principles (polluter pays etc), analyses legal framework, and European trends and states vision and priorities. The strategy includes and overview of the currents status of the waste management whereas the most significant aspects are very low awareness and the big difference on the rate of functioning waste collection systems between urban (90%) and rural (10%) areas. There is an overview about the relevant stakeholders and administrative structures. The strategy sets an objectives that 90% (in total) of municipal waste should be collected in 2020 and the current balance between treated waste and disposed waste (10/90) should be 40/60 by 2020. It is foreseen that by the year 2020, all citizens should benefit from organized collection of waste, percentage of municipal waste destined for further treatment and recycling. According to the strategy the network of facilities and equipment for municipal waste management should be defined in the Municipal Development Plan. According to the Strategy, 'the total estimated investment to address the current problems and to fulfill the objectives amounts to 531 mil Euros. Out of this amount 10 million € are dedicated for general measures and waste reduction, 274 million € for municipal waste, 247 €

for other types of waste having into consideration the construction waste, objects for mechanical-biological and thermal treatment of waste and other technical solutions for disposal of untreated waste as a final solution’.

1.5.3 Governmental strategy and action plan for biodiversity 2011 -2020

Prepared by MESP during the period of 2009-2011. According to the document (Ministry of ...) ‘in order to preserve biodiversity, halt habitat loss and met EU environmental legal standards the strategy sets a vision to ensure unique wealth of plants, animals and landscapes that would contribute to increase welfare for the people of Kosovo’. There are 4 strategic objectives:

Strategic Objective 1: Development of legal and institutional framework in line with EU standards and its effective implementation.

Strategic Objective 2: Conservation, protection and improvement of state for plant and animal species, natural habitats and representative landscapes in natural balance.

Strategic Objective 3: Ensuring integrated protection of nature through cooperation with other sectors, sustainable use of biodiversity and equal sharing of benefits.

Strategic Objective 4: Promotion of effective education and communication for biodiversity.’

Strategy contains a long list of solutions or strategic objectives that need to address identified problems, possibilities, threatening and other issues. Some of these Strategic objectives are mentioned in general terms and are less or more like programs which request longer time periods for implementation. Identified activities within Action Plan will be implemented through specific projects, each activity will request a project which presents a application basis for financing or share of financial sources. It is claimed to be clear that a full list of Actions will request a long time period, maybe 10 or more years, for implementation. During the preparatory process, a lot of efforts were done to prioritize the list, considering the emergency, threatening, possibility, financing and success possibility. Serious efforts were done to resolve programs into specific actions within programs. For Prizren area the strategy is important because it is dealing with the protection issued of the Sharri Mountain national park, it states the need to map the habitats (fauna and flora), to adopt Management and to promote sustainable tourism.

1.5.4 Sustainable Energy Options for Kosovo. An analysis of resource availability and cost

The analysis was prepared by Energy and Resources Group Goldman School of Public Policy Renewable and Appropriate Energy Laboratory University of California, Berkeley and presented in January 2012. This assessment (Energy..., 2012) ‘is an analytic treatment of the energy options that exist today and that can be created through investigation of new energy efficiency, renewable energy, and the wise use of fossil fuel resources. Key components of such a forward-looking energy plan for Kosovo, and arguably for the Balkans more widely, are: job creation and the support of indigenous industry; reduced exposure to energy supply and price risks through regional coordination and integration; and an energy mix that reduces human and environmental health risks and facilitates economic integration with the European Union’. The analysis provides a very comprehensive overview of the current state of electricity sector, where the downsides of the massive use of lignite/brown coal are described such as low efficiency and high rate of CO₂ emissions. Based on this analysis and using a simulation methods three scenarios are described and compared within the analysis – the business as usual scenario, baseline scenario and low-carbon scenario. The analysis (Energy..., 2012) states, that ‘the business as usual path, dominated by an expanded use of low-quality coal, is not the least-cost energy option for Kosovo given the social cost of

thermal generation. The coal dominant energy path also burdens future generations with an energy mix that is neither environmentally sustainable nor is it a path that maximizes job creation. A low-carbon path exists for Kosovo that integrates aggressive energy efficiency deployment, use of both large and small-scale hydropower, solar, biomass and extensive use of wind energy while reducing human and ecological damage. This path whilst delivering 38% of the energy demand through renewable resources can also provide almost 30% more jobs than a business as usual path and it does so at an estimated cost savings of 50% relative to a base-case scenario that includes a new coal power plant. To make the low-carbon path viable, two key commitments are vital: 1) to implement aggressive energy efficiency programs (and reducing technical losses) and enabling policies to do so; and 2) to explore and implement opportunities to make the hydropower capacity a resource year-round, and to develop wind or other renewable energy sources that can address peak energy demands, potentially utilizing wind and hydropower in concert, and/or to bring significant geothermal power into the energy mix’.

1.5.5 Spatial Plan of Kosovo 2010-2020+

As stated in the Prizren PMDP 2025, this Spatial Plan is a document that promotes common interests of the residents of Kosovo, for an accelerated economic development, and simultaneously protecting resources, natural and cultural heritage. Compilation of the Spatial Plan supports spatial distribution of development, at the national, municipal and urban levels and also the drafting of the Overall Kosovo Development Strategy. The vision of Kosovo, according to the plan, is to ensure sustainable social and economic development, infrastructure and modern technology, education opportunities for all and qualified labor force, a country which respects environment, natural and cultural heritage of its own territory and neighbors, with an open society promoting diversity and idea exchange, having respect for the rights of others.

The basic spatial development concept, according to the Spatial Plan of Kosovo, is defined as nodal development concept with elements of the corridor. The concept of nodal development refers to the concentration of future development in the seven major centers of Kosovo, and the concept of corridors refers to spatial developments along the roads, which will be controlled strictly and will not be allowed on agricultural lands of the categories I to IV. Different than previous spatial plan, the Spatial Plan of Kosovo adds social development, conservation of cultural heritage among the main principles of spatial development strategy. Regarding these spatial development concept and strategies, four action areas / regions are proposed in which Prizren is the center of the “Gardens of Kosovo”. The region is located at the south of Kosovo, including Suhareka, Dragash and Prizren municipalities. The area is deployed for cultural tourism, agricultural industry and trade and services and Prizren has a leading role with its natural and cultural heritage values, recreational and cultural tourism potentials.

The spatial development strategy is established on developing a powerful grid of cities with economic impact, through human resources, enhancement of the knowledge base, rational and planned utilization of cultural and natural resources, opportunities for access to physical infrastructure, provision and improvement of living quality, social equality, aiming regional competition as cities, all these supported by organizational capacities. The main principles of the spatial development strategy are introduced for the following headings:

- Development of a strong urban network of economic development
- Development and conservation of natural resources
- Development of strategic links.

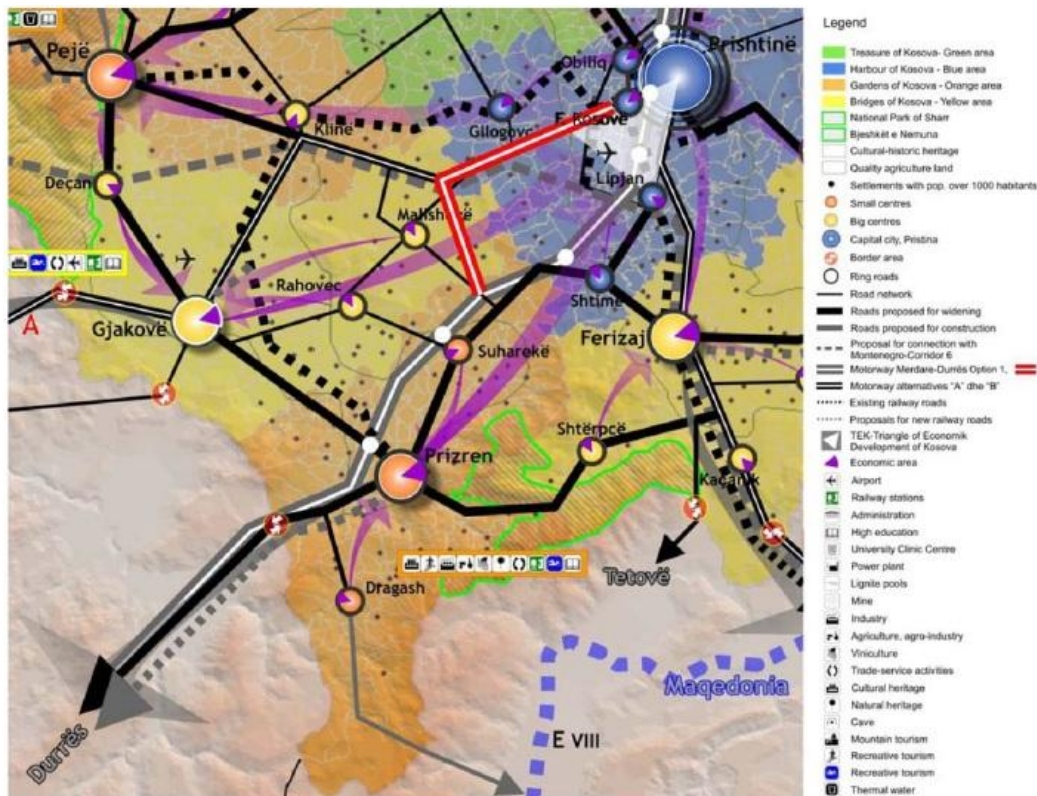


Figure 2. Strategy action areas. Spatial plan of Kosovo, 2010

General goals for Prizren stated by the Plan are:

- Development and enhancement of physical infrastructure,
- Efficient governance and local administration, to support development objectives,
- The local economic development program through promotion of small and medium enterprises,
- Development of pomology, viticulture and farming,
- Development of mountain and cultural tourism, protection of natural, cultural and historical heritage.

Spatial Plan of Kosovo 2010-2020+ additionally describes a general goal for the development of effective links within the urban, inter-urban with 5 other spaces and beyond it through the development of regional infrastructure (road, rail, TI's). Conservation of natural resources is one of the most important principles in the spatial plan of Kosovo considering the loss of quality agricultural land; high environmental pollution; irrational utilization of resources and uncontrolled settlement growth. Especially the consideration of cultural heritage in the newly enacted Spatial Plan of Kosovo 2010-2020+ is an important step for future development and conservation strategies of the country. Regarding this, Prizren is an important node with its rich historical and cultural heritage and environmental resources. Spatial Plan of Kosovo gives Prizren a role as the "Museum City" to contribute in creating conditions for protecting and utilizing cultural and natural heritage for local economic development. But as led by the strategy, there is a need for concentrated action in environmental and natural resource protection, care and promotion for the cultural and natural heritage for tourism development, protection of quality agricultural land and promotion of domestic production, protection of mineral resources and rational utilization of the same, and also the controlled growth of settlements.

1.5.6 Prizren Historic Area Conservation and Development Plan

Prizren Historic Area Conservation and Development Plan is a product of Prizren Historic Zone Rehabilitation Programme is comprehensively described within the PMDP 2025. According to the evaluated plan, the study of Prizren Historic Area Conservation and Development Plan was carried out within the framework of a protocol signed between a Swedish NGO, “Cultural Heritage without Borders” and İstanbul Technical University Urban and Environmental Planning and Research Center. Prizren Historic Area Conservation and Development Plan develop planning proposals in the titles of physical, land use, transportation and conservation issues. In the design proposals plan improved an urban design guideline which introduced structural proposals to both monumental and civil architectural examples and infill applications. For monumental and civil architecture, interventions were defined within conservation and preservation principles. For infill applications structural proposals were underlined with proposed types of construction which is harmony with traditional architecture. According to conservation and development plan, interventions to civil architecture should be implemented, in case of preservation, cleaning and maintenance, restoration, reconstruction, façade renovation. Proposed type of new construction and infill applications has been also examined in headlines of volume, façade, details and ornamentation, townscape and streetscape proposal.

