

## Strategic Environmental Assessment (SEA) Objectives for the Municipal Development Plan (MDP) of the Municipality of Shterpca

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**Abstract:** Strategic Environmental Assessment (SEA) is one of the key instruments for integrating environmental issues, principles of sustainable development, proposed programs and decision-making during drafting of the Municipal Development Plan (MDP). In this research, the Strategic Environmental Assessment report (SEA) for the Municipal Development Plan (MDP) of the Municipality of Shterpca has been explored and analysed in detail. The elements of the SEA report such as the national and the EU legal basis for the drafting of this document, the analysis of the existing situation of environmental factors in the municipality of shterpca such as: (the geographic position, population, flora and fauna, drinking water supply, polluted water treatment, etc., the concept of development of the municipality of Shterpca and the priorities of the scenarios given for the municipal development plan, goals and objectives of the MDP and their harmonization with the national legal frameworks, testing of the goals of the MDP against SEA objectives, water supply, sewage management, traffic and integrated waste management and necessary measures under SEA for the MDP are reviewed and analysed in this research. The implementation of the recommendations and the objectives of the municipal development plan and the strategic environmental assessment for the municipality of Shterpca as the preservation of biodiversity and natural habitats, the protection of protected areas and other objects remain challenges for the management of this municipality.

**Key words:** Strategic Environmental Assessment (SEA), Municipal Development Plan of Shterpca (MDP), geographic position, municipality, traffic, sewage management

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### INTRODUCTION

In Kosovo, the strategic environmental assessment reports for municipal development plans are now a legal obligation. So, the Strategic Environmental Assessment Report for the municipal development plan of Shterpca Municipality is a legal obligation (Anonymous, 2003). SEA is a process aimed at integrating environmental indicators into the preparation and adoption of plans, programs and policies within the framework of the drafting of the development plan of a municipality. The purpose of the SEA report on the municipal development plan of the municipality of Shterpca is to identify describe and evaluate the important impacts that may result from the implementation of the municipal development plan as well as provide additional, more favourable alternative proposals for the development of the city from an environmental point of view.

The SEA report should also include the proposal of measures for the removal of harmful impacts arising from the municipal development plan proposals (Strategy for environment 2013-2022).

The methodology followed during the drafting of the MDP and SEA in the municipality of Shterpca is in full compliance with the EU Directive: 2001/42/EC on the assessment of the effects of several plans and programs on the environment and the Law on Environmental Impact Assessment (Anonymous, 2019).

Supported by this Directive 2001/42/EC, the SEA should include at least some of the following: a summary of basic environmental assessment information, the MDP vision description, a description of existing environmental problems that are relevant to the plan and the ways in which the objectives have been taken into account when preparing the SEA report in the municipality of Shterpca. Strategic Environmental Assessment of the Shterpca municipality (SEA) is a key instrument for integrating environmental issues and sustainable development principles into strategic planning and decision-making processes. The SEA provides guidance on the inclusion of environmental issues in projects that will be realized in the future, in this municipality in the Republic of Kosovo.

## **MATERIALS AND METHODS**

### **SEA legal framework in the municipality of Shterpca:**

When drafting the SEA's Strategic Environmental Assessment, many national and international documents that regulate this field should be considered, EU Directive 2001/42/EC on Strategic Environmental Assessment (27.06.2001). This directive applies to a wide range of public plans and programs such as land use programs, transport, energy waste and agricultural programs at the municipal level.

An important document for drafting SEA is "The EU 2020 Strategy for Strategic Environmental Assessment". This document is of particular importance in drafting policies for the EU itself and for neighbouring countries and regions but it is of particular importance for the Western Balkans. In the framework of the EU 2020 strategy (Anonymous, 2010), the EU's possible enlargement with Western Balkan countries is foreseen. The fast, sustainable and inclusive development of states claiming EU membership is a priority of this strategy. The strategy also includes targets to be achieved such as 20% reduction in greenhouse gas emissions and an increase of 20% energy from renewable sources of energy (Anonymous, 2017).

