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Preliminary Design and Feasibility Study with EIA for construction of Highway E-80 (SEETO Route 7) in Serbia: from Kosovo* (administrative crossing Merdare) to Niš via Prokuplje bypass, section Niš-Pločnik

WB13-SER-TRA-01

Environmental and Social Impact Assessment Study (ESIA)
Social Impact Assessment (SIA)
Draft Final

July 2018

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*) This designation is without prejudice to positions on status, and is in line with UNSCR 1244/1999 and the ICJ Opinion on the Kosovo declaration of independence.

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The technical assistance operation is financed under the Western Balkans Investment Framework (WBIF) which is a joint initiative of the EU, International Financial institutions, bilateral donors and the governments of the Western Balkans which supports socio-economic development and EU accession across the Western Balkans through the provision of finance and technical assistance for strategic investments, particularly in infrastructure, energy efficiency and private sector development.

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Annex 2	Resettlement Policy Framework
Annex 3	Environmental and Social Action Plan

Abbreviations

ARAP	Abbreviated Resettlement Action Plan
ARPC	Association of Roma Citizens Prokuplje
EC	European Commission
EBRD	European Bank for Reconstruction and Development
EIA	Environmental Impact Assessment
EIB	European Investment Bank
ESIA	Environmental and Social Impact Assessment
ESMP	Environmental Social Management Plan
ESP	Environmental and Social Policy
ESS	Environmental and Social Standards
EU	European Union
HRMS	Human Resources Management System
IFI	International Financing Institutions
ILO	International Labour Organization
IPF	Infrastructure Projects Facility
MCTI	Ministry of Construction, Transport and Infrastructure
NGO	Non-governmental Organisation
OECD	Organisation for Economic Co-operation and Development
PAP	Project Affected Person
PERS	Public Enterprise “Roads of Serbia”
PR	Performance Requirements
RAP	Resettlement Action Plan
RPF	Resettlement Policy Framework
RS	Republic of Serbia
RSD	Serbian dinar
SEETO	South East European Transport Observatory
SEP	Stakeholder Engagement Plan
SIA	Social Impact Assessment
STD	Sexually Transmitted Diseases
ToR	Terms of Reference
UK	United Kingdom
UXO	Unexploded Ordnances
WB6	Western Balkan Six
WBIF	West Balkans Investment Framework

1 Project background

The Project defined as Preliminary Design and Feasibility Study with EIA for construction of Highway E-80 in Serbia (SEETO Route 7): from Kosovo* (administrative crossing Merdare) to Niš via Prokuplje bypass has been divided into two sub-sections to be developed in phases. The first section, for which this SEP is designed, considers upgrade of the road network by construction of Highway E-80 from Niš to Pločnik via Prokuplje bypass in the total length of 37 km.

This Route is part of the SEETO core network a priority highway according to the strategic documentation of Republic of Serbia and recently adopted by the EC as a priority project. As high priority project in view of the Berlin Process it was discussed and reconfirmed in the meeting of WB6 Prime Ministers in Vienna (27-8-2015).

The overall objective of the Project is contributing to integration of Serbia into the transport system of the Region and entire Europe.

The more specific objectives are:

- Reduction of travel times,
- Reduction of vehicle operating costs,
- Improvement of overall accessibility,
- Improvement of access to health services,
- Improvement to education facilities,
- Facilitation of international and transit traffic, especially for but not limited to goods,
- Reduction of traffic accidents, and
- Improvement of environmental and social conditions along the highway and mitigation of impacts

1.1 Area of influence

In terms of the area of influence the report was guided by the respective IFI Policies definition and included the following:

(i) “The assets and facilities directly owned or managed by the client that relates to the project activities to be financed (such as production plant, power transmission corridors, access roads, borrows pits, deposit areas and construction camps).”

(ii) “Supporting/enabling activities, assets and facilities owned or under the control of parties contracted for the operation of the clients business or for the completion of the project (such as contractors).”

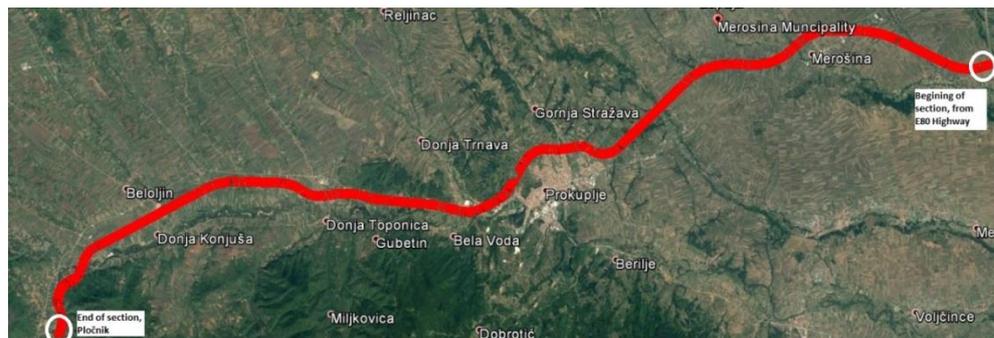
(iii) “Areas and communities potentially affected by impacts from unplanned but predictable developments caused by the project that may occur later or at a different location. The area of influence does not include potential impacts that would occur without the project or independently of the project“.

All above categorized areas were assessed as a matter of course in the SIA through two dimensions:

- *Spatial dimension* - is clear when assessing impacts from linear infrastructure projects. With some refinements this dimension includes all areas within which significant impacts are likely to occur and takes into account the following considerations:
 - › Limits of land to be acquired (permanently or temporarily),
 - › Nature of the baseline conditions.
- *Temporal dimension - Impacts* have been identified and assessed for all phases of Project development from initial site preparation, including any pre-construction preparatory works, through construction, and operation.

The Projects area of influence includes the physical footprint of the Highway from Niš to Pločnik and all its related and ancillary facilities without which the Project cannot proceed (inclusive of access roads, ancillary roads, deposit areas, borrow pits, contractors construction camp, transportation route of material, facilities for the employer and supervision engineer, a 40 m buffer zone around the physical footprint and a for some of the categories of impact up to a 25 km radius¹. The figure below depicts the Project area.

Figure 1. Project area of influence



¹ The 25 km radius was applied for assessment of impact to local transportation routes and access to education

2 Legal, institutional and policy framework

The project is expected to be designed, constructed and operated respecting the national law and international requirements from any potential financing institution. This Section presents a list and a summary of the most relevant national legal documents applicable to the social component of the project, the EBRD's Environmental and Social Policy (2008), the EIB's Environmental and Social Practices and Standards Handbook (2013). Detailed presentation of the national and international Framework guiding the Stakeholder engagement plan is presented in the Project specific SEP, while the in depth presentation of the Framework for land acquisition and involuntary resettlement is presented in the Project specific Resettlement Policy Framework, both annexed to this SEP. Both documents contain a gap analysis with a clear set of recommendations on bridging the gaps.

2.1 International social Policy Framework

The EBRD's 2014 Environmental and Social Policy (ESP) includes the adoption of a comprehensive set of specific Performance Requirements (PRs) that Projects are expected to meet, covering key areas of environmental and social impacts and issues. The Policy is translated into 10 Performance requirements.

EIB's Environmental and Social Practices and Standards Handbook (2013) EIB defined a set of 10 Environmental and Social Standards (ESS) which are described in the Environmental and Social Practices and Standards Handbook (2013).

Both policies have been regarded during development of this SIA.

2.2 Roles and responsibilities

The Promoters of this Project are Republic of Serbia Ministry of Construction, Transport and Infrastructure (MCTI) and as of July 1, 2018 Koridori Srbije d.o.o. a government owned company. It is expected that the KS will be responsible for fiduciary management, procurement, contracting and monitoring of the civil works while the land acquisition is the responsibility of Public Enterprise "Roads of Serbia" as the beneficiary of the expropriation. Such a division of authorities is in line with acknowledged practices in development of large infrastructure Project. Therefore, whenever reference in this document is being made to the Promoter it refers to KS and other responsible entities or institution will be named separately.

2.3 Other key institutions responsible for Project implementation

This chapter offers a general overview of state institutions, their authority proclaimed by law and their responsibilities during implementing the Project in general. Many of those institutions are not participants in the resettlement or expropriation legal process, but given the nature of the Project, but can provide

information or make decisions influencing resettlement. The list of key state institutions includes General assembly with supreme legislative authority, that passes new laws or amendments to existing laws, which may be of importance if during Project and ratifies Loan agreement with IFIs; Government of RS (GoRS) with supreme executive power and legislation initiative rights, also issues secondary legislation and bylaws that may be of importance, Ministry of Public Administration and Local-Self Government (MoPALSG) that monitors and coordinates work of local self-government.

2.4 Key institutions in process of land expropriation and resettlement

This chapter presents institutions that may be involved in the resettlement process, including legal expropriation process. The overview of all institutions is presented below. The in depth assigned responsibilities and arrangements for implementing the requirements of this RPF and each site-specific RAP shall be covered in the RAP itself.

Table 1: Institutions contributing and involved in the resettlement process

Institutions	Responsibilities/actions during resettlement/expropriation
General assembly of RS	Declares public interest by law
Government of RS (GoRS)	Declares public interest for expropriation (if not done by law as above)
Ministry of Construction, Transport and Infrastructure	Proposes, prepares and coordinates RS spatial plan and regional planning documents, manages the register of spatial plans
Koridori Srbije (KS)	As Project promoter, applies and coordinates all resettlement activities under this RPF and individual RAPs Appoints a chief resettlement officer to monitor the implementation and report on social components of the Project, particularly implementation of ESAP, RPF and SEP, as well as HRMS; , Discloses the Cut-off date in public announcement for relevant municipality, as part of expropriation process, prepares individual RAPs and other documents, Discloses RPF, and all other documents holds public consultations in all Project phases Engages with relevant stakeholders implements resettlement mitigation measures; Establishes and administers the CFD grievances of PAPs and stakeholders; Monitors and evaluates process of resettlement reports to appropriate IFI on all issues under this RPF Pre-approves agreements between contractors and land owners of temporary occupied land monitors the process of temporary land occupation until the land is given back to their owners in accordance with this LARF
Public Enterprise "Roads of Serbia" (PERS)	Administers the expropriation process

Institutions	Responsibilities/actions during resettlement/expropriation
Ministry of Finance (MoF)	Borrower
Tax administration offices (decentralized to municipality units, but under MoF)	Provides assessment of market value of agricultural or construction land
Local-Self Governments, including its administration	Local municipalities governs the expropriation process and steers the expropriation process (Department of property affairs)
Ministry of Agriculture and Environmental Protection	Provides information about available replacement land
Republic Geodetic Authority, State Cadastre of immovable property, decentralized units	Provides official information on all immovables, including land, structures, houses, etc. Provides official legal information on owners of immovables Provides information on possessors of immovable property Annotation of expropriation process Executes legal title changes of immovable property owners after land acquisition, expropriation etc.
Relevant municipal courts	Determines fair compensation if amicable agreement has not been reached

2.5 Institutional arrangement, capacity and implementation team

Koridori Srbije d.o.o. will be implementing the Project on behalf of the Republic of Serbia who will be the Borrower to the Loan Agreements signed with the IFIs. Koridori Srbije d.o.o. are ultimately responsible for implementation of the EBRD and EIB Social Requirements during the pre-construction and construction phase. PERS will continue to perform the role of Beneficiary to expropriation and administration of the legal process itself as well as process payments of compensation and R&R assistance.