1.5.7 National Park “Sharr Mountain” – Spatial Development Plan

As described within the PMDP 2025, the spatial development plan for National Park of Sharr Mountain recommend an organized and coordinated action of all structures involved, requires long term strategies and policies which will be based on the results of the planning and research process. In order to cope with the uncontrolled utilization of natural values and environmental degradation within the borders of national park, the plan proposes a framework in six challenges which have been identified by means of a SWOT analyses. The plan determines three zones for environmental protection and economic development within the borders of national park. The first zone is defined as strict nature reserves which are stated as not to have any economic development but just walking paths for visitors. In the second zone, limited economic development has been anticipated in which technical infrastructure should be created for just transportation access for skiing and other tourism activities. Economic activities and development has been proposed in the third zone in the conditions and concept of sustainability. These activities are sport tourism, as well as summer and winter tourism, health tourism, ecotourism, rural and cultural tourism, scientific and research tourism, congress tourism, alpine tourism, and cyclist tourism, etc. At the time of the preparation of current SEA the management plan for the National Park was being prepared.

1.5.8 Review of HPP Zhur Feasibility Study

The feasibility report (Including Preparation of Preliminary Environmental Impact Assessment and Preliminary Social Assessment) is an assessment of the Zhur Hydroelectric Power Plant (HPP) project and its possible effects on generation and supply of electricity. As reflected within the PMDP 2025 the Zhur hydroelectric power plant is a system comprising of two hydroelectric power plants of storage-diversion type, HPP Zhur I and HPP Zhur II. the power plant is located northwest of the town of Prizren. HPP Zhur I is located near the village of Zhur and the HPP Zhur II on the Drini i Bardhe. The report summarizes the possible favorable effects during the project operation as more order within the planned project area; sufficient amount of water for irrigation; increase in air humidity and increase in precipitation, most probably having a favorable impact on increase in forest areas and forest products. On the sociological and demographic aspect, provided the protection measures are taken, the

planned project shall not threaten the life and working conditions of the local population, it shall not encourage emigration, stop immigration, threaten business life or contaminate natural resources important for the living and working in the area. The report also states that after construction, new use of land may also include tourist and recreational uses. Temporary or permanent employment of local workforce during the project implementation is another possible effect of the project.

2. Prizren Municipal Development Plan PMDP 2025

The current Strategic Environmental Assessment procedure is being carried out in order to evaluate the possible environmental impact of the Prizren Municipal Development Plan PMDP 2025. The preparation of the Prizren MDP started at 2008 and the final version was prepared at March 2012.

Prizren Municipal Development Plan 2025 (PMDP/MDP) is assigned by the Prizren Municipality to plan the future of the area for a 15 years period. The plan covers the entire borders of the Prizren Municipality, which is approximately 640 km² and aims to provide a framework for social, economic and spatial development of Prizren.

PMDP was prepared for the Prizren Municipality by the partnership of Istanbul Technical University Urban and Environmental Planning and Research Center, Urban Design Studio from Kosova and Plan&Art from Turkey. The project started in October 2008 and it was completed in January 2010 and amended at spring 2012. The aim of the PMDP process was to prepare a plan that considers the development trends of the entire country and takes both rural and urban development into account, in terms of natural, socio-economic and built environment.

Prizren Municipal Development Plan 2025 is divided into 4 major parts:

1. Municipal Development Profile and Situation Analysis
2. Vision, Principles and Goals
3. Municipal Spatial Development Framework
4. Implementation strategies, actions and provisions.

The PMDP is planned to lead the strategic development of Prizren Municipality, to present an integrated approach, to ensure participation, and to facilitate monitoring and reviewing. In particular, it will link further development to upper scale plans, economic development and well-being strategies to provide a tool to be taken into consideration for local planning efforts, to provide a balanced management and coordination of land use, future growth patterns, to encourage the engagement of local people and users in defining and being involved in the process of change, to influence the location of investments, to facilitate the use of Geographical Information Systems in evidence-based decision making and help track the impact of the Plan. With the implementation of PMDP Prizren future growth patterns will be managed in a balanced manner, while environmentally and ecologically sensitive areas as well as natural and cultural assets will be preserved. To enforce competitive advantages of the urban center a growing and diversified economy will be ensured. PMDP will also show respect towards social, cultural, religious and individual differences providing equal opportunity and access to services for all.

In addition to very comprehensive overview and the analysis of the current situation in Prizren it has a strategic component with vision, principles and goals out of which implementation provisions are derived. The latter has an output of number of projects to achieve the strategic objectives to be implemented within the next 2-5 years. The spatial development framework proposes the poly-centric development concept as the fundamental

development pattern for the Prizren area that include a hierarchical spatial growth, which is expected to reduce the pressure on both urban and rural areas.

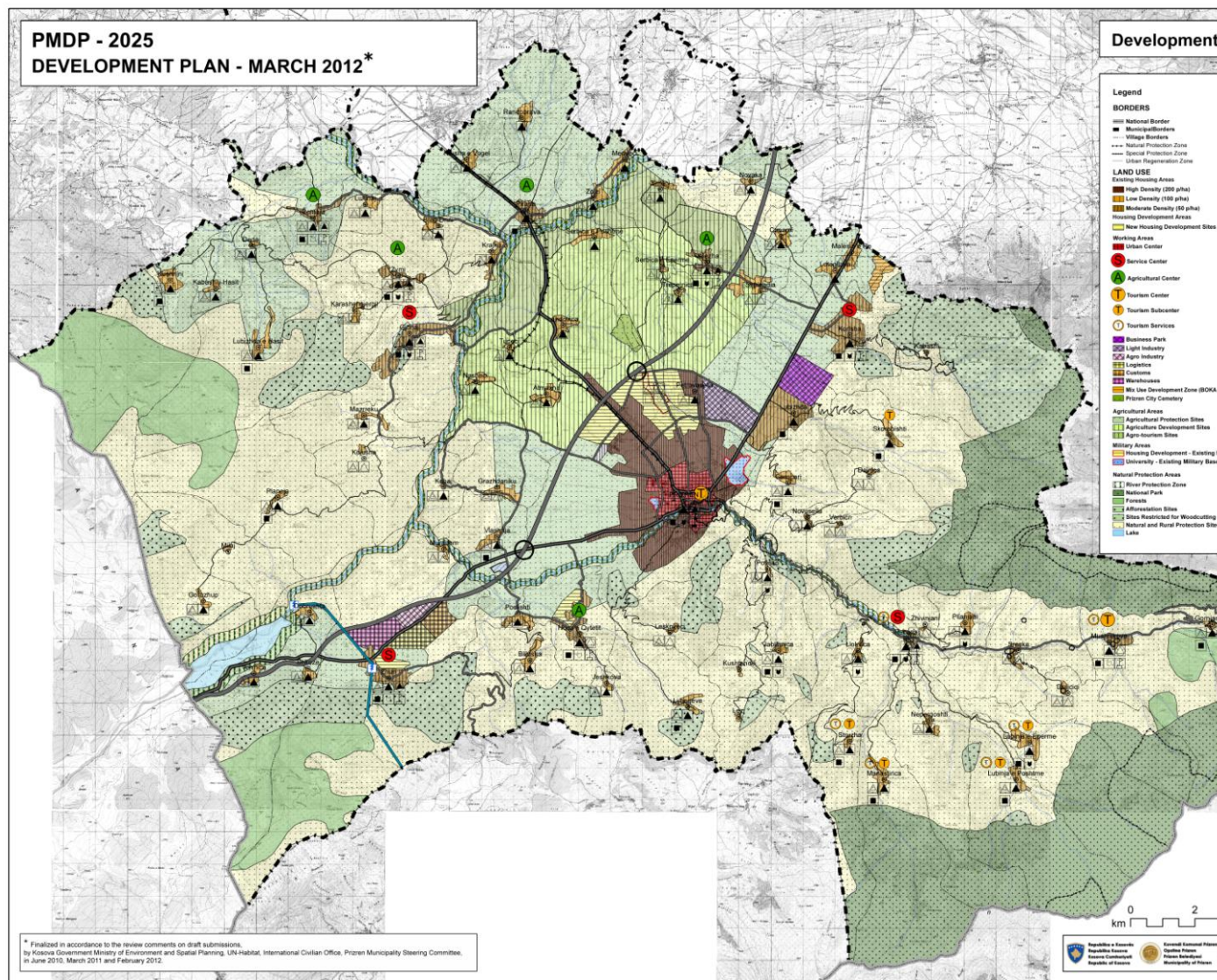


Figure 3. Prizren Municipal Development Plan PMDP 2025. Development Plan Map, finalized in accordance of the review comments in 2012

3. Description of the baseline environment

The main source of environmental data for this SEA is the PMDP 2025 descriptive chapters, as the latter includes a comprehensive overview and an analysis of the current situation in Prizren. As the PMDP 2025 was the first that kind of development document a lot of important information and data was gathered and collected during the MDP composing process. The primary data for the following material was obtained directly from the relevant departments of Ministries of the Government of Kosovo. The secondary data was gathered from the field surveys that were conducted in March and April 2009. All the accumulated data had been applied to digital maps using Geographic Information Systems (GIS). For the SEA report's description of the baseline environment the most important data from the PMDP is collected and combined with information from other data sources (plans, programs, interviews) used during the SEA process.

3.1 General overview

Prizren is the second largest municipality of Kosovo following Prishtina. It is an ancient historical town alongside the River Lumbardhi, lying beneath the Sharr Mountains. It shares borders with Albania in the west, the Municipality of Dragash in the south, FYR of Macedonia in the southeast, the Municipality of Shterpce in the east, the Municipality of Suhareka in the north-east, the Municipality of Orahovac in the north and the Municipality of Gjakova in the north-west.



Figure 4. Location of Prizren Municipality in Kosovo

Prizren Municipality is divided into 75 villages according to the Prizren Municipal Status. Eight of these villages are directly in the domain of Prizren town. There are 10 central villages according to the registration of birth records; those are Gjonaj, Hoca e Qytetit, Lubizhda, Mushnikova, Pirana, Recan, Romaja, Velezha, Zhur, Zymi. The central villages have the same administrative structure with the rest of the villages.

3.2 Topography

The topography of Prizren Municipality has a wavy structure that the altitude has a range between 300 m - 2600 m. While the city center has settled on a flat surface, hilly topography is observed towards western and more distinctively towards eastern sides. The geographic location of Prizren provides conditions suitable for the development of agriculture, stockbreeding, food industry and tourism. Mountainous parts over 1500 m cover approximately 15% of the entire municipal borders. Prizren Plain is a wide flat surface with a slope between 0-5%. It covers about 14000 ha which equals approximately to the 22% of Prizren Municipal area.