Aarhus convention (The convention establishes the right to access information, public participation in decision-making and access to justice in environmental matters). The convention was approved on 25 June 1998 in the city of Aarhus at the fourth conference as part of the "Environment for Europe" process (FMCA., 1998).

Among other important documents for drafting SEA is the Kosovo Spatial Planning Law (Law on Spatial Planning No. 03/L-106). In July 2013 the new Law on Planning (Law No. 04/L-174) was approved. According to Law No. 04/L-174 in Kosovo there are 2 levels of planning (Central and local) while types of plans are: spatial plan, zonal map, spatial plans for special areas, Municipal Development Plans (MDPs), municipal zones map and detailed urban regulatory plans.

The Kosovo Law on Strategic Environmental Assessment (SEA) NR. 03/L-230 is also implemented in Kosovo. The law defines the importance of integrating the principles for environmental protection during the preparation, approval and implementation of the respective municipal plans and programs.

**Current environmental situation of Shterpca municipality:** The analysis of the current environmental situation in the municipality of Shterpca is done to

identify the environmental situation and its confrontation with the vision and priorities and the desired effects of the development and implementation of the municipal development plan.

The environmental condition in the municipality of Shterpca is characterized by the description of environmental receptors as required by the SEA directive which are outlined as follows: population and public health, zoo diversity, nature conservation areas, air quality, noise and unpleasant footage, climatic factors, climate change, water in general, agricultural land and landscape, physical infrastructure (transport and waste management):

- . Several factors that affect the health of the population in the municipality of Shterpca have been identified
- . Preservation of drinking water sources from contamination
- . Construction/rehabilitation of sewage, sewage treatment
- . Rehabilitation of high pollution areas and those with potential for further pollution
- . Promoting mobility, walking and cycling and redesigning public traffic to reduce the emissions of gases and noises in the municipality
- . The quality of buildings, density and zoning should be adequately supported in some settlements of the municipality of Shterpca

**Geographical position and agricultural areas in the municipality of Shterpca:** The total area of Shterpca municipality is 24,762.2 ha. Currently there are about 13,900 inhabitants in 16 settlements including the tourist settlement, Brezovica. Mountain landscapes are traditionally used for livestock production and to a lesser extent for agricultural production (Fig. 1).

The territory of the municipality of Shterpca is located at an altitude of about 640-2,597 m. It is rich in pastures and meadows, fruit and vegetable surfaces as well as arable land:

- . For agricultural production, residents use the following areas
- . For livestock production, 10,985.2 ha were used or 45.8% of the total fertile land, respectively, 44.4% of the total area of the Shterpca municipality
- . For crop production, 2,446.0 ha were used or 10.3% of the total fertile land, respectively, 10.0% of the total area of the municipality