Koridori Srbije d.o.o. have a well-structured organization implementing IFI supported Projects since 2009. The Company has currently 124 Employees with clearly defined roles within the structure. The Land acquisition and resettlement department, within the legal department, employs more the 15 experts experienced in land acquisition and resettlement processes in line with good practice and IFI requirements, stakeholder engagement and dispute avoidance. Individual responsibilities within the department itself will be assigned separately and included in future information packages. The Legal Department will be responsible for overseeing compliance with E&S commitments and compliance towards the IFIs.

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Environmental and Social Impact Assessment Study - SIA

3 Approach and methodology

3.1 Social impact assessment approach and methodology

Social Impact Assessment (SIA) complementing the Environmental Impact Assessment (EIA) is a systematic process of identifying and assessing the potential effects on the socioeconomic environment as a consequence of a project or its development. As a planning tool, the SIA aims to ensure that social issues throughout the entire project lifecycle are anticipated and considered. It also serves as a risk assessment tool and allows establishment of ownership, to a certain extent, over the Project by reducing or preventing adverse social impact. SIA draws from local knowledge and utilizes participatory processes to analyse the concerns of affected human receptors. It involves stakeholders in the assessment of social impacts, the analysis of alternatives, and monitoring of the planned intervention. It further helps in overall management, especially contract management of future contracts for construction works in terms of cost, time and budget. The better impacts are assessed and adequate mitigation measures assigned to manage the risk, and costs attributed to the measures are estimated and set aside the less unforeseeable events will occur changing the sequencing, timing and dynamics of the Project. This further prevents incurring of additional cost once the implementation commences. This tool together with other documents forming the ESIA, especially the Resettlement Policy Framework (RPF) and the Stakeholder Engagement Plan (SEP), has the objective to obtain and maintain the social license to operate which is as relevant as any other, sometimes even more important, and is directly associated with the assessment to the best of the abilities how the Project will and can influence the community when looking through a social lens.

3.1.1 Baseline study methodology and objective

The key objective of the social baseline is setting a benchmark against which changes shall be measured and impacts assessed in terms of key sensitivities and potential constraints on the construction and operation of the highway. The baseline refers to the data for a set of selected indicators measured near the beginning of a project which are used to track change over time. The baseline data become a reference point, along with other benchmark values, against which future situations can be compared.

The social baseline for this Project was created driven by the need to complete the picture of the social environment as comprehensively as possible and to look into every aspect relevant. In more details, the social baseline was prepared to serve the following:

- Understand the socioeconomic context of the study area;
- Inform the impact assessment with appropriate and adequate data in order to predict and explain potential impacts of the Project as well as establish mitigation measures; and

- Understand the expectations and concerns of potentially affected communities in respect to the Project.

By combining a set of primary and secondary, qualitative and quantitative data derived by applying different methods of collection, conditions precedent for the above listed purpose were met and stated objectives achieved.

Secondary and quantitative data were largely available, mainly disaggregated by categories relevant for this study. In cases where such disaggregation was not available, or details on a specific category insufficient, additional collection methods were applied, such as key informants interviews, focus group discussions and questionnaires. The primary data collection was designed to use and build upon the existing knowledge to assess relevant issues in greater detail and to address gaps in the existing secondary data. Methods were tailored to suit the needs of the project area and to be locally and culturally appropriate. Thus, fieldwork included focus group discussions, key informant interviews, and field observation, instead of household survey which would not have fed the document with the required data. The detailed household survey, together with the in depth socio-economic impact assessment for persons affected by the project through land acquisition and resettlement, loss of land, shelter, and livelihood, movable and immovable assets, shall be conducted for development of site specific RAP / ARAP as described in the Resettlement Policy Framework applicable for this Project. The social survey shall be complemented by asset surveys providing for full inventory of both affected persons and affected property form administration of compensation and rehabilitation packages as per the eligibility identified in the entitlement matrix of the said RPF. The minimum content and outline of the RAP/ARAP are in detailed described in the RPF.

Focus group discussions were held to have targeted discussions on a specific topic and to allow exclusive discussions on a specific concern in respect to the specific group.

Key informant interviews were a very rich source of information for issues of concern otherwise difficult to obtain or to understand when put in the local context.

Questionnaires designed as a combination of attitude and explanatory surveys were used to collect and measures the local communities attitude and opinion and to verify the initial rapid assessment.

3.1.2 Desktop review of secondary data

Sufficient evidence has been found to indicate that the social baseline and even a screening of potential impacts can be weighted with a credible accuracy from the existing secondary available data by applying an external desktop review. As explained, the SIA was conducted through a combination of a desk study and qualitative research methods complementing the primary data allowing full understanding of the local context, the dynamics of the local community and hence anticipate and assess any potential disruption of the activities, social networks, culture, livelihoods, infrastructure, housing and business, living environment, ecosystem services, peoples capacities to satisfy basic human rights, abilities and

freedom to achieve their basic goals. The elements constituting the people wellbeing in general are depicted in the matrix below.

Figure 2 Peoples wellbeing matrix



The desktop study included a mapping exercise to confirm location of settlements within the impact area, network of local roads, transmission lines, houses which may be impacted by the Project, local public transportation lines frequently used, daily commuting routes used to bring school and pre-school children to and from schools, to prevent possible collision with the construction works), locations of beehives, location of vineyards, cherry plantations etc.

The terms of reference for this assignment itself had no requirements to conduct a health impact assessment. However baseline information as well as impacts, both positive and negative were considered in order identify the risk of population health being damaged through some direct and unintended consequence of development of the Project. The impact was broadly assessed under the accessibility of and to health services and institutions and community health and safety considerations.

A significant amount of secondary data was already available, including publicly available documents, maps, digital photographic site documents, observations, public consultations, key informant interviews, community meetings and other tools were used to draw the features of the baseline conditions of relevance to the and socio-economic environment of the area of influence. The dataset that appeared viable in addressing the requirements of the study were processed and evaluated, thus ensuring the appropriateness of the topic.

The baseline description regarding existing settlements in the area was used together with the Project description to identify the impacts and evaluate their significance. For identified adverse impacts, relevant mitigation and monitoring measures have been developed.

The data on demographic, economic and livelihood features of the two impacted Municipalities Merošina and Prokuplje are adequately depicting the socio-economic situation and vividly explaining the social dynamics for all settlements including those directly influenced by the Project.

The municipality of Merošina is fairly unified according to its structure, composed of a smaller number of rural settlements, without a significantly more developed urban core which makes the socio-economic profile unified across different settlements. Villages that are under direct impact of the Project are Balajnac, Gradiste, Aleksandrovo, Brest, Merošina, Rožina, Baličevac, Jug Bogdanovac, Arbanašce. In these settlements more than 50% of the total population of the municipality resides and therefore the data on municipal level actually are representative and of significance to understand the socio-economic impact of the area of influence.

Prokuplje is somewhat larger than its neighbour Merošina and divided into an Urban and rural area. The secondary data are disaggregated in the same manner and provide a meaningful disaggregation of each category of relevance to the assessment.

3.1.3 Field verification and qualitative data

In order to complement secondary data, focus groups discussions, key informant interviews and structured questionnaire interview were used to collect primary data and solicit views from key interest groups (*see Table 1*). Additionally, in the overall engagement of Stakeholders public consultations were held to disclose information about the alignment of the Project, tentative implementation arrangements were disseminated, and comments, concerns and views on the planned activities were collected.

Focus groups were chosen and structured based on the assessment of the consultant and guided by the knowledge of the local context as communicated by the key informants from both respective Municipalities Prokuplje and Merošina. The focus groups discussion aimed to solicit opinions and awareness of the project activities, positive and negative aspects of construction, possibility of the demographic revitalization of depopulated areas, increased access to education economic grow from construction and road usage, quality of life, agriculture etc.

Table 2: Summary overview of primary data collection tools and stakeholder groups

Tool	Date and Place	Stakeholders groups	No of people attending	Purpose
Structured questionnaire	September 26, 2016	Local citizens	18	Discuss planned and on-going expansions of communities near the highway route; Discuss the presence of vulnerable groups, ethnicities, religions, etc.; Discuss employment and economic growth in the area; Collect information on livelihood and local economy with specific reference to the 1 km corridor; Discuss any Project-related impacts; Discuss appropriate mitigation measure
	November 24, 2016		22	
Structured questionnaire	November 28, 2016 Merošina	Local citizens	50	Discuss planned and on-going expansions of communities near the highway route; Discuss the presence of vulnerable groups, ethnicities, religions, etc.; Discuss employment and economic growth in the area; Collect information on livelihood and local economy with specific reference to the 1 km corridor; Discuss any Project-related impacts; Discuss appropriate mitigation measure
Focus Group discussions	PROKUPLJE			
	December 15, 2016	Authorized representatives /Principals of all Elementary schools in Prokuplje	4	Discuss current location of schools; Discuss and map remote schools, Discuss and understand the routes of transportation of pupils to schools; Discuss mitigation measures
	December 15, 2016	Authorized Representatives of the Pre-school facility	1	Discuss current location of pre-school facilities and create maps of remote pre-schools. Understand the daily transportation route of children, Discuss mitigation measures
	December 15, 2016	Authorized Representatives of the High Schools (Gymnasium and the Agriculture school)	3	Discuss current location of high -school facilities Understand the daily transportation route of children, Discuss mitigation measures
	December 15, 2016	President of the Education syndicate	1	Discuss overall access to education issues in relation to construction of the Highway.
	December 15, 2016	Cherry Producers and wholesalers	13	Discuss water use systems and issues; Discuss crop type and production, seasonality, techniques, animal-farming, sheep-farming , etc.; Discuss the importance of agriculture(cherry production) and farming activities for livelihood; Discuss agricultural and farming practices in the area, type of land rights, agricultural methods, disputes and development plans and projects; Discuss any Project-related impacts on local businesses; Discuss appropriate mitigation measures.
	December 15, 2016	Representatives of the largest Businesses and employer in the area "Leoni wiring system" "Hissar" "Prokupac"	4	Discuss development opportunities as a result of construction of the Highway. Discuss and understand daily operation and routine of the business including transport of goods, products, basic raw material and finished products as well as understand the daily travel routes of employees and their transport lines and timetables.
	December 15, 2016	Women from the Association of disabled women	2	Discuss access to training and employment opportunities; Discuss gender issue; Discuss access, availability and quality of health care; Discuss current issues; Discuss how the Project may impact women and children; Discuss appropriate mitigation measures Discuss any other issues.