3.3 Water resources

Prizren is one of the fortunate locations in terms of amount of water resources. The most important and longest river in Prizren is Drini I Bardhe River (111 km). It enters Prizren from the north and continues towards the southwest to Albania into Adriatic Sea. The river forms a small lake inside the borders of Dobrushta Village. The river named Lumbardhi with 35 km length flows through Zhupa Valley and continues through Prizren city center. Another important river in Prizren is Toplluha River which is 37 km long. Dumping of organic waste and sewage waters directly into rivers causes water pollution in Prizren Municipality. According to the Spatial Plan of Kosovo, Drini I Bardhe River in Prizren Municipality has the third priority within the country for reduction of water pollution. Due to the fact that regular water quality data is not collected and there were no public qualitative data available, the exact environmental state of the water resources and the influence of the pollution is not known.

3.4 Mineral resources

Geologic and tectonic construction of Prizren Municipality is the main indicator for expectation of occurrence of sources of minerals. This territory is known to have been a source of useful minerals in the past. There are sources of metallic minerals such as chromium, iron, copper and pyrite. Nonmetallic minerals are evident in almost all geological formations as compared to the metallic minerals. The marble of Zhuri, Gjonaj and areas near Macedonian border are related to the Paleozoic formations. The sediments of Mesozoic (late and mid Triassic) have good characteristics and technical properties suitable for production of concrete and rocks for construction in general. The sediments of quaternary are alluvials and river terraces, fractured materials etc. Sand and gravel is located in Pirana (2.000.000 m³) and Krusha e Madhe (2.000.000 m³). Clays are found in Landovica (2.598.072 m³) Sources of nonmetallic minerals such are sand; gravel, clay etc are mainly located in the hills. The other minerals like limes, crystalline schist, construction rocks, and the talc schist are located in the mountainous parts. This areas located in an undeveloped region with difficult access.

3.5 Geology and hydro-geology

In hydro geological terms, the rocks of Prizren Municipality can be divided into:

- Rocks of inter-granular porosity
- Rocks with fractures and carstic phenomena
- The isolating rocks

Rocks of Inter-Granular Porosity includes all deposits of Pliocene and Quaternary. Such sediments are more easily observed in the east of Drini I bardhe river or in the south of Dukagjini valley. They are formed of sands, clays and gravels. All of them lie on top of cretaceous sediments. Quaternary sediments – are represented by the lake sediments and sediments of river terraces of Pleistocene and by the proluvial deposits Terra Rosa and alluvials of Holocene. These sediments are spread in length and are known to be collectors of

underground waters. These sediments are represented by the sandy and gravel clays of yellow to brown color, etc. The terrains of high mountains formed mainly of lime stones, are known to develop carstic phenomena in the surface and inside of them. These terrains possess reserves of underground waters of high quality. There are also plenty of high capacity springs over there.

The planning of hydro geological surveys is closely linked to hydro geological planning for the entire Kosovo. Development of urban settlements is depending on water supply. Modern agriculture is built on the premises of irrigation. The researches conducted have shown that Prizren Municipality is rich in underground waters that can be utilized for the purposes of potable water, water for industry and irrigation. For these reason the PMDP 2025 stresses the need of further hydro-geological researches. The MDP also states the vital need for further geological researches as geological knowledge of the environment is crucial for spatial planning and in general for various needs of use of the terrain. Geological engineering researches are gaining importance on daily basis when it comes to spatial planning of all levels, starting from Kosovo wide level, Municipal level, the zones of special touristic interest, urban plan of settlements and objects of capital interest. Instability of the terrain is also manifested with sliding, collision, erosion etc. Sliding occurs in non rock terrains. Collisions occur in the rocky terrains, mainly formed from metamorphosed serpentines and limes. The linear erosion occurs in streams and rivers and is evidenced in the entire Municipality, mainly in the mountainous parts, where there is no vegetation or in parts where the forests are damaged.

3.6 Climate conditions

The climate of Prizren displays a continental character with a mild influence of Mediterranean climate on the lower altitudes, while a harsh alpine climate dominates in the mountains. The soft climatic characteristics establish a good grace for rich natural resources. It helps with the cultivation of grapes, as well as other fruits and vegetables. Distance from the sea is an important indicator in climatic conditions and Prizren has 105 km distance to sea. The average highest temperature in autumn is 17.6°C. In 60% of the year the temperature is higher than 0°C which means no frost occurs during 229 days. Regarding the rainfall, the yearly average is 686 mm in Prizren, thus creating the ideal conditions for viniculture in terms of amount of rainfall. In Prizren, the amount of precipitation is higher in the winter and accordingly distribution of rainfall is also convenient for viniculture.

3.7 Natural values

In Prizren, there are three natural reserves as, Maja e Arnetit, Oshljaku and Pisha e Madhe which are important with their plant reserves of endemic-relict specie Bosnian Pine (*Pinus Heldreichii*). The largest surface of protected areas is the National Park “Mali Sharr” which is located in Prizren Municipality. The Sharr Mountains are located in the region of Kosovo and Macedonia and includes 1600 km². The northern part of the Sharr Mountains belongs to Kosovo Territory and includes an area of 1100 km². In 1986, by the Assembly of Kosovo, National Park of Sharr Mountain has gained a status of a registered natural heritage site in the classification of Natural Park. Defined by legal regulations and satisfaction of the requirements, defined by international rules and agreements, the national park had a spatial development plan which is prepared by Ministry of Environment and Spatial Planning.

3.8 Land use patterns

The total area of Prizren Municipality is 63,780.67 ha which makes it the largest municipality of Kosovo. It covers approximately 5.94% of the total territory of Kosovo (Prizren Municipal Profile, 2007). The land use pattern shows that rural character is dominant. Total settled areas

are 3,392.72 ha making up only 5.3% of the total municipal area. Agricultural areas and forests cover 90.05% of the municipal borders with a total area of 57,434.1 ha. The forests in Prizren cover approximately 8,500 ha including high and low intensity forest areas which are only 13% of the municipal borders.

Land use type	Area/hectares
Agricultural	57434
Housing/Settlements	2500
Other	1960
Infrastructure/Uncategorized	1105
Commerce/Service/Mixed Use	340
Industry	179
Urban facilities	164
Military	95

Table 1. Land use proportions in Prizren (Ministry of Agriculture, 2005; Field Survey, 2009)

3. 9 Water and sewage management

The overall surface covered with water supply system is 13.5 km² and the average consumption of water per capita per day is 150 L. Most of the existing network is older than 40 years and there is an ongoing work for development and improvement of the sewage and water system. Although water resources of the municipality are rich and adequate with the melting of snow especially in spring, the amount of the water decreases in summer and autumn. 60% of the municipality is settled in lower parts where water supply is based on gravitation. 40% of the areas need to get water via water pumps which is problematic because of the power cut. The existing sewage network is 136,493 km according to the Prizren Municipal Profile dated 2007 and covers mainly the densely populated areas near Prizren town. Many projects have been implemented after the war in terms of construction of sewage system to build appropriate facilities in order to protect rivers from pollution. But still, it is one of the main problems that the sewage is discharged into rivers and in some parts directly to open space without purification.

At the time of the current SEA report preparation the local water management company „Hidroregjioni Jugor“ was in the preparation phase of the renewal project for water/sewage treatment facilities. According to the company's representatives, the project is funded by German bank KWF and is divided into 3 parts. First part is about to be ready in 2013 and consist the restoration of the pipes and the building of the main collector (at the right bank of the river). Another step is to build a treatment facility, capacity to service 50 000 inhabitant, deadline 2016. Third part has an ambition to provide sewage treatment service for the all Prizren town area at 2036. According to the MDP data and data collected during the SEA processes there water resources have high potential, but there is a vital need for proper water/sewage management.

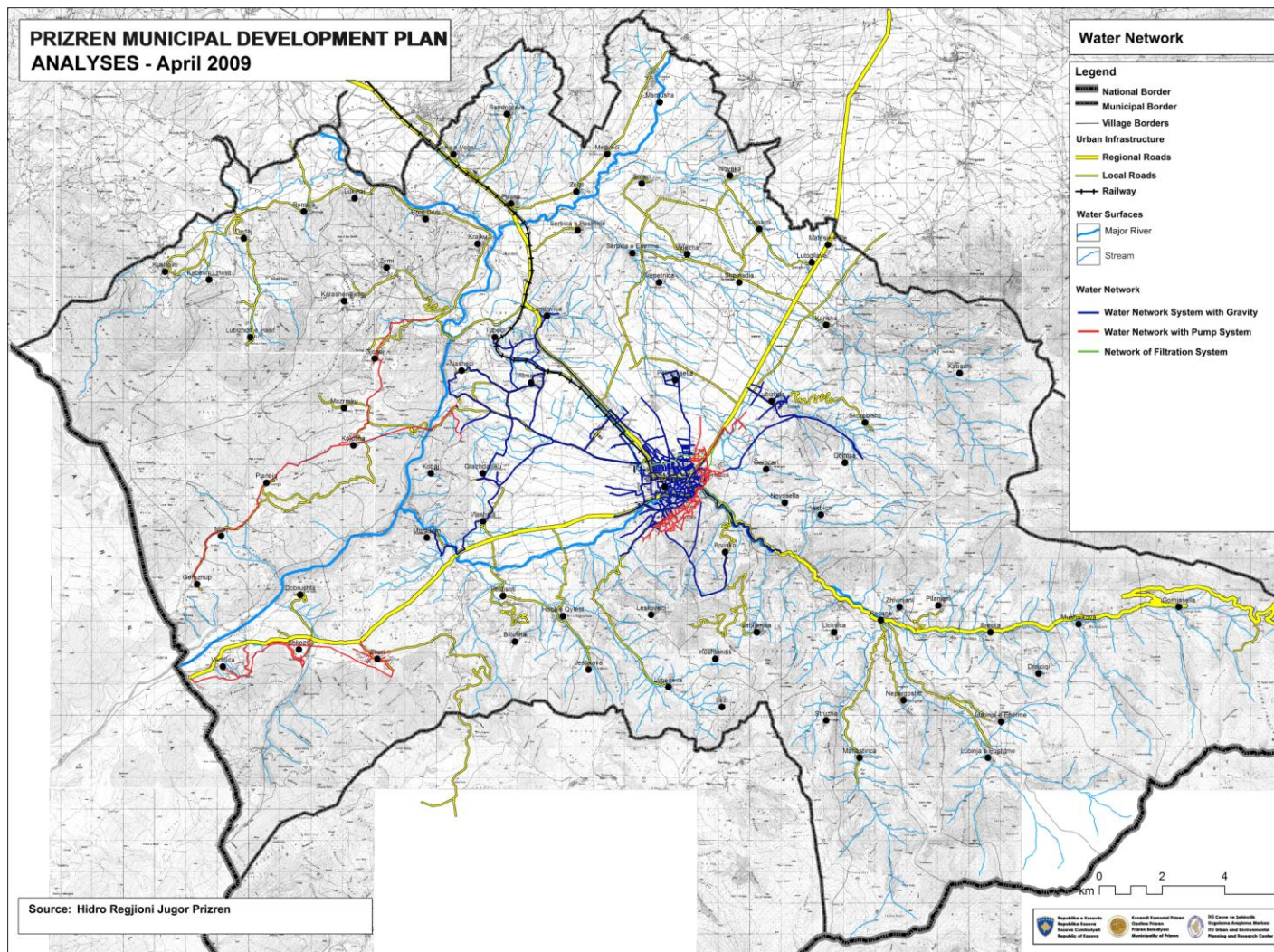


Figure 5. Water network in Prizren (PMDP 2025)

3.10 Waste management

According to the PMDP 2025 there are one public and six private companies managing the solid waste collection services. The management of the waste collection has not reached a satisfactory level yet and capacity to cover surrounding villages is not available, thus causing the pollution of rivers. The old waste disposal site in village Korisha has been closed in 2005 and the new location for waste disposal, which is serving regional needs, is in Landovice. The hinterland of the waste disposal site includes Suhareka, Gjakova, Rahovec municipalities as well as Prizren Municipality. It is designed for 500,000 inhabitants and has a capacity of 2,500,000m³. The planned time of use of the disposal site is 18-20 years. At the time of the current SEA report preparation the Prizren Municipality Public Services Department and JICA Expert Team were preparing the Solid Waste Management Plan for Prizren, according to the draft plan the waste collection rate*2 is 70.6% in whole municipal area, 78.9% in urban area and 52.6% in rural area. Source separation of the waste practically does not exist in Prizren. 15.1% of the waste generated is disposed illegally and 11.8% of this is removed by Ekoregijoni (local waste management company.) Current recycling rate is only 5%. It is needed to mention that most solid waste management activities (Landfill management, site selections for new landfill) are managed nationally, any further developments concerning major rearrangements in this fields could not be set on municipal level.