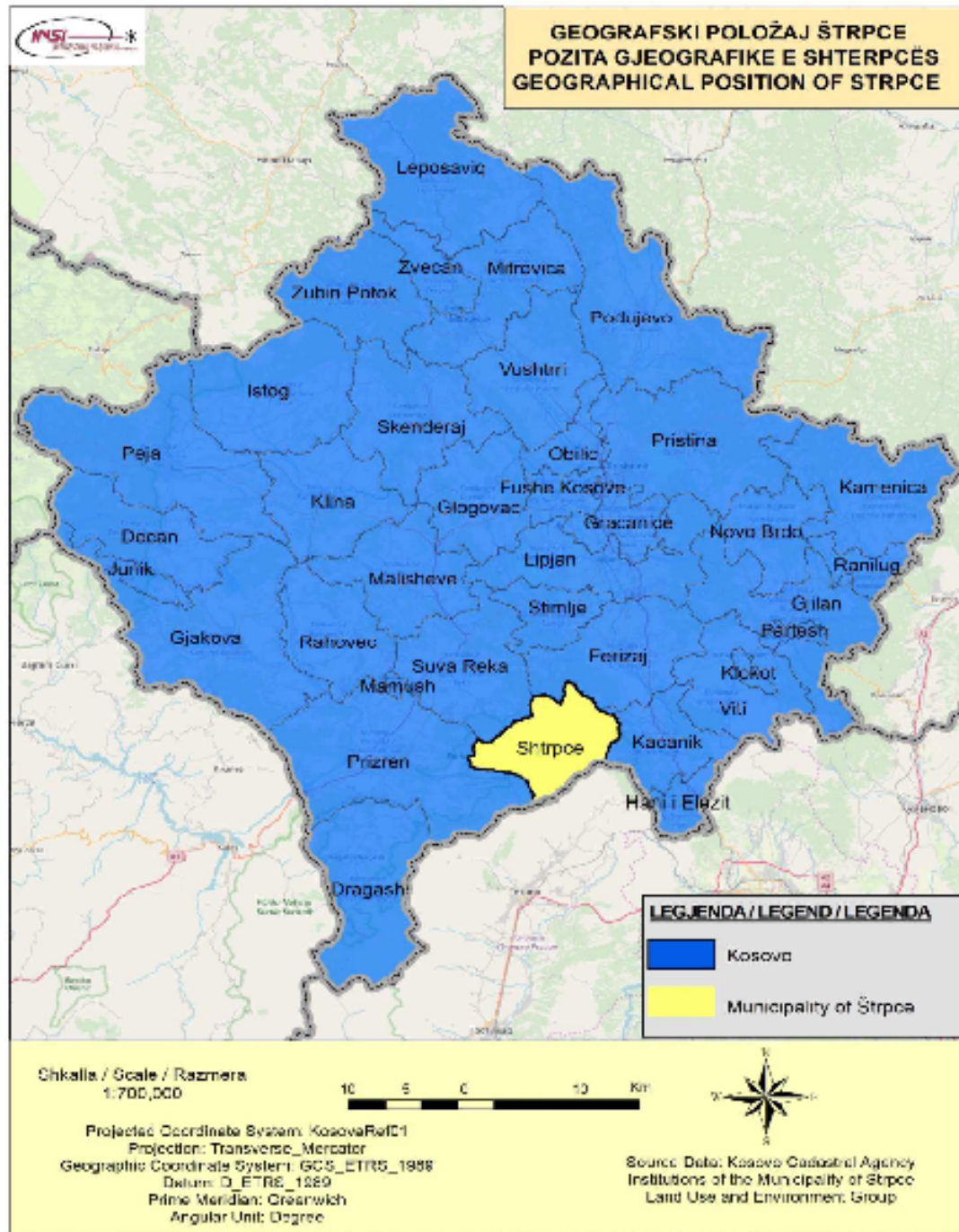


Fig. 1: Geographical position the municipality of Shterpca

- 203.5 ha or 0.8% of the total fertile land, i.e., <0.8% of the total area of the commune were used for fruit/fruit/vineyard production

The total area of agricultural land is 13.652,7 ha which represents 55.15% of the total area (Fig. 2).

**Forest vegetation and the animal world:** The forest vegetation of the Northern part of the Sharr mountains and its branches is very developed, complex and important with several high breeds of vegetation. This situation is due to climate and its impacts, the low xerothermophilous bushwood (*quercus pubescens*,