Tool	Date and Place	Stakeholders groups	No of people attending	Purpose
	December , 2016	Men from the association of disabled workers	2	Understand if the construction will impact the disabled persons differently and whether specialized facilities used exclusively by this vulnerable group are impacted
	December, 2016	Representatives (President and secretary) of the Roma NGO	2	Discuss issues facing the vulnerable population; Discuss exact location of Roma settlements; Discuss employment opportunities for Roma population, Discuss inclusive approaches and support in prevention of sexually transmitted diseases and HIV prevention in relation to influx of workers
	December 15, 2016	Association of pensioners	5	Discuss issues encountered by the elderly population in the project area; Discuss access, availability and quality of health care; Discuss any Project-related impacts; Discuss potential mitigation measures.
	December, 15 2016	Women	3	Discuss access to training and employment opportunities; Discuss gender issue; Discuss access, availability and quality of health care; Discuss current issues; Discuss how the Project may impact women and children; Discuss appropriate mitigation measures Discuss any other issues.
Focus Group discussions	MEROSINA			
	January 24 , 2017	Roma association-president	1	Discuss issues facing the vulnerable population; Discuss exact location of Roma settlements; Discuss employment opportunities for Roma population, Discuss inclusive approaches and support in prevention of sexually transmitted diseases and HIV prevention in relation to influx of workers
	January 24, 2017	Pensioners	8	Discuss potential impacts on this vulnerable group
	January 24, 2017	Utility companies	5	Discuss potential impacts to utilities and supply
	January 24, 2017	Red Cross Association	2	Understand the activities and support provided to the vulnerable members of society
	January 24, 2017	Cherry and other fruit producers	5	Discuss impact to fruit bearing trees and productivity issues
	January 24, 2017	Farmers	5	Discuss impact to agricultural land, understand location of access routes and roads
	January 24, 2017	Beekeepers association -president	1	Discuss and understand location of beehives and harvesting patterns
	January 24, 2017	Women	10	Discuss access to training and employment opportunities; Discuss gender issue; Discuss access, availability and quality of health care; Discuss current issues; Discuss how the Project may impact women and children; Discuss appropriate mitigation measures Discuss any other issues.
	January 24,2017	Business representatives "ERGOMADE"	4	Discuss progress in development of the complex and possible conflicts with construction of the Highway.
	January 24,2017	School and pre-school Representatives	6	Discuss current location of schools; Discuss and map remote schools, Discuss and understand the routes of transportation of pupils to schools; Discuss mitigation measures
Key informants interviews	August 22, 2016	Representatives of Municipality of Prokuplje	4	Discussions preparation of stakeholder engagement meetings.
	September 15, 2016	Representatives of Municipality of Merošina	3	Discussions about the refinement of the alignment

Tool	Date and Place	Stakeholders groups	No of people attending	Purpose
	October 10, 2016	Representatives of Municipality of Merošina	2	Discussions about the available workforce and possible data collection option
	November 23, 24, 28 2016	Representatives of Municipality of Prokuplje	4	Discussions about stakeholder engagement meeting preparation. Distribution of announcement posters and brochures
	December 8, 27 2016	Representatives of Municipality of Merošina	3	Discussions about stakeholder engagement meeting preparation. Distribution of announcement posters and brochures
	January 13, 2017	President of the association of Beekeepers	1	Discuss location of beehives and impacts during construction and adequate mitigation measures

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3.1.4 Project impact assessment methodology

This Report has followed the question and answers method to assess the impact to socio-economic environment.

Basically four questions, presented in table below, have been used to identify, predict, evaluate, mitigate and identify residual impacts to people.

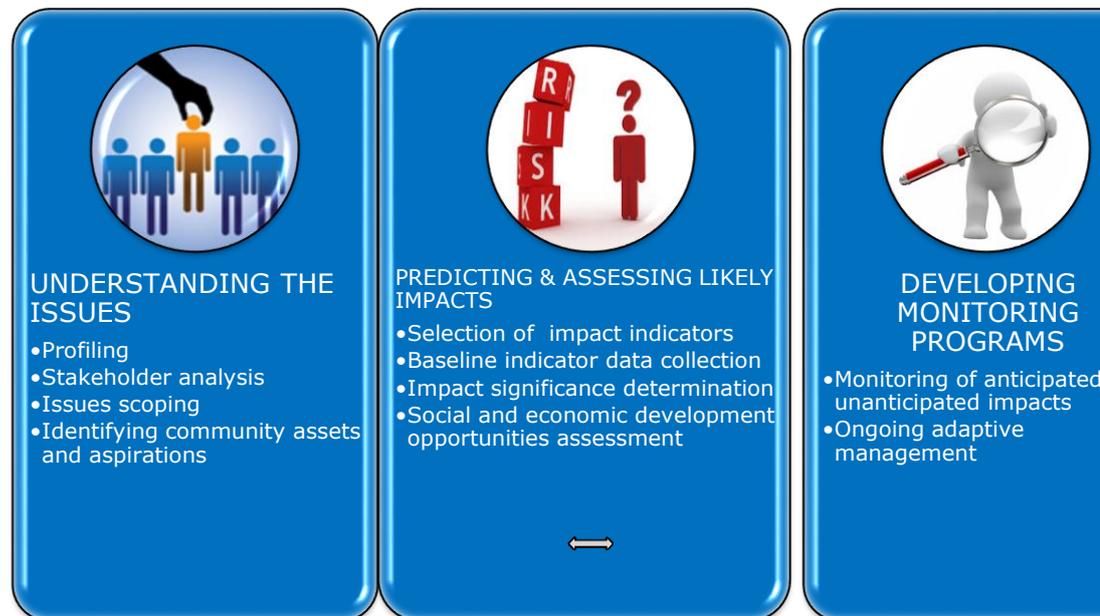
Table 3: Question matrix

<ol style="list-style-type: none"> 1. What will happen to the community and individuals as a consequence of potential impact attributable to the Project? 2. How significant or important is the change? 3. What can be done about the impact if significant? 4. After applying all mitigation measures above, the questions is do we still have residual impacts and how can we further mitigate them?

In case mitigation measures leave behind residual impacts re-assessment should be considered and further mitigation option explored. This process should be repeated to the extent of technical and cost feasibility maximum, in context of this Project or until the remaining impacts are as low as to be deemed as acceptable.

The figure below depicts the process the assessment has followed.

Figure 3 Assessment process for project impacts



² The 25 km radius was applied for assessment of impact to local transportation routes and access to education

3.1.5 Types of Impact

In determining the type of impact, the report was guided by the following indicators:

- The nature of impact. Identification what changes the impact brings, are they an improvement or degradation to the benchmark conditions. In this respect they are classified as: Positive or Negative.
- The spatial dimension and geographic 'reach' of the impact. This takes into account the proportion of communities potentially affected by the change. By this virtue impacts are categorized as local and regional.
- Time dimension for social impacts is the timeframe over which an impact will be experienced; this may include one-off, short-term, long-term and permanent impacts.
- Magnitude for social impacts is the degree of change at a household or community level to livelihoods and quality of life i.e. extent of impact. In this respect they can be: major, moderate, minor, negligible and none.

The assessment is equal for positive and negative impacts meaning they are filtered through all of the above listed categories in order to arrive at adequate assessment and mitigation.

3.1.6 Rating significance of impact

The significance of social impacts is evaluated taking into account the magnitude of the impact and the vulnerability of affected receptors as well as all other above mentioned dimensions. In order to assess the significance of the impacts, the impact is reflected within the local setting as articulated in the view of the local population.

Socioeconomic impacts, significance of the impact are evaluated through consideration of the impact magnitude and the importance placed on the impact by stakeholders.

Positive and negative impacts are rated similar, whereas with positive "negligible", "minor", "moderate" and "major" represent benefits experienced by the socioeconomic environment.

Table 4 Designating ratings for Social Impacts

NATURE OF IMPACT NEGATIVE /POSITIVE		Vulnerability of Receptors			
		Low: Minimal areas of vulnerabilities; consequently with a high ability to adapt to changes brought by the project.	Moderate: Few areas of vulnerability; but still retaining an ability to at least in part adapt to change brought by the project.	High: Profound or multiple levels of vulnerability that undermine the ability to adapt to changes brought by the project	
Magnitude of Impact	Negligible	Change remains within the range commonly experienced within the household or community.	Negligible	Negligible	Negligible
	Minor	Perceptible difference from baseline conditions. Tendency is that impact is local, rare and affects a small proportion of receptors and is of a short duration.	Negligible	Minor	Moderate
	Moderate	Clearly evident difference from baseline conditions. Tendency is that impact affects a substantial area or number of people and/or is of Moderate duration. Frequency may be occasional and impact may be regional in scale	Minor	Moderate	Major
	Major	Change dominates over baseline conditions. Affects the majority of the area or population in the area of influence and/or persists over many years. The impact may be experienced often and national in scale.	Moderate	Major	Major
Spatial dimension of impact	Local	Change has a definite spatial form and is limited only to the area of influence of the project ³	Temporal dimension of impact	Temporary	Lasting for a limited time including a one-off event
	Regional	Change affecting a wider administrative area i.e. geographic region		Short -Term	Changes affecting the baseline conditions from several days to several weeks.
Likelihood of occurrence	Highly unlikely	Unlikely are impacts with the estimation from less than 1% chance of the impact occurring		Long -Term	Changes affecting the baseline conditions for a long time
	Unlikely	Likely are impacts with the estimation from 1% to 50% chance of the impact occurring		Permanent	Changes affecting irreversible the population forever or for a very long time
	Likely	Very likely are impacts with the estimation from 50% to 99% chance of the impact occurring			
	Certain	Certain are impacts with the estimation of 99% chance of the impact occurring			

³ Area of influence as defined for this particular Social impact assessment

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4 Socio economic baseline conditions - Historical and Political Overview

4.1 Historical Overview

After Slavs came to the Balkan peninsula, between the 6th and 9th century, Serbs established several states during the early Middle Ages (9th to 11th century), that finally unified under the Nemanjic dynasty in the first half of 12th century. It became a Kingdom ruled by its first King Stefan Nemanjic ("Prvovencani" - "Firstwed", as wed with a crown) in 1217 and it reached its peak under Emperor Dusan Nemanjic who was proclaimed Emperor by the autocephalous Serbian church in 1346. After losing several large battles Serbia was annexed by the Ottoman Empire. Austrian Empire started expanding towards Central Serbia since the end of the 17th century, while maintaining foothold in modern-day Vojvodina. Two Serbian revolutions in the beginning of 19th century progressively led to final independence of civil and modern Serbian kingdom. After catastrophic casualties in World War I, but also dissolution of two large empires, Ottoman and Austrian, Serbia co-founded Yugoslavia with other South Slavic nations. Yugoslavia became a socialistic republic after communist revolution during World War II. It existed until its disintegration in the 1990s. Before final and new independence of Republic of Serbia, Serbia formed a union with Montenegro in 1992, which broke apart in 2006.