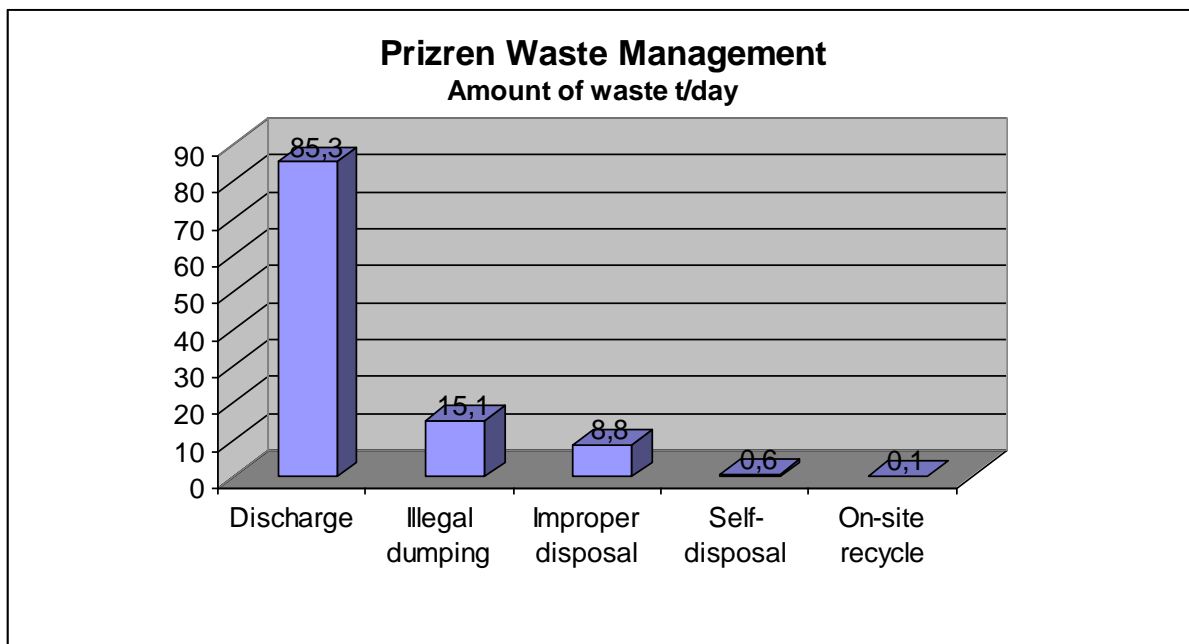


Figure 6. Prizren Waste Management division (amount of waste per day)

3.11 Cultural heritage

The city has always been a crossroad of cultures and different ethnic groups and therefore Prizren reflects a remarkable history of the Kosovo Territory. There are numerous significant monumental buildings inherited from different civilizations, especially from the Ottoman era, when the city gained importance as a prosperous trade city owing to its strategic position. There are 291 cultural monuments and sites in the Prizren Municipality, which are listed by the Institute for Protection of Monuments (2009). Prizren town has the most quantity and variety of monuments and sites which represent historical background of its territory. As the architectural monument classification, there are 50 public buildings in the use and /or ownership of public or state parties in the Prizren Municipality.

3.12 Demography and employment

As in Kosovo, 1991 population census is the last official data regarding population in Prizren. Population of Prizren has been determined as 178,723 inhabitants in 1991 by Statistical Office of Kosovo (SOK). According to the data obtained from SOK, population of Prizren Municipality has always had a balance between rural and town; approximately 50% of the total population in the Municipality lived in rural areas until 1991. By the time of the current SEA preparation the official data from the 2011 census were not available yet. Last study has been carried out by Prizren Municipal Community Office for the year 2009 and the population of Prizren has been calculated as 240,000 inhabitants. Average population growth rate of Prizren has been calculated as 2.3% a year for the period 1971-2009. Prizren is one the five most dense municipalities in Kosovo with 375 persons per km² by the year 2009. According to the PMDP 2025 calculation, population of Prizren town is approximately 150,000. The population data about the rural regions is shown in Table 1.

Table 2. Population in Prizren regions

Center/Region	2001*		2009**	
	Population	%	Population	%
PRIZREN	138,042	62.53	~150,000****	61.26
Prizren	7,190	3.26	7,880	3.28
Has	20,844	9.44	20,825	8.68
Kabash	7,000	3.17	10,412	4.34
Luma	12,140	5.50	14,210	5.92
Podrimi	14,019	6.35	18,600	7.75
Vrini	10,419	4.72	9,080	3.78
Zhupa	11,122	5.04	11,980	4.99
Total	220,776	100.00	~240,000***	100.00

Latest study regarding age groups in Kosovo has been done by United Nations Population Fund (UNFPS) in 2003. According to this study, the category of children in Kosovo (from 0-14 years old) represents 33% of the population. The participation of the population aged between 15-64 years old is 61%. The population aged above 65 years old includes 6% of the population. The domination of the young population is a major trait of Kosovo, resulting from the high population growth rate. In Prizren, latest study on age groups has been done according to the 1991 census and the results show that the distribution of population by age groups has similar characteristics as Kosovo. However, the inhabitants of the Prizren Municipality are of a relatively young age being 36.9% in the age group 0-14 and only 4.9% over age of 65. The ethnic structure of Prizren consists of Albanians and Posnians. Prizren region shows the most varied ethnic structure. The villages in the east of Prizren town are mostly Bosnian while the ones in the west are mostly Albanian. Regarding the rest, all regions show the majority of Albanians except Zhupa which is Bosnian. Regarding ethnic minorities, there are Serbian, Turks and Romans living in Prizren Municipality.

Considering the average household sizes in Prizren, the household sizes present an overall average of 6.87 in whole Prizren rural territory. Regarding the recent data of PMDP 2025 field survey, household distribution among Prizren regions indicates the highest share in Has with 19.04% (2,377 households) and the lowest in Prizren with 8.53% (1,065 households). Totally there are approximately 12,500 households in the Prizren rural.

In Prizren, according to the approximate numbers provided by the Center for Employment (Prizren Municipal Profile, 2007), 21,271 inhabitants are employed; 20.40% (4,341) of which are in social and 22.50% (4,787) in public sector. Some 12,000 individuals are engaged in agriculture business. Prizren Municipal Profile (2007) notes that the overall number of employees is much higher if daily and seasonal employees like the ones working in construction, street sellers, craftsmen etc. are considered. That means that there is a phenomenon of illegal and temporary employment.

3.13 Economy

In Prizren, approximately 40% of the population lives in the rural areas. Thus, the agriculture sector remains one of the most important sources of employment and income. Agricultural activities include crop production and vegetable production. Prizren Municipality has some 14,096 ha of grazing pastures which forms a foundation for development of animal production.

Prizren regions have Industrial activity in their vicinity except Has. All of the Prizren Regions have construction material industry in their vicinity, except Has and Luma. Luma has only

sewerage material Industry. Prizren, Kabash and Podrimi are rich in the distribution of industrial activities whereas Has has no industrial activity and Luma, Vrani and Zhupa have a few. Metal nickel industry is only present at Prizren Region. Food product is one of the main manufacture activities in Prizren. There are two important SOEs which are food factory of “Abi Elif” and “Euro Food”. Prizren has a long tradition of producing wines. The Wine Processing Plant “Kosovo-Vera Company”, located in Krusha e Vogël, is established in 1952 as a social company. ‘Kosovo Vera’ has processing capacities of up to 2,240 thousand liters and used to process 700-800 wagons of grapes a year. Factory for Production of Chemical and Pharmaceutical Products “Farmakos” is located IN WHERE, the overall production capacity of the factory today is 5.113 million Euros. In 2002, Farmakos had a turnover of 500.000 euro, from selling of its goods in Kosovo and Macedonia. Prizren is the most visited city in Kosovo and has potential for sustainable development of tourism. The PMDP and other data sources do not provide any specific data about the tourism indicators or about any further plans, but nevertheless the rapid growth of this economic sector could be monitored during the SEA preparation period.

4. SEA Time Frame

According to the Kosovo’s national legislation the SEA shall be carried out during the preparation of a plan or programme and before its approval. Due to the fact that the Prizren MDP was prepared (not finally approved) before the Law on Strategic Environmental Assessment came into force this principle could not be fully met within the current SEA process. The preparation of the Prizren MDP started at 2008 and the final version was prepared at March 2012. The SEA process started at May 2012. In June 2012 a field visit which included numerous meetings with local stakeholders was held in order to gather additional data for the SEA process. In September 2012 there was another field visit with additional meetings with key environmental stakeholders and workshops to discuss proposed scenarios and environmental objectives, targets and indicators from the scoping phase of the SEA. Third field visit at the beginning of the October 2012 included the presentation and the discussion of the draft SEA report. After that relevant amending, consultation and legislative publication were carried out during October to November 2012.

4.1 Participatory approach of the SEA procedure

As the SEA procedure had to be adapted to the situation wherein the assessed MDP was fully prepared prior to the assessment the participatory actions were limited to some extent. Nevertheless participatory approach was included into the SEA process by thematic training sessions, workshops and interviews carried out during the abovementioned missions. The training sessions (performed in June and September) were directed mainly to the municipal staff and were held together with representatives from neighboring municipality Rahovec. The aim of the training sessions were to (re)familiarize the municipality representatives responsible for SEA with participatory approaches, theories and practices in line with specific requirements and conditions from the SEA. Training sessions included interactive discussions among participants and experience sharing between two municipalities in order to identify possibilities and/or obstacles for effective stakeholder involvement into current and further SEA procedures. In addition to training sessions two semi-public (in addition to municipal staff pre-identified stakeholders were invited to attend) workshops were held in Prizren (attendance lists annexed, annexes 1-2). The first of them was held in 14.09 in order to introduce and discuss the scoping elements of the SEA – main environmental issues, identified alternative scenarios, environmental objectives, indicators and actions. Another

workshop took place at 4th of October and included the introduction of alternative scenarios and their main elements. In addition to familiarize regions' key stakeholders on environmental issues with ongoing SEA process and to collect additional data numerous face-to-face interviews/meetings were held with representatives from private (water & waste management companies), public (different municipal officers, National Park Mali Sharr) and civic (environmental NGO, Cultural Heritage without Borders) sector, notes included valuable insights and information are annexed to the current report (Annexes 3-4).