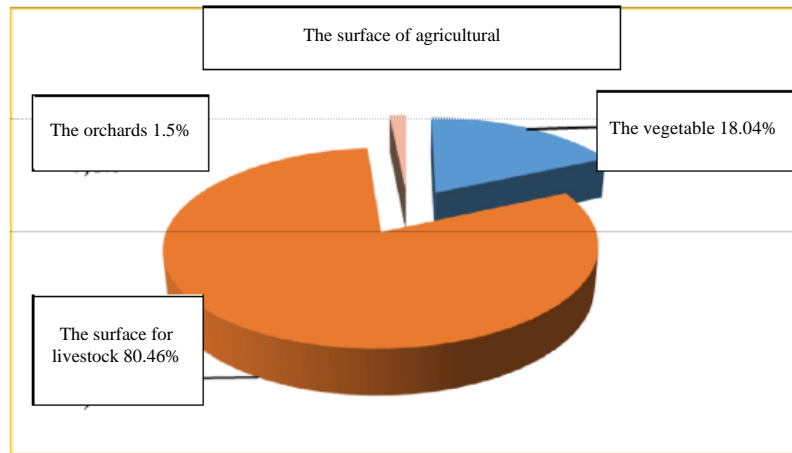


Fig. 2: Surface of agricultural land in the municipality of Shterpca

quercus conferta, quercus cerris, carpinus orientalis, then the quercus petrea (quercus petrea) and white hornbeam carpinus betulis), the mesophilic beech forest of beech or ash-Fagus moesiaca and the beech forest mixed with the *Abies alba* pines in the high mountainous areas.

The animal world of the valley of Sharr and its periphery is characterized by a large number of species and a small number of specimens of some certain species. According to the results of the research, so far, there are deer, chamois, wild boar, bear, roe deer, lynx, then wolf, wild cat, fox, glittering golden coon, rabbit, rabbit, squirrel, baldosa, otter, cockroach, galica roaches, snow parrots, black woodpeckers, golden eagles (hills), hut, woodpecker and many other species that live in the Sharri mountains.

**Tourism and cultural heritage in the municipality of Shterpca:** Shterpca municipality is characterized by very favourable natural conditions for the development of tourism. In spite of this fact, the Sharr mountains with altitudes up to 2,600 m are not much used for the development of Winter and Summer tourism. The geomorphologic and biogeographic conditions for tourism development in Sharr indicate the existence of favourable conditions for the development of many activities in Bistra and Careva meadows up to the Northeast towards Luboten, Shterpca and Gotovusha. In the planning process and the urbanization process that should include this underdeveloped area, it is important to physically preserve and raise the level of testimony of the people for the difficult times of history, world time and world wars but also including contemporary life and the modernized landscape (Kosovo Environmental Protection Agency, 2011).

The list of cultural objects protected and evidenced in the municipality of Shterpca are:

- The castle on Brezovica-Çajlia, Brezovica
- The Church of St. Nicholas of the XVI century, Gotovushe
- The Church of St Nicholas of the century, Shterpca

**Part of the cultural heritage of great importance are:** The stone slab with the tombstone of the Church of St. George Bitia e Eperme, Church of the Holy Theodor from the 16 century Bitia e Poshtme, Cemetery of the village “Crkvisha” Verbeshtica, St. Ilija Church in Vrbashtica, St. George’s Church from the century 16 and 17 Sevce, the Church of St. Nicholas from the 16 century in Sevce, the Church of St. Matthew from the 16 century in Jazhince, the village mosque Bitia e Eperme and the tower of Ibrahim Mule from the 19 century Firaje.

**Waste management in the municipality of Shterpca:** Waste management in the municipality is done by the Municipal Public Company. Based on the data obtained by this company, 80% of settlements are covered by municipal services. Out of 16 settlements in the municipality of Shterpca, only 3 villages are not covered by municipal services (Sushica, Izhanca and Kashtanjeva). For garbage collection, 1.1 m<sup>3</sup> containers are available which are distributed to public facilities and the baskets of nearly every home. The municipality does not have landfills where waste can be disposed of but the waste is transported to Gerlice and then to the regional landfill in Gjilan.