4.1.1 About the region of southeastern Serbia

The region is known as one of the cradles of "Vinchan culture". Archeological site of Plocnik, near Prokuplje, has been known as the first metallurgical centre in the world, dated between 5500 and 4600BC. The settlement at Plocnik is one of the most important archeological findings in the world from that time.

City of Niš (Naissus) was the historical centre of southeastern Serbian region since the ages of the Roman Empire. It became part of the Empire during Emperor Augustus, and was centre of imperial province Moesia Superior. Naissus was the place of birth of the Roman Emperor Constantine the Great (reigned 306 to 337 AD), the first Roman emperor to profess Christianity. The region became part of the Eastern Roman empire (Byzantium) after the division in 395 AC. After the demise of Western Roman Empire, Byzantium Empire prevailed but the region, being a border province, was often raided by barbarian tribes - Skits, Goths, Avars, Slavs and Ants. It became part of the first Serbian states during the 9th century.

The southern Serbian region was the place of battlefield during the expansion of the Ottoman Empire to Europe in the 14th century. One of the battles took place at Plocnik that was fought sometime between 1385 and 1387, near Prokuplje, between the Serbian forces of Prince Lazar Hrebeljanović and the invading Ottoman Army of Sultan Murad I. This region (as well as the entire Serbian empire) became part of Ottoman empire after the defeat at the Battle of Kosovo that took place on 15 June 1389 between the army led by the Serbian Prince Lazar

Hrebeljanović, and the invading army of the Ottoman Empire under the command of Sultan Murad.

After second Serbian insurrection in 1815, Serbia begins a process that led to obtaining status of vassal state (1830), to becoming an internationally recognized sovereign state in 1878. The south eastern region was part of that process since 1830 when Ottomans admitted that region to be part of the newly freed Serbian duchy.

4.2 Modern political context

4.2.1 National context

Serbia is a parliamentary republic, with the government divided into legislative, executive and judiciary branches. The General Assembly is the supreme unicameral representative body, holder of constitutional and legislative power in the Republic of Serbia. As the holder of constitutional and legislative power, the General Assembly: adopts and amends the Constitution; ratifies international contracts when the obligation of their ratification is stipulated by the Law; enacts laws and other general acts within the competence of the Republic of Serbia; adopts development plan and spatial plan; adopts the budget and end-of-year balance of the Republic of Serbia etc.

The President of the Republic is the head of state, elected by popular vote to a five-year term, with mostly procedural duties in accordance with Serbian parliamentary system. The Government is the most influential executive power and comprised of the prime minister and minister cabinet. The Government is responsible for proposing legislation and a budget, executing the laws, and guiding the foreign and internal policies.

Serbia has a three-tiered judicial system, made of the Supreme Court of Cassation as the court of extraordinary appeal, Courts of Appeal as the appellate instance, and Basic and High courts as the general jurisdiction courts of first instance. The Supreme Court of Cassation is the highest court in the Republic of Serbia. It began to operate on 1 January 2010 when all courts were re-established through the organization of courts and jurisdictions, in accordance with the reform carried out by provisions of the Law on Courts ("Official Gazette of the RS", no. 116/08...13/2016). At the beginning of 2014, the amended Law on Courts and the new Law on Seats and Territories of Courts and Public Prosecutors established and launched a new network of courts at which time the Supreme Court of Cassation sustained significant changes in organization and jurisdiction. Courts of special jurisdictions are the Administrative Court, commercial courts (including the Commercial Court of Appeal at second instance) and misdemeanor courts (including High Misdemeanor Court at second instance).

The current Constitution of the Republic of Serbia was adopted in 2006, replacing the previous constitution dating from 1990, during Montenegro's secession and the dissolution of Serbia and Montenegro. It was adopted by the General Assembly on

30 September 2006 and confirmed by the public referendum held on 28–29 October 2006, and enforced on 8 November 2006.

4.3 Local Administrative Structure

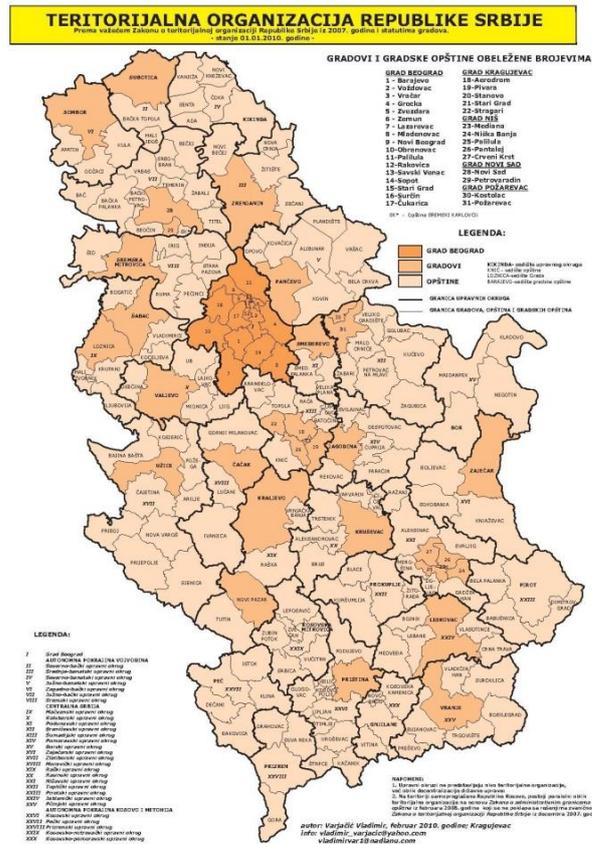
Serbia is a unitary state. According to the Law on the Territorial Organization, key and basic units of local-governments are 147 municipalities and 27 cities. There are also 29 administrative districts and two autonomous provinces⁴ with significant autonomy. A city may be divided into city municipalities depending on their size. Currently, there are six cities in Serbia with city municipalities: Belgrade, Novi Sad, Niš, Kragujevac, Požarevac and Vranje comprise several city municipalities each, divided into "urban" and "suburban".

In Serbia there are 29 administrative districts which are not units of local self-governments but are established for purpose of state administration outside the headquarters of the state administration. Administrative districts are established by the RS Government decree, which also included the areas and seats of administrative districts. The administrative district has a Chief who is accountable to the minister in charge of state administration and local self-government. The Chief of administrative districts is appointed by the Minister responsible for state administration for a period of four years. Administrative districts also have Council that coordinates the relations of the district regional units and the municipalities and cities in the administrative districts area.⁵

⁴ Source: "Law on the Territorial Organization of RS"

⁵ Source: State administration law of RS

Figure 4 Territorial organization of Serbia, districts and municipalities



Source: Wikimedia

The picture above shows Serbian municipality network and administrative districts. Municipalities are shown in pale red, cities are shown in Moderate red and city of Belgrade in darkest red colour.

Municipalities are the basic entities of local self-government in Serbia. The local self-governments consist of the Municipal assembly that elects the President of the municipality and Municipal council. Municipal assembly is elected on local elections (held every 4 years). Sometimes numerous municipal administration is employed to tend to all competences defined by law: development, maintenance and administration of local infrastructural systems, usually by establishing public utility companies (water supply system, sanitation, public heating system, public gas supply, (but not electricity), local roads network, public transportation, waste etc.); issues construction permits on public or private land, demolishes illegally built facilities, administrates birth, wedding and death registry, overviews social care and assistance, primary health care, preschool education and care etc.

4.3.1 Local administrative and political context

Municipality of Merošina is part of Nišavski administrative district, with centre of district in the city of Niš. Nišavski district is the third most populated district in Serbia (after "capital of Belgrade district" and Novi Sad - "Južnobački district"). Municipality of Prokuplje is a part and the seat of the smallest Toplički district.

After the local elections held on 24th of April 2016, new governments of all municipalities in Serbia were elected. The municipality assembly of Merošina consists of 37 councilors. The leading coalition consists of 10 councilors from Serbian Progressive Party (SNS), 5 councilors of Serbia Socialist party (SPS) and 5 councilors from the citizen coalition around the party of United Serbia. The president (elected by the assembly) is Sanja Stajić from Serbian Progressive Party (SNS). The same applies to the municipality of Prokuplje. Assembly of Prokuplje consists of 55 councilors, out of which 30 are from leading Serbian Progressive Party, so they were able to elect most of the officials from their own ranks. The president of municipality elected by the municipality assembly is Aleksandar Simonović. This means that the political parties of the local governments of municipalities of Merošina and Prokuplje more or less corresponds to the parties that lead the government at the level of the Republic of Serbia, the fact that should not, but can positively influence the attitude of the local municipality government toward any project led by the central government, including the Niš-Pločnik highway.

Figure 5 Nišavski and Toplički districts shown on Serbia map



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5 Demographics

5.1 Population and Settlements

As of January 2016, population of Serbia was estimated to be 7.076.372, which continues the trend of population decrease of around half percent every year. This trend can be corroborated while observing the table below. Low birth rate, aging population and emigration are the trendsetting factors.

Table 5 Population trends in Serbia

	2011	2012	2013	2014	2015
	Population	Population	Population	Population	Population
Serbia population					
Total:	7236519	7201497	7166552	7131787	7095383
Population decrease:	-	0.48%	0.49%	0.49%	0.51%

When analysing population density, Serbia is one of the countries in Europe with lower population density at an average of 91 inhabitants per sq. kilometre⁶ (but one of the highest in the region - higher population density have only Slovenia and Albania). Population density of municipality Prokuplje reaches 56.1 inhabitants per sq. kilometre and 69, 6 inhabitants per sq. kilometre in municipality of Merošina. Municipality of Prokuplje is one of the least inhabited municipalities in Serbia comparing to its surface area.

The district of Niš is the third most populated district of Serbia with a population of 373.404⁷, which represents 5.1% of total Serbian population. Toplički district has 90.600 inhabitants, which represents 1.2% of total national population.