5. SEA stages and methodology

5.1 Screening

Screening is the process for deciding whether a particular plan or programme, other than those for which SEA is mandatory, would be likely to have significant environmental effects, and thus would warrant SEA. In accordance with Kosovo's legislation (Kosovo's Law on Strategic Environmental Assessment, Law No 03/L-230) it is a requirement to conduct the SEA for the municipal development plans, therefore no special screening process was not needed for the current SEA.

5.2 Scoping

Scoping is the procedure whereby the range of environmental issues and the level of detail to be included in the SEA Report are decided. Scoping helps to focus the SEA on important issues such as those relating to existing and potential environmental issues and problems, therefore minimizes the waste of resources on unnecessary data collection. Scoping facilitates the selection of issues relevant to the environmental components which are specified under the SEA Directive and legislation, namely; biodiversity, flora and fauna, population and human health, soil, water, air and climatic factors, material assets, cultural heritage including architectural and archaeological heritage, and landscape.

Preparation of the separate scoping report is not a formal requirement of the SEA Directive and Kosovo's national legislation but is recommended as good practice. The Scoping Report should be issued early in the assessed planning document process, for example together with the first plans consultation document. The current SEA process was carried out within unique circumstances whereas the plan/programme (Prizren MDP) was already fully prepared when the SEA process started. Therefore the process of scoping was included into the SEA report preparation, scoping process main elements were discussed with local stakeholders and the separate scoping report was not prepared.

The scoping phase of the SEA highlights a number of issues which are of concern and are critical to sustainable development within the Prizren area, namely

- Ground Water Quality & Surface Water Quality
- Solid waste management
- Wastewater treatment;
- Sustainable land use patterns

Ground Water Quality and Surface Water Quality

Ground water resources are a precious asset and are susceptible to pollution with short to long term negative consequences with potential cumulative effects, etc. Ground water resources are an invaluable source of water supply for the public, industry, and agriculture and also perform

an important role in sustaining base flows in the rivers and their tributaries within the Prizren area. Its protection is therefore of the utmost importance. Similarly to ground water resources the surface water resources are important assets for the Prizren area. It is important to highlight that the river pollution issues have to be urgently properly addressed.

Wastewater treatment

The treatment of wastewater in the Prizren area is of concern as the MDP states that the significant amount of sewage is discharged into rivers and in some parts directly to open space without purification. The sewage and water infrastructure is old (pipes) or missing (sewage treatment facilities). There are still some areas without a proper public sewerage system in the plan area. However, some improvements are ongoing. System upgrades are being planned by the local water company and the installment of some elements of relevant infrastructure is being prepared.

Solid waste management

Prizren area is facing the situation where insufficient number (~70 %) of the households are included into the solid waste collection system. Therefore a significant amount of mainly domestic waste is dumped illegally. In addition to the challenge to set up an effective collection system, there is a need to provide modern ways to treat the collected waste. At the moment there's only a possibility to dump the collected waste in Landovice landfill.

Sustainable land use patterns

A complicated historic background and a long period of time without proper strategic and spatial planning activities have caused the developments (settlement expansion, new industries etc) to appear rather randomly. A proper balance between the main land use zones is essential for the sustainable development of Prizren. There is a need to channel economic zones in the way that they would not threaten the valuable agricultural and natural areas. As the Prizren town acts as an attractive urban center the adequate measures to mitigate the possible negative impacts of the rapid urbanization and land degradation in rural areas. An adequate settlements network and structure with necessary public service needs to be located.

CONSIDERATION OF ALTERNATIVES

Article 5 of the SEA Directive specifies that the Environmental Report should consider 'reasonable alternatives taking into account the objectives and geographical scope of the plan or programme'. The issue of alternatives is a critical function of the SEA process and is necessary to evaluate the likely environmental consequences of a range of alternative development strategies for the MDP area within the constraints imposed by environmental conditions.

For the Prizren MDP's SEA three below-mentioned scenarios were analyzed:

0 scenario/do-nothing scenario. The socio-economic and environmental impacts will be analyzed in the context of not implementing the MDP, the positive and negative aspects of the current state of environment will be described and analyzed, the possible future developments of trends without interference are to be predicted. Although using a do-nothing scenario is to not be a reasonable alternative if the as preparation of the MDP is required by law, but a do-nothing scenario should be regarded as the benchmark against which the proposed MDP is assessed.

full implementation of the MDP- scenario. The Prizren MDP itself does not include any alternative development scenarios (alternative spatial development concepts are briefly mentioned within the spatial development framework), therefore the main impacts of the full implementation of the Prizren MDP spatial development framework (polycentric spatial approach), implementation strategies, actions and provisions will be considered as one of the scenarios

integrated functional zoning scenario. As the Prizren MDP currently does not include the integrated functional zoning element, relevant scenario is described and evaluated. Whereas a proposed polycentric spatial concept is combined with elements of compact development concept and with a strategic component of the generation of the regional center

In addition of describing and analysing the abovementioned scenarios there is a task which involves identifying the preferred alternative, based upon environmental grounds, and accurately describing the relevant grounds for this choice.

5.3 Objectives, targets and indicators

SEA uses a combination of objectives, targets and indicators to predict impacts, and describe and monitor change of proposed plans and programmes on the environment. Strategic Environmental Objectives (SEOs) and targets set aims and thresholds that should be taken into account when assessing the impact of proposed Plans and Programmes on the environment. Allied to the development of the SEOs are environmental indicators and targets. Indicators facilitate the monitoring aspect of the SEA, while Targets provide a realistic and achievable target to which the local authority can work towards. Indicators are used to illustrate and communicate impact in a simple and effective manner. Indicators can also be used to form the basis of a monitoring programme for the MDP.

Environmental objectives provide a benchmark “intention” against which the environmental effects of the plan can be tested. They are often be similar to measures contained in the MDP or derive from objectives that may exist. Examples of the environmental objectives: reduce noise and vibration in settlement areas, increase water quality in surface waters, reduce CO₂ emissions from transport or electricity generation, minimize impacts on designated habitats.

Indicators provide a means of measuring the progress toward achieving the environmental objective over time such as noise complaints received over a specified period of time, river/lake water quality, tonnes of CO₂ emitted per year, area of designated habitats.

Targets describe the desirable state in relation to each objective in quantifiable terms as follows: 50% reduction in noise complaints, meet targets required by phosphorous regulations, X tons of CO₂ emitted per year by 2020 or no significant impacts on populations of protected species. It is important that the indicators are measurable and targets are realistic and to ensure that either there are existing monitoring networks in place to measure the indicator, or that there are resources available to set up new monitoring networks. Quantitative targets and indicators are more useful than qualitative ones since they can generate tangible, real data and, as long as they are realistic, are easier to monitor. Nevertheless, qualitative indicators should not be discounted, as sometimes they are the only option available by which to measure performance.

An objective of this SEA report is to provide for a high level of environmental protection and to contribute to the integration of environmental considerations into the adoption and implementation of the Prizren MDP.

Table 3. Proposed objectives:

Objective	Indicator	Target
I Biodiversity, landscape and land use		
Protect, conserve and avoid loss of the diversity and range of habitats, species and wildlife corridors.	The increase % of the protected areas	15%
Protect and enhance people's quality of life based on high quality residential, community, working and recreational environments based on sustainable land use patterns.	Qualitative indicator	-
Protect human living quality by avoiding hazards or nuisances (dust, noise, smell) arising from exposure to incompatible land uses/developments (sand/gravel quarrying)	Percentage of eliminated developments with potential hazards to living quality	30%
Protect and conserve the cultural heritage including the built environment and settings; archaeological, architectural and manmade landscape features.	The increase percentage of protected/preserved natural heritage sites	20%
Protect designated landscapes and scenic views, routes and landscape features of local value	An amount of protected landscape features	75
Provide of green spaces for amenity	A percentage (from total area) of green spaces provided.	20%
Protect, improve and maintain the quality of soils	The improvement % of chemical, physical and biological soil quality indicators	50%
II Solid waste management		
Expand the solid waste collection system, promotion of sustainable waste treatment options (sorting, composting)	The percentage collected by the collection system	80%
Minimize the amount of waste to landfill from site	% of the reduction of waste disposed at landfill and re-used waste	20%
Identify any unregulated quarries, landfill sites or historical contamination sites within the Prizren Area	% of sites	95%
Elimination of illegal waste disposal sites	% of sites	80%
III Water protection		
Protect and enhance the status of aquatic ecosystems and, with regard to their water needs, terrestrial ecosystems and wetlands directly depending on the aquatic ecosystem (quality, level, flow).	Water quality monitoring results (improvement %)	50%
Reduce the impact of polluting substances to all waters	Water quality monitoring results (improvement %)	50%
Prevent pollution and contamination of ground water	Water quality monitoring results	50%

	(improvement %)	
Maintain and improve the quality of drinking water supplies	Water quality monitoring results (improvement %)	80%
Promote long-term protection of available water resources through sustainable water use.	Water quality monitoring results (improvement %)	50%
Upgrade infrastructure to meet future water supply needs and wastewater purification standards	Qualitative indicator	
IV Climate change and energy efficiency		
Minimize all forms of air pollution and maintain/improve ambient air quality.	Air quality monitoring results (improvement %)	70%
Minimise emissions of greenhouse gases and contribute to a reduction and avoidance of human-induced global climate change.	CO2 emission	20%
Maximize sustainable modes of transport and provide for ease of movement for all road users and to promote development patterns that protect and enhance road safety.	No of hybrids/electricity driven vehicles, amount (km) of light-transportation facilities	50 cars/20 km
Reduce waste of energy, promote use of renewable energy sources and support energy conservation initiatives. Promotion of energy conservation across all sectors. Promote the development of low carbon commerce and buildings	Qualitative indicator	
Reduce the risk of flooding and harm to people, property and the environment	Amount of projects/activities undertaken to reduce/avoid flood risks	10 per year

6. Environmental Assessment of the MDP

In general, the intensification of the current industrial areas and the restoration of former industrial areas have positive impact for the area's environmental and socio-economic conditions. It is likely, that the intensification of the current industrial areas is more sustainable than establishing new ones, as the relevant infrastructure is already present. This also allows to collect possible negative impacts on environment and therefore the range of the environment under the impact will be significantly smaller than in the case of several different industrial areas. The densification of the industrial zones does increase the negative environmental impacts (higher pollutant emissions, noise etc) in the area, but on the other hand a smaller area of so far untouched natural area will be influenced.

Well planned and designated additional industrial and business zones help to safeguard the municipality's balanced and sustainable development as it creates precondition for the local economy to grow and expand, might attract the investments outside of Prizren/Kosovo, also helps to create jobs and to decrease the unemployment rate.

Still, if planned industrial facilities are evaluated to create an additional non-point pollution source, especially for water, relevant means and measures (proper wastewater/waste

collection and treatment facilities, air filtration systems etc) are needed to establish in line with carefully planned industrial objects.

If new residential areas are to be designated, it is important to bear in mind that these areas are located in the way that the high-living quality is guaranteed for the potential inhabitants and on the other hand, the potential negative impacts of the establishment of the new settlement on the natural environment would be as minimal as possible. A proper planning of relevant infrastructure (water/wastewater management, energy infrastructure, conditions for effective and sustainable transport etc) for new settlement areas helps to minimize the potential environmental risks.