## RESULTS AND DISCUSSION

**Harmonization of the SEA objectives for the MDP of Shterpca municipality:** Based on the SEA purpose which is harmonized with the purpose of environmental

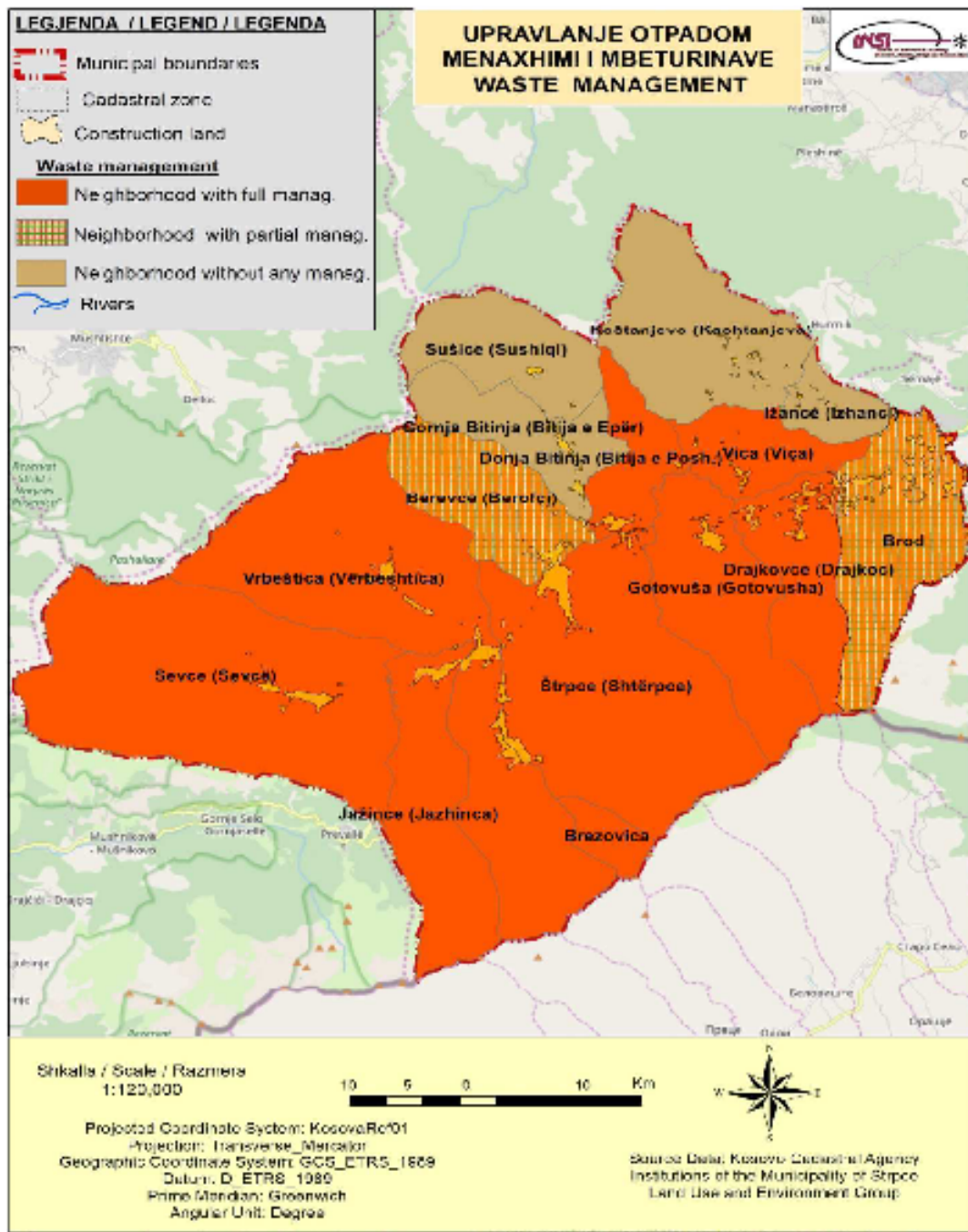


Fig. 3: Extension of the existing waste transport network in the municipality of Strpce

protection of Shterpca MDP, the environmental objectives of SEA have been defined. These objectives have been built in accordance with the national environmental policy strategies, the Kosovo spatial plan and the positions of the respective sectors. Some of the objectives of reviewing the municipal development plan of the Shterpca are presented in the Table 1 and Fig. 3.