⁶ Source: National statistical office; for 2016 population data

⁷ Source - National statistical office of Serbia - Brochure published by NSO: "First hand report of 2011 population census"

Table 6: Population of Merošina and Prokuplje, with a list of larger settlements⁸

	Population				Population		
	Total	Male	Female		Total	Male	Female
Merošina				Prokuplje			
Population	13968	7174	6794	Population	44419	22056	22363
City areas				City areas	27333	13442	13891
Rural areas	13968	7174	6794	Rural areas	17086	8614	8472
Merošina settlements above 200 inhabitants				Prokuplje settlements above 200 inhabitants			
Azbresnica	726	378	348	Prokuplje (city area)	27333	13442	13891
Aleksandrovo	409	211	198	Babin Potok	618	323	295
Arbanasce	513	263	250	Babotinac	242	121	121
Balajnac	1254	645	609	Bace	228	111	117
Baličevac	1141	587	554	Bela Voda	259	125	134
Batušinac	792	410	382	Beloljin	485	223	262
Biljeg	498	260	238	Berilje	738	371	367
Brest	547	288	259	Bresničić	237	111	126
Bučić	489	240	249	Velika Plana	506	235	271
Gornja Rasovača	218	117	101	Gornja Stražava	676	352	324
Gradište	559	280	279	Gornja Trnava	314	162	152
Devča	385	201	184	Donja Konjuša	246	119	127
Dešilovo	366	194	172	Donja Rečica	357	188	169
Donja Rasovača	536	286	250	Donja Stražava	799	422	377
Dudulajce	309	152	157	Donja Toponica	299	134	165
Jovanovac	492	273	219	Donja Trnava	1383	707	676
Jug Bogdanovac	493	258	235	Žitni Potok	484	242	242
Kovanluk	226	115	111	Klisurica	202	101	101
Kostadinovac	254	123	131	Mađere	261	145	116
Krajkovac	509	267	242	Mala Plana	558	286	272
Lepaja	600	303	297	Mikulovac	317	160	157
Merošina	905	451	454	Nova Božurna	227	118	109
Oblačina	447	210	237	Novo Selo	390	200	190
Padina	335	171	164	Petrovac	302	164	138
Rožina	692	353	339	Pločnik	120	57	63
Mramorsko Brdo	189	96	93	Potočić	420	220	200
				Reljinac	532	267	265
				Tulare	262	136	126
				Ćučkovac	278	148	130
				Džigolj	222	113	109

The table above shows that municipality of Merošina doesn't have an urban settlement; all settlements in Merošina are considered to be mostly rural and largely unified in its composition. Prokuplje city is the only urban settlement in municipality of Prokuplje, representing more than 60% of the municipality population.

⁸ Source - National statistical office of Serbia -
<http://webrzs.stat.gov.rs/WebSite/Default.aspx>

Merošina with its population of 13.968 inhabitants belongs to a group of smaller municipalities, representing 0.19% of overall population. Prokuplje with population of 44.419 inhabitants (0.62% of total population) is the seventh largest municipality in Serbia without status of a city. Population analysis reveals that, according to present trend, in year 2041. Merošina will have 11.972 inhabitants (6.149 female and 5.823 males) suffering decrease of nearly 15% comparing to 2011, while Prokuplje will have 34.883 inhabitants (17.460 female and 17.423 male) with a decrease of nearly 22%⁹.

The municipality administration centre of Merošina municipality is located in the Merosina village, but it is not the largest settlements - villages Baličevac and Balajnac are the two most populated villages.

The Table 6 does not include tens of smaller settlements in municipality of Prokuplje with population below 100 inhabitants, even some villages of population below 10 inhabitants.

There are 2.487.886 households in Serbia, 61% living in urban areas, and 39% living in rural and "other"¹⁰ areas.

Table 7 Households by number of members¹¹

	Total	With 1 member	With 2 members	With 3 members	With 4 members	With 5 members	With 6 or more members
REPUBLIC OF SERBIA							
Total							
Total household	2487886	555467	638091	476642	454127	197506	166053
		22.33%	25.65%	19.16%	18.25%	7.94%	6.67%
Urban settlements							
Total household	1533866	350052	396450	318151	295790	105726	67697
		22.82%	25.85%	20.74%	19.28%	6.89%	4.41%
Other settlements							
Total household	954020	205415	241641	158491	158337	91780	98356
		21.53%	25.33%	16.61%	16.60%	9.62%	10.31%

It is important to note that around 5% of households are compound out of two or three families living together, and this percentage is higher for rural and other areas - nearly 8.5%.

The table 7 below shows some important statistical data regarding households in municipalities of Merošina and Prokuplje. Additionally, data from several different

⁹ Projection by Statistical office of Serbia

¹⁰ Statistical office applied so-called administrative-legal criteria. Urban settlements are determined by acts of local self-governments, rest is defined as "other".

¹¹ Source - National statistical office of Serbia - <http://webrzs.stat.gov.rs/WebSite/Default.aspx>

population census information to provide key indicators for potential vulnerable households were compared.

Table 8: Households of Merošina and Prokuplje with some key regional statistic¹²

	Households	1 member	2 member	3 member	4 member	5 member	6 member and more
Merošina							
Total	4046	717	957	576	580	481	735
	100%	17,7%	23,6%	14,2%	14,3%	11,8%	18,1%
Prokuplje							
Total	15119	3272	4075	2493	2807	1307	1165
	100%	21,6%	26,9%	16,4%	18,5%	8,6%	7,7%
Vital household statistic (based on regional statistical comparison)	One family households	Single mothers households	Single fathers households	Cooperative households (two or more families)		Single person households	
	54.30%	8.03%	2.58%	11.86%		20.79%	
Households statistic based on person who is registered to head the household	Males leaded households	Female leaded households	Older people leaded households (60+)				
	73.19%	26.81%	34.26%				

Household statistic shown in above table are pinpointing several important social indicators accounted for in this SIA, revealing potential vulnerable households.

We can notice a rather large percentage of six-member households in Merošina. Having in mind that Serbia faces constant population decrease, that only one of two households are single family households and also the statistic shown above that almost 12 % of all households in the region consists of two families or more, it shows that nearly one of every five households in Merošina is large cooperative household still common for rural and underdeveloped areas in Serbia. This number is significantly smaller in Prokuplje, a more urban environment.

It is to pinpoint that one of ten household are single parents households (8% single mothers and 2% single fathers) always to be regarded as extremely vulnerable.

In three of every four cases men are registered as head of households, while one-third of registered households headed by women are actually single mothers' household, which expressively shows a very traditional, patriarchal community. Men are leading over 80% of family households in the region, speaks for the household and the family property in registered in their name. Regardless of the contemporary legal protection of gender equality and joint marital assets of spouses, these circumstances acquire special attention. Therefore, during all field survey separate interviews and focus groups with women from households were held, as many impacts are affecting women and mothers in households to which

¹² Source - National statistical office of Serbia data, comparative overview - <http://webrzs.stat.gov.rs/WebSite/Default.aspx>

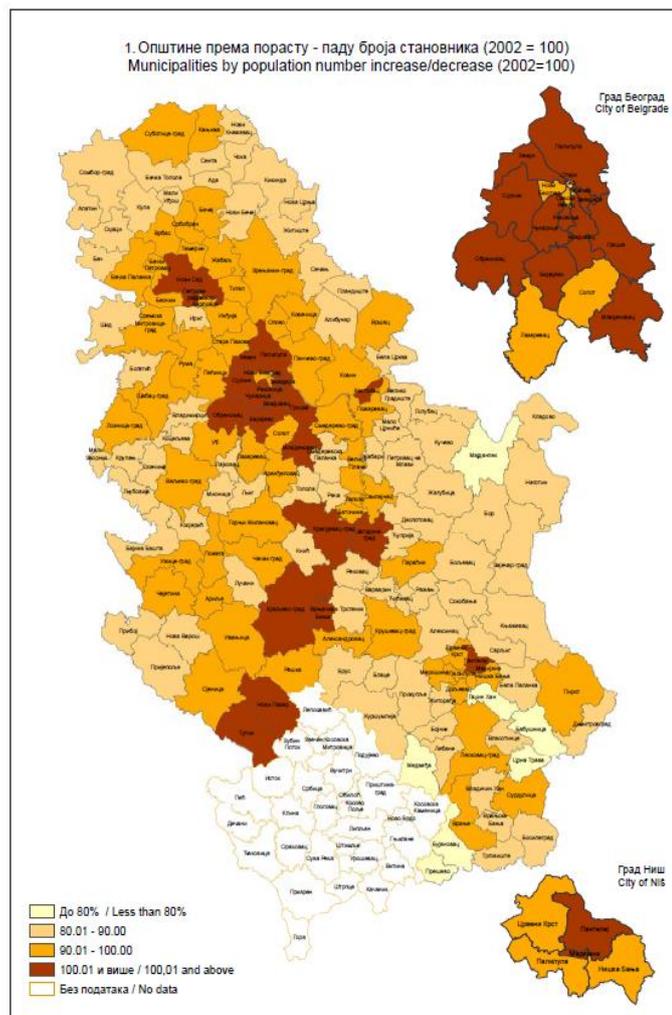
men do not pay attention. Each of these potential social impacts is dealt with in the appropriate section of the SIA.

One more statistic important to be pinpointed - one of three household is represented by an older persons. Due to constantly aging population and emigration of younger people from rural to urban areas, and from Serbia to foreign countries, many households in rural areas are "elderly households" that are also extremely vulnerable to all significant changes and to social impacts of the Project, so special care was administered in assessing impacts on that group of households too.

5.2 Migration and Population change

Serbia faces same population decrease as many other European countries. Rate of mortality is higher than the birth rate and the rate of emigration of younger people is high, so there is a decrease in number of citizens.

Figure 6 Municipality population decrease/increase¹³



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¹³ Source - National statistical office of Serbia - Brochure published by NSO: "First hand report of 2011 population census"

The figure above depicts the trend of decrease of population between 10% and 20% from year 2002 to 2012 (two last national population censuses). This trend has not changed during last few years. Nevertheless, there are some municipalities (shown in darker shades of brown) that are experiencing population increase, due to internal migrations (city of Belgrade, cities Nis, Novi Sad, Kragujevac, Jagodina, Kraljevo, and Novi Pazar).

Table 9: Population change in Merošina and Prokuplje municipality, including some major age groups and gender

	2011			2012			2013			2014			2015		
	Total	Male	Female												
Merošina															
Total	13954	7164	6790	13848	7113	6735	13721	7059	6662	13594	7011	6583	13449	6953	6496
Change (100% previous year)				-0.76			-0.92			-0.93			-1.07		
age 0-14	1975	996	979	1922	952	970	1890	942	948	1872	925	947	1845	910	935
Change (100% previous year)				-2.68			-1.66			-0.95			-1.44		
age 35-69	6381	3398	2983	6339	3399	2940	6293	3370	2923	6256	3341	2915	6231	3326	2905
Change (100% previous year)				-0.66			-0.73			-0.59			-0.40		
age 70+	2395	1068	1327	2414	1091	1323	2401	1082	1319	2385	1085	1300	2349	1087	1262
Change (100% previous year)				0.79			-0.54			-0.67			-1.51		
Prokuplje															
Total	44479	22069	22410	43986	21852	22134	43511	21605	21906	43021	21355	21666	42515	21131	21384
Change (100% previous year)				-1.11			-1.08			-1.13			-1.18		
age 0-14	6733	3509	3224	6602	3432	3170	6489	3356	3133	6392	3270	3122	6312	3218	3094
Change (100% previous year)				-1.95			-1.71			-1.49			-1.25		
age 35-69	20990	10459	10531	20801	10372	10429	20613	10290	10323	20468	10232	10236	20367	10198	10169
Change (100% previous year)				-0.90			-0.90			-0.70			-0.49		
age 70+	5937	2451	3486	5904	2465	3439	5858	2433	3425	5788	2407	3381	5646	2357	3289
Change (100% previous year)				-0.56			-0.78			-1.19			-2.45		

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Table 9 is showing population changes for municipality Merošina and Prokuplje for a period from 2011 to 2015. It reveals an expected and regular decrease in number of inhabitants that is higher than the Serbia average as well as the trend of constant population aging. In 2011 children between the age 0-14 represented 14.1% of total population in Merošina, but only 13.7% in 2015. Similar, in Prokuplje children in the age group 0-14 amounted to 15, 1% of total inhabitants, but only 14.8% in 2015 a trend triggered by low birth rates and emigration.