Mining is economic activity which strongly affects natural resources and landscape. Although there is no adequate data about the mineral resources of Prizren the current knowledge indicates different mineral resources are present and the interest for mining within the area might occur. The MDP does not designate any particular mining sights, therefore every single intention to conduct mining activity should be evaluated separately (EIA) to avoid conflicts with current MDP (taking into account that some of the valuable mineral assets such as chrome, iron, copper, gold, mercury are described to be present at the mountainous parts of Sharri mountains) and over-exploitation of the resources.

In the case of Prizren MDP, it is important to mention, that not all vital environmental issues could not be handled fully on local governance level. The complex issues of point and non-point sources based pollution needs more general planning activities from national authorities. During the SEA process it was not possible (partly because of the data gaps) to identify particular point-source pollution sources, it could only been estimated that Landovice landfill might act as a pollution source for soil and water resources. Still, as the landfill and the waste management system generally is planned and managed by national authorities the proper impact monitoring together with efficient central management system is needed to tackle the problem in Prizren and elsewhere in Kosovo. However, in order to make waste management more accessible and affordable for local inhabitants (especially in rural areas) the local authorities can contribute into the goal of minimizing the amount of waste deposited in the landfill. In addition to the environmental benefits on-site sorting and recycling (establishment waste transit/sorting stations) includes economic benefits such as the reduction of transportation/deposition costs the potential use of recycled materials including composting.

It is likely and evident that the high pollution rates in groundwater resources are caused by non-point pollution sources from agricultural land and residential areas. This problem needs also to be addressed nationally. There is a need to monitor and assess the impact of nonpoint pollutions sources by adequate (GIS-based) evaluation models as the effects are most likely transboundary. Although the MDP includes the project proposition to compose the River Basin Management plan in line with EU Water Framework Directive if supported by central action and guidance.

Through safeguarding the balanced land use patterns with current MDP and other spatial planning documents it is possible to avoid and mitigate potential negative environmental effects. Properly planned and implemented development areas (both residential and industrial) help to decrease biodiversity loss and protect valuable habitats. It also provides possibilities to establish relevant infrastructure and set up systems to prevent pollution from sewage and waste.

During the assessment process the potential cumulative effect of the impacts was also taken into account. Cumulative impact occurs if single impacts will influence the environment at the

same time and this cumulative impact does not necessarily is a arithmetic sum of the single impacts.

In the case of Prizren MDP the positive cumulative effect is most likely to appear on following development fields:

- impact on people health and welfare – positive impact on the people's health and welfare is created by the establishment of new settlements areas, business and recreational areas as well as modern technical infrastructure. The cumulative effect of those activities is stronger than the separate effects the single activities might have;
- impact on economical condition – the reservation and designation of industrial and business areas creates preconditions for the new enterprises and jobs. The economic activities will expand, economic welfare will increase.;
- impact on natural and agricultural environment – the reservation of new and expanded settlements and industrial/business zones is happening mostly at the expense of the existing natural/agricultural areas. There is a vital need to ensure that balance between socio-economic and environmental interests is found within the MDP by drawing special attention a the measures to protect natural values and by providing mitigation measures for the potential negative impacts.

6.2 Environmental Analysis of the proposed alternative scenarios

During the Scoping phase (see 5.2), three alternative scenarios were proposed to address further in the current SEA report. Within this chapter, these scenarios will be described and analysed, compared and the preferred alternative suggested.

6.2.1 Do-nothing scenario.

Under the do-nothing scenario which would result if no strategically planned development activities would take place, the PMDP 2025 area would maintain its current physical, environmental and socio-economic characteristics. Development would be market dependent within the existing development boundary and parameters. Future investment by the Prizren Municipality and others would be absent where not provided by the development plan and Municipality's role as a pro-active influence in the area would be lost. Adopting the do-nothing scenario would mean that Prizren would remain under-utilised with little physical, social or economic enhancement. The urbanization trend could continue uncontrolled with the possible outcome of urban sprawl which is associated with unplanned development sprawl to sites outside and inside of the Prizren town. The core of the town may be lost with unplanned excessive new growth. This development model often results in greater growth than anticipated and at a faster rate than anticipated with social, transport and piped infrastructure requirements problematic to plan to likely pace of growth. On the other hand, the socio-economic and environmental situation of the rural areas could deteriorate significantly if the provision of public services and job opportunities decrease and proposed sustainability led project are not going to be implemented. As in essence the PMDP 2025 is targeted to solve current environmental issues and to promote ongoing and sustainable development and it includes only a few project proposals which might (if not planned, prepared and implemented reasonably) include some negative environmental impacts, the do-nothing scenario could not be considered as the preferred one.

6.2.2 Full implementation of the PMDP 2025 scenario

This scenario means that the spatial development concept of the polycentric approach will be implemented, in the sub-centers additional range of public services will be provided with the hope to safeguard the growth and development of the rural neighborhoods. A *hierarchical polycentric region* contains several urban centres which are organized in a hierarchical central place structure. In this urban structure, one centre (Prizren town) is dominating the others. This approach is currently widely spread and is in accordance with the European Spatial Development Perspective (ESDP)³. It should help to find balance between rural and urban areas and to provide conditions for the rural areas more successfully to assimilated structural changes. As in Prizren the population growth trend demonstrates that Prizren Town tends to grow larger and to expand towards peripheries. Unless managed properly, this growth will constitute a threat over the areas of rich ecological values between the city centre and peripheral settlements. To minimize that threat and to be targeted to balanced spatial development the poly-centric Development Concept is proposed by the PMDP 2025. If implemented properly, no significant negative impact could be foreseen as a result of the choice of that spatial concept. The PMDP also uses the tool of Analytic Hierarchy Process (AHP) to indicate suitable zones for future development (such as housing, industry, tourism, agriculture etc). This tool allows to take into consideration relevant spatial data in order to assess the suitability of the area for specific purposes. As a result, AHP maps are prepared, from where the suitable areas for future developments can be found. As the characteristics, according to which the suitable areas are mapped, can be evaluated generally appropriate the further implementation of the analysis result should have positive environmental impacts. It suggest that potentially pollutive activities (residential, industrial, agricultural) are excluded at the environmentally vulnerable areas. But the PMDP 2025 does not integrate the AHP results with the polycentric development approach to provide coherent spatial structure/zoning (only some minor elements visible from May 2012 map). As a result the sustainable and analysis-based way to further develop the spatial planning in Prizren would be challenging to implement. If therefore neither the polycentric development concept nor the AHP results will not be implemented effectively, it might end up with continues random settlement/industrial areas' development and negative environmental impacts. All of the implementation project will be carried out, out of which mainly positive environmental impacts emerge. Although, as there are a wide range on preparative projects (plans/programs preparation mainly scheduled for the first trimester of the PMDP 2025 period) a lot of potential environmental impacts (which could be assessed if the proposed plans are already implemented) remain moderate and indirect.

³ http://ec.europa.eu/regional_policy/sources/docoffic/official/reports/pdf/sum_en.pdf

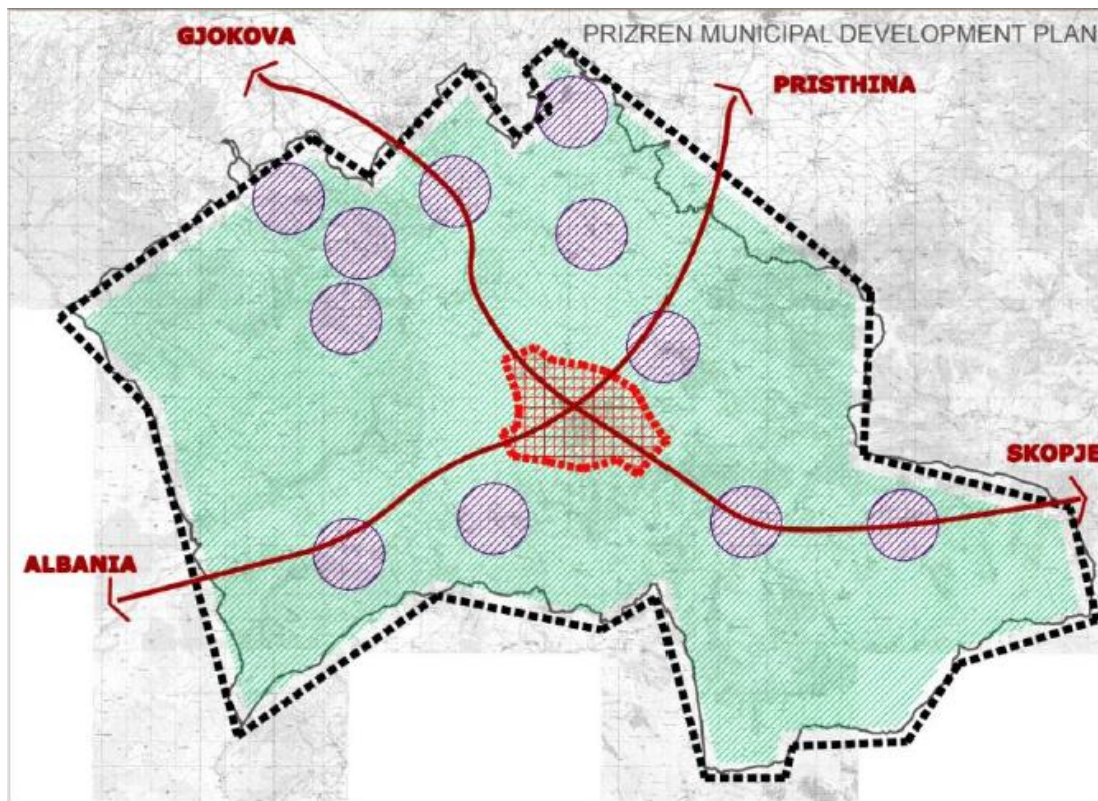


Figure 7. Illustration of the polycentric spatial development concept (PMDP 2025)

6.2.3 Integrated functional zoning scenario

This scenario maintains the main element such as polycentric spatial concept from the last scenario in order to strengthen and balance the urban-rural relationships in a way that benefits both urban and rural populations. But as the Prizren area is influenced by Kosovo's status as a developing country and very strong demographic trend (population growth) there is a need to take into consideration the possibility that the high pressure on the Prizren town will maintain and increase and therefore the elements of Compact Development Concept are combined with the Polycentric ones. Prizren's role as a strong regional primate center with the concentration of urban facilities and expansion possibilities is emphasized. For the town expansion zones, only the suitable areas from the AHP analyses are used. In order to provide better combined implementation possibilities for the spatial development concept (polycentric and compact combined) together with AHP results the functional zoning map needed is prepared as a basis for further spatial developments. The zoning should propose suitable areas for housing, agriculture, industry, tourism based on the AHP data, but all the zones are combined into one zoning map, where overlays are eliminated (analysis indicates that in AHP analysis results suitable areas for housing and industry overlay a lot) and the zones are located in the way that they'll support the spatial development concept. As this alternative scenario minimizes the risks which might occur if the urbanization trend vitally continues and provides additional implementation (combined functional zoning as the spatial guidelines for further development) support, it is hereby identified as a preferred scenario.