**Air quality in the municipality of Shterpca:** The lack of facilities of heavy industry and other industrial activities in Shterpca has not had a negative effect on air quality. Even after the war economic and social developments, especially the increase in the number of vehicles and construction activities have caused air pollution in the municipality. (United States for project



Tables 1: Objectives of the municipal development plan of Shterpca

MDP environmental objective	Obligations from the MDP (Municipal Development Plan)
Air	Fulfilment of criterions for the annual emissions of pollutants, according to the norms allowed by the European Union
Water	Preventing the negative effects of human activity on surface water and groundwater resources for drinking water
Land/soil	Sustainable protection and management of land and natural resources
Biodiversity	Sustainable biodiversity management in function of conservation of ecosystems
Forests	Sustainable forest management in order to guarantee ecosystem resilience
Landscape	and Landscape management, a basic matrix for ensuring sustainability of ecosystem ecosystems services
Cultural heritage	Conservation and restoration of historical sites and objects, cultural and archaeological heritage
Quality of life	Ensuring sustainable social, economic and environmentally friendly development and natural resources

development, UNDP, 2008-2009). Several factors affecting the quality of air in the municipality of Shterpca are:

- The large number of private cars
- Vehicle aging over 15 years, conditions not complying with Euro 1 and 2
- A large number of vehicles work with diesel and do not use alternative sources
- From the roads in the territory of the municipality of Shterpca, some of them are asphalted and of poor quality
- Waste burns in wild landfills, there is no proper management of them
- Forest and biomass waste burning without any surveillance (Fig. 4)

**Development scenarios under the MDP in the municipality of Shterpca:** During the drafting of the MDP of Shterpca municipality, three potential scenarios were considered: the centric scenario (with Boston as a development centre), development corridor scenario and the two-point Poly-centric X-scenario (with many centres).

The centric scenario is based on the proposal to develop a strong administrative and functional centre but its implementation would require the limitation and removal of most developmental opportunities in settlements with positive development trends. Given the current land use and density in Shterpca, this scenario, according to the MDP report for this municipality is unrealizable.

The corridor scenario reflects existing trends where developments tend to be along the roads. It is about the scenario of “not doing anything”.

The third scenario proposes the preservation of Shterpca as the main urban centre but also developing other urban joints to provide quality services in the area as well as potential employment opportunities. Table 2 compares these scenarios and evaluates them based on several priority criteria.

#### **SWOT analysis of the strategic environmental assessment of the Shterpca municipality development plan for the environmental areas:**

Environmental problems identified as mismanagement of solid or liquid waste as well as air pollution are avoidable, if investments are made in an effective and timely manner. With Swot’s analysis we summarize the above analysis of the environmental conditions in Shterpca, pointing out:

- Areas that suffer from a deep environmental degradation or are being crossed by an environmental friend
- Areas with special environmental sensitivity which may suffer irreversible changes in ecosystems, unless a better environmental protection is provided
- Summary of the nature and degree of potential impacts on the environment, based on descriptions made in this chapter

The study shows the advantages and disadvantages according to SWOT analysis.