5.2.1 Emigration

The problem of emigration of mostly younger population and "brain drain" has been one of the most significant problems in Serbia from the second part of the 20th century. The history of emigration begins with Ottoman conquest, continues in the 20th century during World War I, communist revolution and economic emigration during the 1960s and 1970s. This is, and always was, a very important issue in Serbia¹⁴.

Some statistic shows that Serbia in 2011¹⁵ had 562 thousand emigrants, age 15 and over, living in OECD countries (7.7% of Serbia population), out of which 61 thousand were highly educated persons.

That number is significantly higher when statistic include families that lives in foreign country for several generations, and also considering countries in region: Croatia, Bosnia, Slovenia, etc. amounting to a total of 4,5 million (that would mean that more than one third Serbs are living out of Serbia), out of which 1,5 million are holders of Serbian citizenship, including a significant number of those who have dual citizenship (Serbia and immigration country citizenships)¹⁶. Largest Serbian emigration lives in the United States, where there are about 560 000 Serbs, second place is Germany with 400,000 Serbs, followed by Austria with 190,000, and Canada with 180,000 people. More than 100,000 people were counted and the Serbian community in France, Switzerland and Australia. In Sweden there are 70,000 and 55.000 in the UK¹⁷.

National Statistical office of Serbia in 2011 published that 296,000 Serbs live in temporary work emigration but this data is based on the statements by family members of people on temporary work in abroad countries.

¹⁴ It should be noted that as the Serbian emigration is a "*par excellence*" political issue, and methodology can significantly differ (some statistics include only Serbian citizens only recently living abroad, some include families living for generations), many available and published data are in conflict. Official sources claim that only in US today lives around 1.000.000 Serbs, which significantly exceeds the OECD countries report. Nevertheless, we can be quite certain that emigration of young people and brain drain still remains a significant problem in Serbia.

¹⁵ Source - "World Migration in Figures" A joint contribution by UN-DESA and the OECD to the United Nations report: <http://www.oecd.org/els/mig/World-Migration-in-Figures.pdf> last accessed 21/12/2016

¹⁶ Source - Ministry of foreign affairs of RS - <http://www.mfa.gov.rs/sr/index.php/konzularni-poslovi/dijaspora/dijaspora-opste?lang=lat>

¹⁷ Source: Serbian orthodox church

5.2.2 Immigration

Serbia has a short history of immigration, but it became an important issue since the conflicts in former Yugoslavia countries. Most important influx of immigrants happened 1990s, first from Croatia, Bosnia and last in 1999 during Kosovo conflict. As a result of that, at the moment 66.000 people live in Serbia with a refugee status, and 215.000 have a status of internally displaced persons, mostly from Kosovo¹⁸.

Nowadays, Serbia is one of the main corridors of refugees coming from Africa and Middle-East seeking asylum in EU countries. According to some sources¹⁹, during the last two years close to 600.000 refugees legally²⁰ passed through Serbia on their way to EU countries, out of which, only a smaller number expressed the will to stay in Serbia - 2.700²¹ during 2016. There are no refugee camps in Merošina or Prokuplje.

In municipalities of Merošina and Prokuplje the number of immigrants coming from other countries is relatively small, as it is shown in the following Table.

¹⁸ Source - Commissariat for Refugees and Migrations of RS

¹⁹ The Ministry of Labor, Employment, Veteran and Social Affairs RS

²⁰ Most often this means legally entering the country, asking for asylum which allows them to be located in one of refugees camp, but again leaving the country during the process.

²¹ Source - UNHCR for Serbia

Table 10: Migrants from abroad

		Total population	Total migrants (including Kosovo)	Total immigration - migrants from abroad		Migrants originating former Yugoslavia republics		Migrants from other countries		
Merošina										
			Total number	% of total population	Total number	% of total population	Total number	% of total population	Total number	% of total population
Total		13968	5268	37.71%	294	2.10%	203	1.45%	91	0.65%
Male		7174	1181	16.46%	162	2.26%	108	1.51%	54	0.75%
Female		6794	4087	60.16%	132	1.94%	95	1.40%	37	0.54%
Prokuplje										
			Total number	% of total population	Total number	% of total population	Total number	% of total population	Total number	% of total population
Total		44419	17771	40.01%	1564	3.52%	1050	2.36%	514	1.16%
Male		22056	6566	29.77%	730	3.31%	444	2.01%	286	1.30%
Female		22363	11205	50.11%	834	3.73%	606	2.71%	228	1.02%

5.2.3 Local migrations

Internal migrations

After World War II, began a process of internal migrations. It involved mostly younger people, migrating from rural to urban areas, from smaller to larger cities, mainly to Belgrade, Novi Sad and Niš. This process is still on going, leaving many rural areas deserted, including rich agricultural areas, and creating many old farming households.

In municipality Prokuplje only 59% of total number of inhabitants lived there all their life; and 62% in municipality of Merošina.

Table 11 Internal migrations to Merošina and Prokuplje

	Total population	Total migrants (inhabitants not born where they live)	Internal immigration - migrants from other parts of Serbia (including Kosovo)		
Merošina					
	Total population	Total number	% of total population	Total number	% of total population
Total	13968	5268	37.71%	3005	21.51%
Male	7174	1181	16.46%	780	10.87%
Female	6794	4087	60.16%	2225	32.75%
Prokuplje					
	Total population	Total number	% of total population	Total number	% of total population
Total	44419	17771	40.01%	10154	22.86%
Male	22056	6566	29.77%	3933	17.83%
Female	22363	11205	50.11%	6221	27.82%

Source - National statistical office of Serbia

Table 12 Emigration out of Merošina and Prokuplje

	Emigrated				Emigrated				Emigrated				Emigrated		
	Total	Male	Female		Total	Male	Female		Total	Male	Female		Total	Male	Female
2011				2012				2013				2014			
Merošina															
Total population	13968	7174	6794												
Total	165	58	107	Total	191	73	118	Total	154	56	98	Total	199	72	127
age 15-44	73.33 %	62.07 %	79.44%	age 15 - 44	65.97 %	52.05 %	74.58%	age 15-44	66.88 %	51.79 %	75.51%	age 15-44	65.83%	52.78 %	73.23%
Prokuplje															
Total	802	337	465	Total	727	312	415	Total	787	358	429	Total	822	355	467
age 15-44	69.95 %	62.61 %	75.27%	age 15-44	67.54 %	60.90 %	72.53%	age 15-44	64.29 %	56.42 %	70.86%	age 15-44	61.68%	57.46 %	64.88%

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Every year around 1.1% of all population emigrates out of the municipality of Merošina (1.5% of female inhabitants); and around 1.5% emigrates out of the municipality of Prokuplje (1.9% of female population). More detailed statistic is shown in Table 12 above.

Migration and population change issues - views from field survey

During focus group discussions, as key reason for negative population trends emigration of young people to Belgrade, or more often, to one of the high economy standard EU countries, Canada or US was listed. The local Community expressed its fear that this trend will even grow after the highway construction, as a side effect of economy blow that it will cause.

Interesting fact is revealed in the Table 11. It can be noticed that there is a considerably larger number of female immigrants living in both municipalities - 60% females comparing to 16% males in Merošina, and 50% comparing to 30% in Prokuplje. One of the reasons for this odd statistic lies, as it was explained during focus group discussions, that young women are more likely to leave rural areas and go to large university centres for education, or to get married. In recent years young women also attended school for medical nurses in Prokuplje in order to leave towards the EU and Scandinavian countries (Table 12 confirms there are more female than male emigrants). As a result, villages in those municipalities are left with a number of young male bachelors, who in need to start families search for brides in more underprivileged rural areas of Serbia, like in eastern parts of Serbia and Kosovo, and even outside of Serbia (rural parts of Ukraine, Russia, Moldavia etc.). This can be additionally confirmed when looking to the Table 5 showing that both municipalities have a larger percentage of male over female inhabitants in rural areas, which deviates from Serbia average.

Daily migrations in Merošina and Prokuplje

Table 13: Local migrations in Merošina and Prokuplje²²

	Economically active population/school children and students	Total daily migration				
		Total number of daily migrating population	Total daily migrating ratio	Within same municipality	Other municipality of the same region	To municipality of a different region
Daily migration of economically active population						
Merošina						
Total	4727	2002	42.35%	624	1165	211
Prokuplje						
Total	15694	2920	18.61%	1740	421	755
Urban areas		1032		186	269	574
Rural areas		1888		1554	152	181
Daily migrations of elementary/all high schools/vocational college and university students						
Merošina						
Total	2266	1238	54.63%	467	550	220
Prokuplje						
Total	7521	2210	29.38%	1301	213	694
Urban areas		642		4	110	526

²² Source - National statistical office of Serbia, but combined with data from other sources and from field surveys

	Economically active population/school children and students	Total daily migration				
		Total number of daily migrating population	Total daily migrating ratio	Within same municipality	Other municipality of the same region	To municipality of a different region
Rural areas		1568		1297	103	168

The Table above contains several significant self-explanatory²³ data:

- There is a significant ratio of Merošina’s active population migrating (42.35%) for employment purposes. This includes people migrating to other settlements within the same municipality during the day, but most of them (over 50% of all daily migrants and 24.6% of all economically active population) are daily migrating to another municipality in same administrative unit - mainly to the City of Niš.
- Migration to municipalities of a different region of active population (10.5%) from Merošina refers to working force mostly employed in municipality of Prokuplje, but also Žitorađa, Blace and Kuršumlija.
- There is no high school/vocational college or university in municipality of Merošina, so daily migration of all high school pupils and students is necessary, mostly to city of Niš (44% of all migrations) and some to municipality of Prokuplje (little less than 20%).

Unlike elementary schools, in Prokuplje high schools and vocational schools exist only in the city centre. Therefore, the number of daily migrating students from Prokuplje, within same municipality, from rural to urban areas is high (17% of all students in Prokuplje).