The third scenario also supports the realistic approach as a basis of planning new residential areas. Within PMDP several population prediction models are used to estimate the Prizren population in 2025, only the most optimistic approach suggest that the population could grow as high as half a million of inhabitants. Using the suggested population density rate 175 persons per hectare from PMDP capacity analysis it can be concluded that all the AHP identified suitable housing areas (25 000 ha) could accommodate up to 4,3 millions inhabitants. Even if this estimate would be reduced in order to include necessary land

resources for infrastructure and public spaces it is evident that all of the identified areas suitable for housing are not likely to be developed for settlements. The figure below illustrates the approach where AHP analysis results for housing and industries are used to locate designated zones for both purposes to support the development of Prizren town as well as all of the major regional centers. The PMDP expansion zones for settlements could act as further border areas for lower level spatial planning documents. The illustrative map indicates 3000 ha of new housing areas which could accommodate up to 500 000 inhabitants (175 p/ha). This approach would prevent developments areas to be located improperly or too scarcely with suitable areas, it helps to plan and establish necessary infrastructure, service and public facilities.

According to that the third scenario is suggested to be the most suitable scenario and it is suggested that the functional zoning map (which supports the current contents and main suggestions of the PMDP 2025) is added to the municipal development plan and further developments and development plans will be prepared and implemented accordingly.

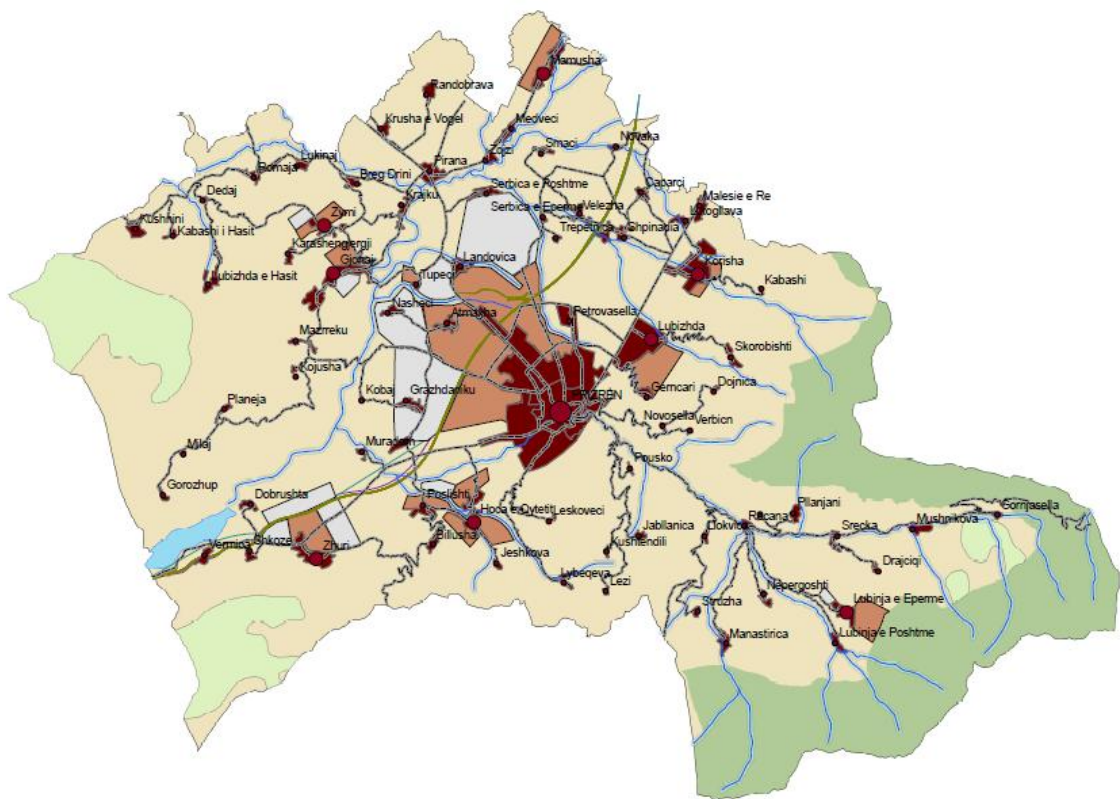


Figure 8. Third scenario illustration. Dark brown indicates current residential areas, light brown indicates potential residential areas and gray indicates potential industrial areas (based on AHP analysis).

6.3 Environmental Impacts of the proposed implementation strategies and actions

The MDP implementation chapter is conducted in the way where in order to attain the vision of PMDP 2025, strategic goals for long term development and related objectives are determined. Then, action plans are developed based on the goals and objectives and for of them projects are defined with the timing. The main implementation chapter does not include neither the definition of responsible (administrative) bodies for the proposed projects nor any indication of the necessary financial means. Although the time perspective of the PMDP2025

is set to be 15 years the majority of the proposed projects are foreseen to be implemented within 2-5 (only one project's timing is set to be 15 years), taken into consideration the scope and the ambitiousness of the projects it is not likely that all of the proposed projects could be implemented during the proposed time limit. No indicators and targets are proposed for the implementation actions and this on the other hand will make the monitoring of the progress of the plan implementation complicated. In order to safeguard the achievement of the possible positive environmental impacts of the PMDP2025 implementation it is hereby suggested to revise the proposed projects' timing perspectives, to add responsible (administrative) bodies and financial indicators. It is important to point out that almost all of the projects are proposed for the first trimester of the PMDP 2025 period and a lot of them are not implementation projects but rather plans/programs to prepare certain activities. Therefore, during the monitoring process of the plan it would be essential, according to the revised need and means, to add implementation projects to be carried out during the later stage of the plan period.

Following, the potential environmental impacts of the proposed projects are assessed, structured according to the proposed setup of the strategic goals and objectives. An impact could be evaluated to be significant if it is likely to exceed the area's endurance limit, to cause irreversible changes in the environment or to threaten human health and welfare, cultural heritage or wealth.

The PMDP 2025's first (A) principle of "Natural and Cultural Heritage Conservation" includes 2 main strategic goals, such as *cultural heritage will be conserved and enhanced* (1) and *natural heritage will be conserved and enhanced* (2). Within the first goal 7 projects are proposed, as any of them do not include any real construction or other activities and they only foresee the composition of different programs, projects and plans they do not include any significant environmental impacts. If these plans, projects and programs will be conducted and/or implemented, the necessity of the SEA/EIA to assess possible environmental impacts should be deliberated

Environmental impact matrix of the projects, goal *cultural heritage will be conserved and enhanced*

Code	Project name	Environmental Impact (EI)	EI Strength	EI Timeframe	EI Geographic Scope	Other significant impacts
A.1.1.1	Urban Design Implementation Programs and Projects for Prizren Historic City Center	Neutral	-	-	-	-
A.1.2.1	Comprehensive Restoration Projects for the Historic Buildings	Neutral	-	-	-	-
A.1.3.1	Rehabilitation Projects of Historic Buildings and Sites for Accommodation and Cultural - Touristic Services	Neutral	-	-	-	-
A.1.3.2	Restoration Projects for Monumental Buildings	Neutral	-	-	-	-
A. 1.3.3	Historic Site Management Plan	Neutral	-	-	-	-
A.1.3.4	Visit Prizren' Promotion Program	Neutral	-	-	-	Socio-Economic+
A.1.4.1	Protect Prizren' Education Program	Neutral	-	-	-	-

The second strategic goal Natural Heritage will be conserved and enhanced includes 4 project proposals. 3 out of these proposals include preparation of projects and one of them EIA projects, therefore only weak/moderate environmental impact is assessed to occur as the real impacts depend on the contents of the projects and their implementation efficiency.

Environmental impact matrix of the projects, goal *natural heritage will be conserved and enhanced*

Code	Project name	Environmental Impact (EI)	EI Strength	EI Timeframe	EI Geographic Scope	Other significant impacts
A.2.1.1	Management Project for Natural Heritage	Positive	Weak	Short-term	Local	-
A.2.2.1	Integrated Natural and Historical Tourism Destination Project	Positive	Weak	Short-term	National	-
A.2.3.1	Environmental Impact Assessment Project for National Park Sharr Mountain	Positive	Moderate	Short-term	National	-
A.2.4.1	Capacity Building Project for Tourism Development	Neutral	-	-	-	-

According to the second principle (B) of the PMDP 2025 the main strategic goal is *protection and sustainable use of environmental resources will be ensured*. To achieve that goal 10 projects/ideas are proposed, 9 out of them are plans, projects and programs and one implementation project to construct treatment facilities. Although the possible implementation of the proposed projects might involve significantly strong positive environmental impacts the preparation of the planning projects as such do not include strong impacts

Environmental impact matrix of the projects, goal *protection and sustainable use of environmental resources will be ensured*

Code	Project name	Environmental Impact (EI)	EI Strength	EI Timeframe	EI Geographic Scope	Other significant impacts
B.1.1.1	Natural Tourism Development Plan	Positive	Moderate	Long-term	International	-
B.1.1.2	River Basin Management Plan	Positive	Strong	Long-term	International	-
B.1.1.3	Construction of Treatment Facilities	Positive	Very Strong	Long-term	International	-
B.1.2.1	Environmental Impact Assessment Project	Positive	Moderate	Short-term	National	-
B.1.2.2	Special River Protection Projects for Lumbardhi and Drin i Bardhe Rivers	Positive	Moderate	Mid-term	National	-
B.1.3.1	Risk Assessment Project for Natural Areas	Positive	Moderate	Long-term	Local	-
B.1.4.1	Forest Management Plan	Positive	Moderate	Long-term	Local	-
B.1.4.2	Investigation Project for the Location of Stone Quarrying Activities	Positive	Moderate	Long-term	Local	-
B.1.4.3	Rehabilitation Project for the Illegal Stone Quarrying Areas	Positive	Strong	Long-term	Local/National	-
B.1.5.1	Agricultural Education Programs	Positive	Weak	Mid-term	Local	-

The third (C) principle of PMDP 2025 “Social inclusion, social equality and quality of life” includes 3 main strategic goals such as *balanced and accessible public facilities will be provided* (1), *new employment opportunities will be provided and unemployment rate will be decreased* (2) and *public participation in decision making will be encouraged* (3)

Taken into the consideration the nature and characteristics of the projects, as well as the presumption the construction sites (kindergartens, elementary schools, high-schools, cultural facilities, sports-facilities) will be selected bearing in mind the sustainable use of land resources and the construction activities are carried out according to sustainable building principles, the vast majority of the projects proposed for that principle should not include any significant and direct environmental impacts. Nevertheless, indirect impacts might occur if the socio-economic situation significantly improves by the provision of additional public services and the decrease of the unemployment rate.

Environmental impact matrix of the projects, principle *Social inclusion, social equality and quality of life*

Code	Project name	Environmental Impact (EI)	EI Strength	EI Timeframe	EI Geographic Scope	Other significant impacts
C111	Requalification and Organizational Evaluation Project of Urban Facilities	Neutral	-	-	-	-
C121	Kindergarten Construction Projects for Each Village	Neutral	-	-	-	Financial-, Social+
C122	Elementary School Construction Projects for Each Village	Neutral	-	-	-	Financial-, Social+
C131	Highschool Construction Project	Neutral	-	-	-	Financial-, Social+
C132	Multi-Purpose Cultural Facility Construction Project	Neutral	-	-	-	Financial-, Social+
C133	Sports Facility Construction Project In Each of the Central Villages	Neutral	-	-	-	Financial-, Social+
C141	Capacity and Quality Development Project for Urban Facilities	Positive	Moderate	Long-term	Local	-
C211	Youth Entrepreneurship Education Program	Neutral	-	-	-	-
C212	Establishment of Agency for Project Development and Consultancy	Neutral	-	-	-	-
C213	Local Economic Development Program	Neutral	-	-	-	-
C221	Job Recruitment Program for Business Entrepreneurship Assistancy Services	Neutral	-	-	-	-
C231	Program for Agricultural Entrepreneurship Assistancy Services	Neutral	-	-	-	-
C232	Community Planning Project (CPP)	Positive	Weak	Mid-term	Local	-
C311	e-Prizren Project	Positive	Weak	Long-term	Local	Innovative+
C321	Municipal e-Bulletin Project	Neutral	-	-	-	-

The fourth principle (D) of the PMDP 2025 “Economic vitality” includes 5 main strategic goals. These are:

1. Managed and balanced rural development will be provided
2. Agricultural production will be supported
3. Manufacturing activities will be fostered and organized
4. Commercial and financial activities will be fostered
5. Tourism activities in Prizren will be developed and enhanced

As the proposed projects do not include specific description of the planned activities, the assumptive impacts are predicted and assessed. There are the total of 16 projects proposed for the abovementioned strategic goals, some of them are promotion/consultancy programs or plans, which do not include any significant or negative environmental impact. Under the current principles, some of the projects, if not implemented fully sustainably, might include negative environmental impacts.