#### **Advantages:**

- The MDP has addressed all the environmental problems and challenges
- Good (MDP) project at the macro level
- Municipal development plan
- Suitable physio-geographic position, developed tourism and sufficient natural resources
- Increasing interest of citizens, state authorities and civil society for the environment
- Environmental legislation and spatial planning is developed and improved
- Innovative technology in industrial and construction processes
- Significant funding from the government, donors and improvement of own source revenues
- high co-ordination with other municipal clusters in the region
- Improved communication through road transport

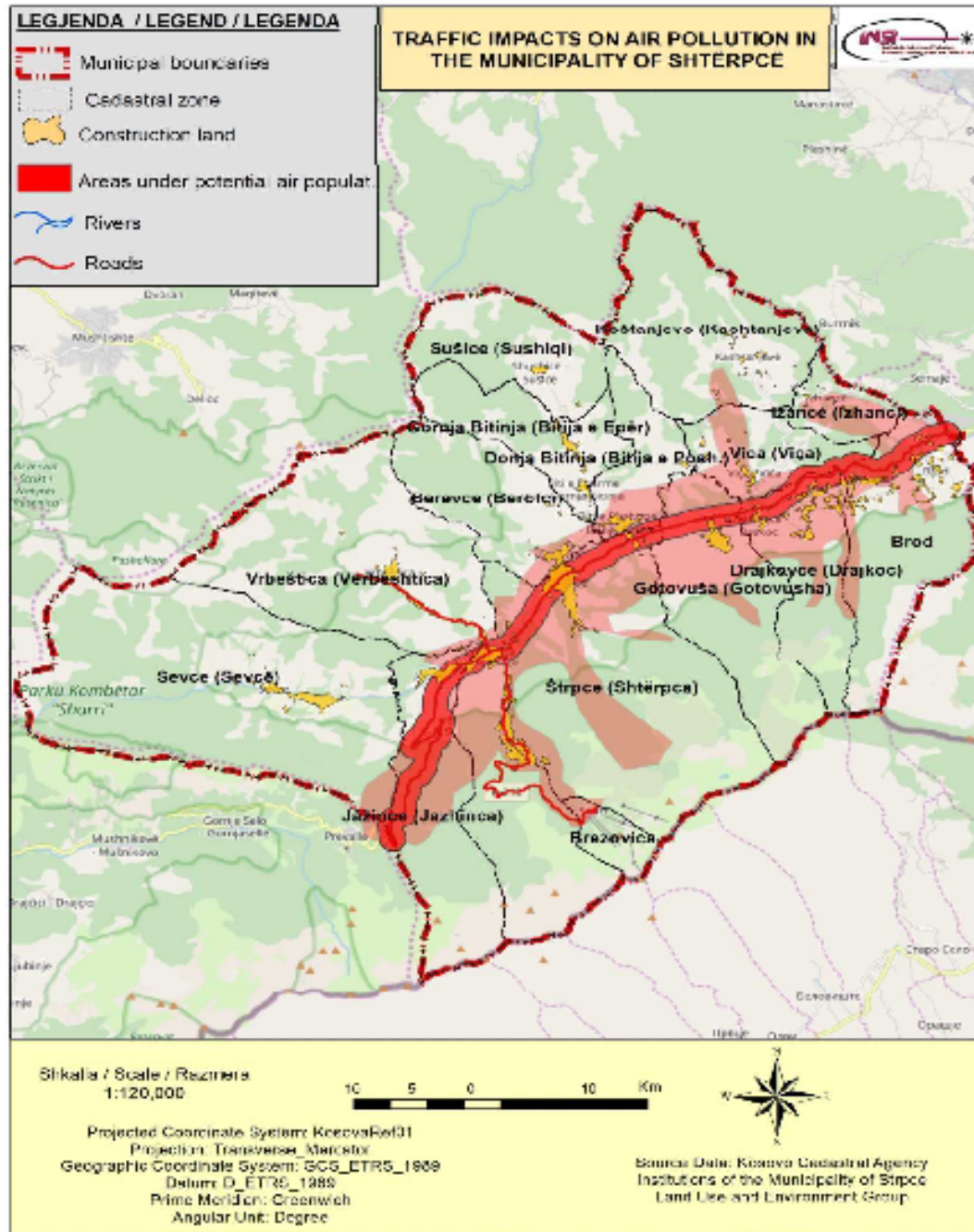


Fig. 4: Traffic impacts on air pollution in the municipality of Shterpea

#### Disadvantages:

- Lack of information to deepen the analysis of planned developments with the MDP of the Shterpea municipality high unemployment rate
- Low density areas in the largest number of settlements
- Substantial acoustic pollution areas (due to the sensitivity of noise-protected areas) low level of local governance skills and low motivation
- Reduction of green spaces and other public spaces
- Lack of culture for collective housing, especially in the population that has moved to larger municipality settlements coming from less developed areas

**Tables 2: Evaluation and comparison of the MDP scenarios of the municipality of Shterpca**

Scenarios/assessments	Centric scenario	Scenario of development of corridors	Polycentric scenario with four centres
Economic and institutional feasibility	- -	++ +	++
Environmental impacts	-	--	++
Social impacts	+	---	++
Political feasibility	++	++	+
Assessment	Unacceptable	Unacceptable	Realizable

Explanation: ++Compliance at a considerable level, +Satisfactory compliance 0 No effect, -small possible conflict -/-Significant possible conflict, +/Elements f compatibility and conflict

- Unregulated and not highly developed infrastructure
- Poor urban waste management
- Poor tourism management

#### **Opportunities:**

- Planning of measures for environmental protection and development
- Donor willingness and central government to handle hotspots in the environment
- Development of management capacities of policies, plans and programs at municipal level
- Creation of a comprehensive civic forum for better quality life as a unit for environmental education
- Increasing the effectiveness of the implementation of laws and financial obligations of the population and business in relation to municipal taxes
- Interaction with other municipalities and the neighbouring country Macedonia for the environmental aspect
- Involvement of qualified teams in implementing plans and drafting of important projects within the MDP