Daily migrations - views from field survey

The local community of Merošina, are expecting less time consuming travels to both Niš and Prokuplje as a direct benefit of the Project. Yet, most of the citizens expressed concerns about higher everyday travel expenses on a tolled Highway. As a result, citizens predict a significant increase of traffic on an alternative local road to Niš, which has been reported to be in extremely bad shape. Two possible mitigation measures are proposed and are budget dependent:

- Major reconstruction of the existing, alternative local road to Niš;
- Agreement between municipality of Merošina and Promoter (public enterprise Roads of Serbia) which would allow free toll to commuting citizens of Merošina to Niš and Prokuplje; or toll free road to Niš.

Concerns about possible disturbance of daily commute, to other municipalities, as well as within same municipality, induced by closed local roads during construction and road works caused stalls was underlined in both municipalities equally.

²³ In this section data from secondary sources were compared to primary information gathered during field surveys

5.3 Age

The population of Serbia is significantly aging. In 1971 the average person in Serbia had 32.4 years, and now the median age of Serbian population is almost 43 years, but that average is similar to the European median age. Life expectancy is 72 years for male, and 77 for female population.²⁴ Since 2011, every year, population in Serbia is in average getting older for 0.17 years, with a similar rate for female and male population. The graph below shows female and male age groups in Serbia and their rate in total Serbian population.

Figure 7 Age group distribution

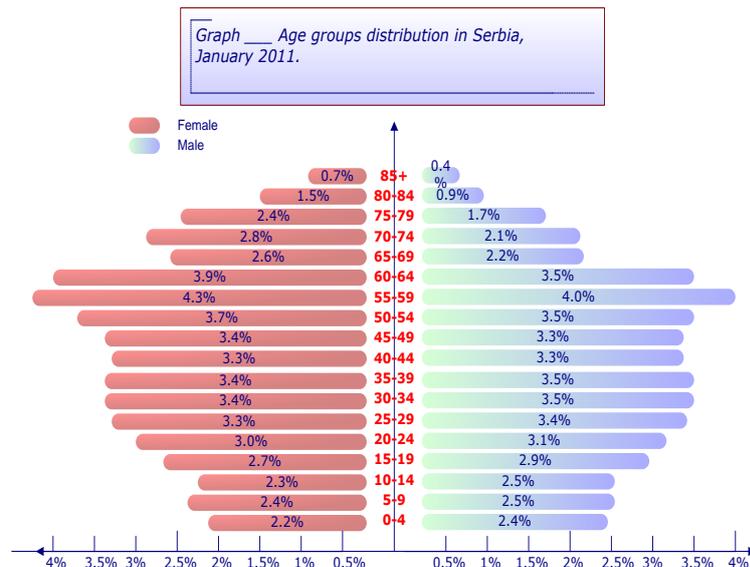


Table below shows that municipality of Merošina has a significantly older population, while municipality of Prokuplje a slightly older population than the national level. The main reason for this has been explained before: emigration of younger people to larger cities (Belgrade, Niš) and to other countries. The difference of ratio of working age population group (age 20 to 64) in total population of more than 6% between municipality of Merošina and the national level seems to be the most alarming statistical data, as well as the ratio of older age group population (65+).

Table 14: Major age group comparison

Major age groups	0-14	20-64	65+
Serbia	14.27%	62.74%	17.40%
Merošina	14.17%	56.61%	23.15%
Prokuplje	15.06%	59.90%	18.72%

Age - views from field survey

The Association of Pensioners of Prokuplje was reported to have 8500 members, which makes them a single most numerous social group and organization. During stakeholders meeting it was clearly explained that they are considered to be one

²⁴ Source - National statistical office of Serbia - <http://webzrs.stat.gov.rs/WebSite/Default.aspx>

of the most influential local citizen organizations. During the meeting, no concerns were expressed regarding the Highway construction process providing that all local roads are kept operational. It has been stressed that all primary health protection is available on a weekly basis (once or twice a week) in every village in addition to the health care provided in the hospital. Overall economy long-term effect of the Highway was deemed to be negative.
(See: Economy and livelihoods issues - views from field survey –in section 6.3).

5.4 Gender and gender equality

Out of the total population of Serbia, 51.3% are female and 48.7% are male inhabitants.

The Constitution of the Serbia proclaims principles of gender equality (Art. 15), all internationally recognized human right (Art. 18), and prohibition of any form of discrimination (Art. 21), gender equality in marriage (Art. 62):

- Article 15 - The State shall guarantee the equality of women and men and develop equal opportunities policy.
- Article 18 The Constitution shall guarantee, and as such, directly implement human and minority rights guaranteed by the generally accepted rules of international law, ratified international treaties and laws. The law may prescribe manner of exercising these rights only if explicitly stipulated in the Constitution or necessary to exercise a constitute project specific right owing to its nature, whereby the law may not under any circumstances influence the substance of the relevant guaranteed right.
- Article 21 - All direct or indirect discrimination based on any grounds, particularly on race, sex, national origin, social origin, birth, religion, political or other opinion, property status, culture, language, age, mental or physical disability shall be prohibited.
- Article 62 - Marriage shall be entered into based on the free consent of man and woman before the state body. Contracting, duration or dissolution of marriage shall be based on the equality of man and woman.

Although the Constitution fails to mention gender pay equality, articles of The Labour Law²⁵ treats rights of men and women equally, including right of equal pay. Additionally, according to provisions of this Law, a working woman has the right of absence from work due to pregnancy and childbirth, maternity leave, and absence from work for child care, for a total of 365 days. This length of maternity leave is usually used in full, making it one of the most lengthy in the world. The right of employment is also proclaimed equal, but because of maternity leave provisions young women in certain cases will be discriminated in employment possibility, although it is illegal to ask questions about maternity plans during job interviews. This particularly applies to employment in small and moderate private enterprises.

Despite principles however, many women in Serbia face challenges combining paid work and child care responsibilities. This could be an additional cause for

²⁵ "Official gazette of RS" 24/2005, 61/2005, 54/2009, 32/2013 i 75/2014

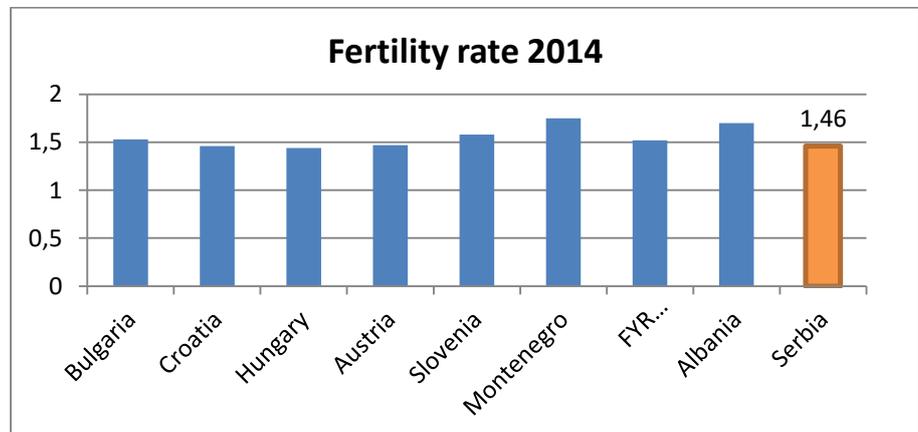
Serbia’s low fertility rate, which is one of the lowest in European countries, and average in the region at 1.46 percent in 2014. See *Table 15* and *Figure 8* below.

*Table 15 Fertility rates in Europe from 1960 to 2014*²⁶

	1960	1970	1980	1990	2000	2010	2012	2013	2014
EU-28 (*)							1.58	1.54	1.55
Belgium (*)	2.54	2.25	1.68	1.62	1.67	1.86	1.79	1.75	1.74
Bulgaria	2.31	2.17	2.05	1.82	1.26	1.57	1.50	1.48	1.53
Czech Republic	2.09	1.92	2.08	1.90	1.15	1.51	1.45	1.46	1.53
Denmark	2.57	1.95	1.55	1.67	1.77	1.87	1.73	1.67	1.69
Germany (*)						1.38	1.39	1.38	1.47
Estonia	1.98	2.17	2.02	2.05	1.36	1.72	1.56	1.52	1.54
Ireland	3.78	3.85	3.21	2.11	1.89	2.05	2.01	1.96	1.94
Greece	2.23	2.40	2.23	1.39	1.25	1.48	1.34	1.29	1.30
Spain			2.20	1.36	1.23	1.37	1.32	1.27	1.32
France (*)						1.89	2.03	2.01	1.99
Croatia							1.55	1.51	1.46
Italy	2.37	2.38	1.64	1.33	1.26	1.46	1.43	1.39	1.37
Cyprus				2.41	1.64	1.44	1.39	1.30	1.31
Latvia						1.25	1.36	1.44	1.52
Lithuania		2.40	1.99	2.03	1.39	1.50	1.60	1.59	1.63
Luxembourg (*)	2.29	1.97	1.50	1.60	1.76	1.63	1.57	1.55	1.50
Hungary (*)	2.02	1.98	1.91	1.87	1.32	1.25	1.34	1.35	1.44
Malta			1.99	2.04	1.70	1.36	1.43	1.38	1.42
Netherlands	3.12	2.57	1.60	1.52	1.72	1.79	1.72	1.68	1.71
Austria	2.69	2.29	1.65	1.46	1.36	1.44	1.44	1.44	1.47
Poland (*)				2.06	1.37	1.41	1.33	1.29	1.32
Portugal	3.16	3.01	2.25	1.56	1.55	1.39	1.28	1.21	1.23
Romania			2.43	1.83	1.31	1.59	1.52	1.41	1.52
Slovenia				1.46	1.26	1.57	1.58	1.55	1.58
Slovakia	3.04	2.41	2.32	2.09	1.30	1.43	1.34	1.34	1.37
Finland	2.72	1.83	1.63	1.78	1.73	1.87	1.80	1.75	1.71
Sweden		1.92	1.68	2.13	1.54	1.98	1.91	1.89	1.88
United Kingdom			1.90	1.83	1.64	1.92	1.92	1.83	1.81
Iceland		2.81	2.48	2.30	2.08	2.20	2.04	1.93	1.93
Liechtenstein					1.57	1.40	1.51	1.45	1.59
Norway		2.50	1.72	1.93	1.85	1.95	1.85	1.78	1.75
Switzerland (*)	2.44	2.10	1.55	1.58	1.50	1.52	1.52	1.52	1.54
Montenegro						1.70	1.72	1.73	1.75
FYR of Macedonia						1.88	1.56	1.51	1.49
Albania							1.51	1.49	1.52
Serbia (*)					1.48	1.40	1.45	1.43	1.46
Turkey						2.04	2.09	2.08	2.17

(*) 2012 and 2014: break in series.
 (*) 2012: break in series.
 (*) 2014: break in series.
 (*) 2000: break in series.
 Source: Eurostat (online data code: demo_frta)