Environmental impact matrix of the projects, principle *Economic vitality*

Code	Project name	Environmental Impact (EI)	EI Strength	EI Timeframe	EI Geographic Scope	Other significant impacts
D111	Program for Business Entrepreneurship Assistancy Service	Neutral	-	-	-	-
D211	Training and Consultancy Programs for Animal Production	Neutral	-	-	-	-
D212	Municipal Incentive Funds for Animal Production	Negative	Moderate	Mid-term	Local	Economic+
D213	Produced in Prizren' Program	Neutral	-	-	-	-
D214	Training and Consultancy Programs for Dairy Products	Neutral	-	-	-	-
D2aa	Agricultural Development Project	Negative	Moderate	Long-term	Local	Economic+
D311	New Agricultural Industry Zone Project	Negative	Moderate	Mid-term	Local	Economic+
D321	Education Program for the Production of Local Beverages	Neutral	-	-	-	-
D322	Education Program for the Production of Fligran	Neutral	-	-	-	-
D411	Continuous Education Program for Retail and Commercial Activities	Neutral	-	-	-	Economic+
D421	Logistic Node Project	Negative	Weak	Long-term	Local	Economic+
D511	Establishment of a Tourism Office in Prizren Town	Neutral	-	-	-	-
D521	Benchmarking and Control Program for Tourism Facilities	Neutral	-	-	-	-
D531	Ski Center Project in Prevalac	Negative	Strong	Long-term	National	Economic+
D532	Agro-Tourism Project on Podrimi Plain	Neutral	-	-	-	Economic+
D533	Mali Sharr National Park Tourism Management and Implementation Plan	Positive	Moderate	Long-term	International	Economic+

The last, fifth (E) principle “Spatial integrity” includes 2 strategic goals: *attractive living environments will be created* (1) and *effective and spatially integrated transportation and infrastructure network will be provided* (2). First goal includes 3 and the second one 7 project ideas, whereas most of them are directed to the improvement of natural/living environment and have rather positive environmental impacts. However, some of the infrastructure projects (new transportation routes/wind energy site selections) might include negative environmental impacts which are needed to further assess during preparation and implementation of the proposed projects.

Environmental impact matrix of the projects, goal *attractive living environments will be created*

Code	Project name	Environmental Impact (EI)	EI Strength	EI Timeframe	EI Geographic Scope	Other significant impacts
E111	Revision of Urban Development Plan of Prizren Town’ Project In Line with the Prizren Municipal Development Plan	Positive	Moderate	Mid-term	Local	-
E112	Urban Regulatory Plans for Each of The Central Villages	Positive	Very-Strong	Long-term	Local	-
E1aa	Sustainable Residential Planning and Design Prizren Urban Design Guideline	Positive	Strong	Long-term	Local	-

Environmental impact matrix of the projects, goal *effective and spatially integrated transportation and infrastructure network will be provided*.

Code	Project name	Environmental Impact (EI)	EI Strength	EI Timeframe	EI Geographic Scope	Other significant impacts
E2aa	Transportation Masterplan	Negative	Moderate	Long-term	Local	Economic+
E241	Traffic Design and Management Plan for Prizren Town	Neutral	-	-	-	-
E251	Renovation Project of Electricity System	Neutral	-	-	-	Financial-Economic+
E252	Wind Energy Potential and Site Selection Project	Negative/Positive	Moderate	Long-term	National	Economic+
E253	Renovation and Establishment Project of Communication Network	Neutral	-	-	-	Socio-economic+, Financial-
E254	Renovation Project of Sewage System and Construction Project of Purification Units in Disposal Sites	Positive	Very strong	Long-term	International	Financial-
E255	Renovation and Establishment Project of Irrigation System	Negative/Positive	Strong	Long-term	Local	

6. 4 Mitigation measures

The objective and the purpose of the mitigation measures are to avoid or to decrease any potential negative impact on environment. The selection of the most suitable mitigation measures in an on-going process during the whole period of development and it is should be carried out in the close co-operation of all the relevant stakeholders (decision-makers, experts, investors, local inhabitants, NGO-s). The suitable mitigation measure has to be the best one among possible alternatives, considering economic aspects as well.

Although major negative impacts were not identified during the assessment phase, there is still a need to avoid or minimize the potential negative effects some or the MDP activities might have:

- while planning and establishing new industrial areas, tourism attractions, settlements or infrastructure there is a need to find a balance between socio-economic and environmental interest by planning green corridors, buffer zones, promotion and implementation of sustainable energy solutions etc, during the development activities them maximum amount of existing greenery should be preserved;
- management of existing forest resources have to be particularly sustainable to ensure the preservation of the forest biodiversity and the long-term economic benefits sustainable forest management;
- while planning and establishing tourism facilities to valuable natural areas, especially in Shar Mountain National Park the suitable activities need to be selected according to the area's capacities; the mobility of the visitors should be appropriately channeled (by footpaths, parking lots, toilets, resting spots) in order to increase the exploitation of the valuable landscapes and natural areas by the proposed management plans, there is a vital need to further develop the co-operation between Prizren Municipality and the responsible bodies of National Park management in order to prevent improper development project to be planned and developed within the park's borders;
- while planning and establishing industrial areas there is a need to reserve space of sanitary and buffer zones and not to locate inappropriate (high noise level, massive buildings, intense transportation) industrial facilities in the close proximity to settlements and areas with high natural/scenic value.

7. Conclusion

The strategic environmental assessment process for the Prizren Municipality Development plan covers wide range of scopes from global (Millenium Development Goals) to very local (new schools at rural settlements). Although planned and implemented locally the MPDP 2025 is going to have it's share in contributing into Kosovo's, Europe's and world's efforts on tackling a complex set of environmental challenges such as climate change, biodiversity loss, pollution, urbanization etc. The Prizren Municipal authorities together with plan composers and included stakeholders have faced this challenge successfully and the prepared planning document creates a good basis for further sustainable development corresponding well with upper level plans and programmes. One of the main assets and strengths of this very comprehensive document is the collection and analysis of the current data and situation of the municipality. In addition of the current MDP this set of data presented as descriptive chapters, tables and maps will be most useful for further planning activities in Prizren as well. The strategic, spatial and implementation parts of the planning document are based on collected data and adequate analysis. Sustainability issue is included as a priority policy into the area's strategy - objectives, implementation provisions derived accordingly. As the PMDP is generally directed into the improvement of current situation, economical as well as

environmental, the implementation of this plan would not include any significant negative environmental impacts. It addresses basically adequately the main environmental challenges faced in Prizren, such as: ground water and surface water quality, solid waste issue, wastewater treatment and sustainable land use patterns. In order to implement the PMDP 2025 effectively in line with sustainability principles the current SEA report proposes a set of environmental objectives, indicators and targets, which are derived from the MDP and are in accordance with modern sustainable development principles and upper level plans and programmes. These objectives should be implemented and monitored in parallel with current MDP. From the three proposed alternative environmental scenarios (do-nothing, full implementation and combined scenarios) the combined scenario is proposed as a suggested scenario. According to that alternative the current MDP is going to be supplemented with more specific spatial framework which is based on AHP analysis results and combines the elements of polycentric and concentrated spatial development concepts. It proposes that adequate amount of reasonably located development areas would be designated with MDP in order to ease the further decision-making processes by providing clear development perspectives for the future and spatial guidelines for lower level planning documents. It also prevents developments (with potentially negative environmental impacts) to be located improperly or too scarcely and helps to plan and establish necessary infrastructure, as well as public and private services. The SEA report includes the environmental assessment of the plan, its strategic goals, objectives and implementation projects. As a result of this assessment no perspective negative environmental impacts were identified. However, the proposed implementation projects were rather general in nature (mainly composition of plans and programmes) and covered only the 5-year period of the PMDP 2025 timescale. Therefore it is suggested that either before the final approval of the MDP or during the next revision of the plan the project list will be revised and amended with short-medium-and long term projects with responsible bodies to achieve the plan's strategic goals. Including clear steps will safeguard the achievement both economic and environmental objectives of the plan.

8. Monitoring

As part of the Strategic Environmental Assessment process, measures envisaged for monitoring the likely significant effects of implementing the PMDP 2025 must be included in the SEA Report. The main purpose of the regular monitoring is to identify the possible negative effects of the MDP implementation as early as possible and to imply necessary means to prevent and/or mitigate the negative impacts.

The purpose of the monitoring suggestions is to provide support for the responsible authority (Prizren Municipality) to assess the changes at the natural environment during the implementation of the Prizren Municipal Development plan. During monitoring, there should be a possibility to find out if the strategic aims, implementation provisions etc of the plan caused the expected outcomes or improvements.

One essential component of SEA monitoring is to periodically observe the progress of achieving the environmental objectives, reaching the set targets. A list of environmental indicators and targets is provided in the Table 2. They have been derived from knowledge of the existing environmental issues within the Prizren area and also from legislation, guidelines and other relevant documents. It is suggested that the monitoring will be conducted annually in tact with the monitoring process of the PMDP 2025 itself. During the preparation of the current SEA report the amount of quantitative environmental data (water, air, soil quality etc) was limited for Kosovo in general and for Prizren area as well. Therefore it is also suggested that during the regular monitoring process the suitability and adequacy of the proposed

indicators/objectives will be assessed and corrected if there will be a need and/or the possibility. If it occurs, that the monitoring results indicate the fulfillment of any targets, it should be deliberated if there is a need and necessity to raise the target. Until the monitoring systems for gathering the necessary environmental data (water pollution etc) have not been set up the monitoring of some environmental objectives should take place on evaluative basis, by evaluating the extent of influence a certain project (i.e. building the wastewater treatment facility) on the environment (water quality).

In addition to the monitoring of specific environmental objectives and targets by measuring the indicators the environmental aspects should be under consideration while evaluating the implementation progress of the plan itself. It allows to identify the real environmental impacts of the implemented projects and to propose additional mitigation measures or suggestions to correct the plan if necessary. A special attention should be paid to the implementation projects if the assessment matrix in chapter 6.3 have indicated that the project have either positive or negative environmental impact. In both cases the impact extent of the implemented project or activity should be measured or evaluated. In case there will be new projects or activities added into the plan during the it's monitoring, the perspective environmental and other impacts should be evaluated following the example of the matrix provided in the current report.

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Annexes

- 1) List of the EU legislative documents on environmental matters relevant in Kosovo
- 2) Attendance lists of the semi-public workshops
- 3) Notes of the stakeholder meetings/interviews