- Construction of the regional plant and temporary treatment at the last drops of used water spills

#### **Threats:**

- Endangering the health of the population
- Disruption of the environmental balance
- Deployment of water resources, water resources and other resources
- Degradation of ecosystems, biodiversity, flora and fauna
- Destruction of cultural and natural heritage
- Conflicts regarding property issues
- Reduction of public spaces due to pressures
- Lack and/or high cost of disposing of free surfaces for industrial park development and lack of developed infrastructure
- Significant decline in biodiversity
- Lack of coherence between civil society and local government shares
- Donations and university departments/professional studios, etc.

#### **CONCLUSION**

Shterpca municipality is a country of great natural prosperity due to its relief and other climatic conditions,

demographic, biodiversity, special ecosystems, stretches and vegetation coverings from the lowest levels to the subalpine and alpine areas. Following the analysis of the strategic plan of the municipality of Shterpca, it is noted that this municipality has a profile with spatial development concept with strategic vision and plan for measures for environmental protection during the implementation of this plan. The MDP and the suggestions emerging from the SEA should positively influence the revitalization of degraded ecosystems, reforestation of bare areas and afforestation of some areas that are constantly under the influence of erosion. They will also affect the preservation of rich areas with groundwater and the ban on construction on river banks. The municipal development plan gives priority to new areas of infrastructure, road segments, conservation of protected areas and special monuments areas with groundwater and surface waters, afforestation opportunities and reforestation. The environmental solutions proposed by the MDP are largely viable and in line with current environmental problems in EU countries.

#### **RECOMMENDATIONS**

Some of the recommendations coming from the SEA for the municipality of Shterpca are:

- Definition of ecological corridors during the realization and planning of roads
- Sustainability in the conservation of protected areas and special facilities in the municipality
- Conservation of biodiversity and natural habitats in Shterpca municipality
- Projects for rehabilitation of waste-littered areas and planning their treatment and recycling
- Conservation of groundwater and surface waters in accordance with local and EU laws
- Preservation and conservation of monuments of nature as important natural objects

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