*Figure 8 Fertility rates in region*²⁷



The employment rate of women in Serbia (38.3%) is significantly lower than the EU-27 average (58.5%)²⁸. Gender gap in employment rates stood at an average of

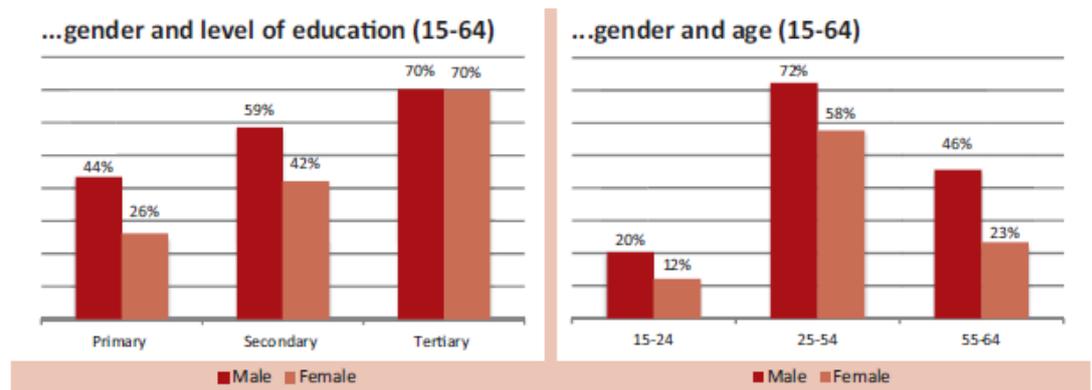
²⁶ Source - Eurostat - [http://ec.europa.eu/eurostat/statistics-explained/index.php/File:Total_fertility_rate,_1960%E2%80%932014_\(live_births_per_woman\)_YB16.png](http://ec.europa.eu/eurostat/statistics-explained/index.php/File:Total_fertility_rate,_1960%E2%80%932014_(live_births_per_woman)_YB16.png);

²⁷ Eurostat - [http://ec.europa.eu/eurostat/statistics-explained/index.php/File:Total_fertility_rate,_1960%E2%80%932014_\(live_births_per_woman\)_YB16.png](http://ec.europa.eu/eurostat/statistics-explained/index.php/File:Total_fertility_rate,_1960%E2%80%932014_(live_births_per_woman)_YB16.png)

²⁸ The current situation of gender equality in Serbia – Country Profile - study that was financed by, and prepared for the use of the European Commission, Directorate-General Justice, Unit D2 “Gender Equality” in the framework of the service contract managed by

-15 percentage points during the analysed period (October 2008-October 2011). The observed gender gap in employment is mainly caused by higher inactivity of women, which is above men's by 16.7 percentage points. Unemployment is also higher among women than among men, but to a far lesser extent – gender unemployment gap stood at an average of 2.5 percentage points during the period of analysis. Between October 2008 and October 2011, all the main labour market indicators worsened for both men and women. However, the worsening of employment and unemployment rates was less pronounced for women than for men, which led to reductions in gender employment and unemployment gaps. The worsening of all labour market indicators in Serbia is a reflection of the strong impact of the global economic crisis on the Serbian labour market. However, female employment, although at lower levels, was more resistant to the crisis. This is because women in Serbia are more often employed in the public sector, which did not adapt to the crisis by cutting down employment to the same extent as the private sector. Furthermore, the fact that women who work are on average better educated and more skilled than men who work may have contributed to this trend, because low-skilled workers are more likely to lose jobs during the crisis than high-skilled ones²⁹.

Figure 9 Gender employment comparison per education level and age groups³⁰



Lower employment ratio of women is one of the causes of the fact that the unadjusted wage gap in Serbia is 3.3%³¹ which is one of the smallest gap in Europe, but this statistic needs to be looked at more closely in order to understand it in full. At the lowest part of the distribution (lowest 20% of the wages) female wages are on average even 1.6% higher than male wage. The gap grows to 5.6% and 5.5% in the 2nd and 3rd quintile (40% and 60% of the wages height) of the wage distribution. The gap then starts dropping again and becomes statistically insignificant at the top of the wage distribution.

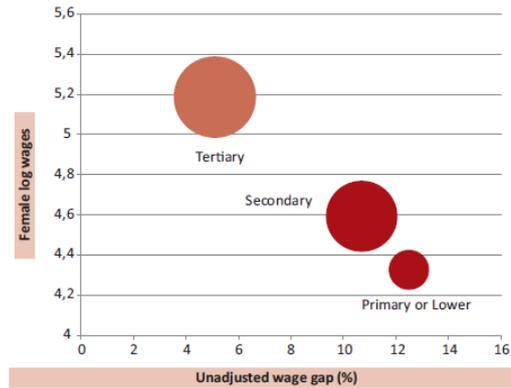
Roland Berger Strategy Consultants GmbH in partnership with ergo Unternehmenskommunikation GmbH & Co. KG.

²⁹ study of FREN – Foundation for the Advancement of Economics published in Belgrade "Gender Pay Gap in the Western Balkan Countries: Evidence From Serbia, Montenegro and Macedonia"

³⁰ Ibid.

³¹ Ibid.

Figure 10 Unadjusted wage gaps across education levels³²



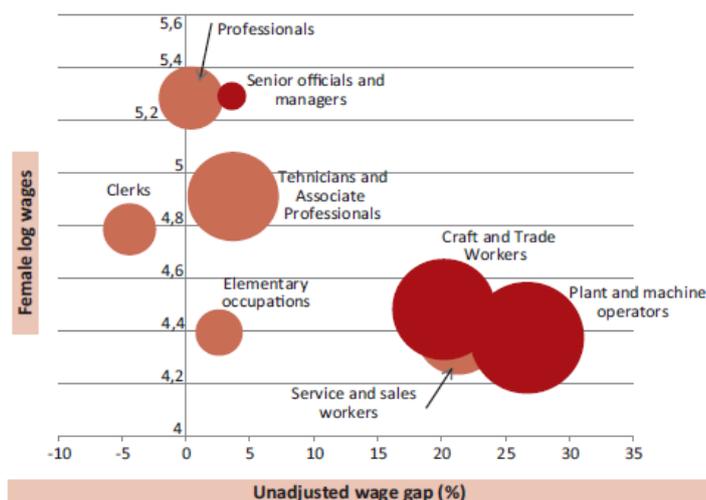
Source: Own calculation based on the LFS data, waves Oct 2008 – Oct 2011 (without April 2010).
 Notes: 1) Size of the circles indicates the differences in the frequency of male vs. female employment by level of education. Lighter circles represent those characteristics which can be found more frequently among employed women than among employed men (e.g. employed women more frequently have tertiary education than employed men), while darker circles represent those characteristics which can be found more frequently among employed men (e.g. employed men more frequently have secondary education than employed women). The size (surface) of the circle shows the extent of this difference between the genders by that particular labour market characteristic.

Employed women more frequently have tertiary education than employed men (the lighter circle in Figure 9), while employed men are more frequently found with primary or secondary education than women (the darker circles in Figure 9). This is because women with lower educational attainment more frequently stay out of the labour market. Yet, the gender employment gap is the least pronounced among those with primary education, i.e. only a slightly higher share of all working men have primary education than it is the case with working women (the darker circle for Primary education in Figure 9 is the smallest in surface). Based on these observations, we can conclude that the educational structure of employed women is much better than that of employed men. Namely, 28.5% of women in wage employment have tertiary education, compared to 18.5% of employed men. Only 10.6% of all wage-employed women have primary education and 60% have secondary, compared to 13% for primary and 68.5% for secondary for men. We can consider this a type of discrimination against women, since in order for women to become employed, they need higher educational attainment on average than men do, i.e. they need to invest in their education more if they want to get into wage employment.³³

³² study of FREN – Foundation for the Advancement of Economics published in Belgrade "Gender Pay Gap in the Western Balkan Countries: Evidence From Serbia, Montenegro and Macedonia"

³³ Ibid.

Figure 11 Unadjusted wage gaps across different professions³⁴



Source: Own calculation based on the LFS data, waves Oct 2008 – Oct 2011 (without April 2010).

Footnotes: ^(a) Professionals include armed forces.

^(b) Technicians and associate professionals include skilled agricultural workers.

Notes: 1) Size of the circles indicates the differences in the frequency of male vs. female employment by occupation. Lighter circles represent those occupations in which women can be found more frequently than men (e.g. women can be found more frequently working as Clerks than men), while darker circles represent those occupations in which men are employed more frequently (e.g. men can be found more frequently working as Plant and machine operators than women). The size (surface) of the circle shows the extent of this difference in gender frequencies within each occupation.

Among senior officials and managers, there are almost twice as many men as women. This could suggest a “glass ceiling” for women, who, although their overall educational structure is better than male among employees, cannot access the top positions, which pay the highest wages. Of course, a supply side reason for this could be that women select away from positions with greater responsibility due to different preferences in comparison to men (as we discussed in the literature review). The fact that the unadjusted gender wage gap is low among senior officials and managers suggests that those women who break the barrier and access these senior positions receive wages that are on average the same as those of male employees³⁵.

The share of the wage employed in urban areas is very high among both women and men, and it is considerably higher for women (almost 90%) than for men (81.7%). A higher percentage of men in urban areas can be found among the self-employed (17.9% vs. 9.5% among women). Analysis by regions shows that Belgrade, as a predominantly urban area, has particularly high levels of wage employment for both genders, and especially women. The share of wage-employed in Belgrade is 91% for women and 84.7% for men. Gender gap wage employment is the most pronounced in Vojvodina, where 80.2% of female employment is wage employment, while this percentage for men is 70.3%. In this region women can also be found slightly more frequently among unpaid family members (by 4.4 pp: 6.8% for women vs. 2.4% for men). In West Serbia and Šumadija and Eastern and Southern Serbia, which have higher shares of non-urban areas, trends are very similar to country level nonurban trends. The share of

³⁴ study of FREN – Foundation for the Advancement of Economics published in Belgrade "Gender Pay Gap in the Western Balkan Countries: Evidence From Serbia, Montenegro and Macedonia"

³⁵ Ibid.

wage employment is significantly lower and around 1pp in favour of women, while the female share is significantly lower among the self-employed and significantly higher among the unpaid family members than male³⁶.

The table 16 below shows that trends in the region of Southern Serbia are consistent with national level. It is noticeable that female population is a slight majority of total population, but there are 8% less employed women than men, and 10% more inactive female population.

Table 16 Region of Southern Serbia activity across gender³⁷

	2014	
	Southern Serbia region	
Total population	Total	% of total
Total	1,323,000	100.00%
Male	649,700	49.11%
Female	673,300	50.89%
Active population		
Total	653,700	49.41%
Male	381,200	28.81%
Female	272,500	20.60%
Employed		
Total	508,500	38.44%
Male	304,300	23.00%
Female	204,200	15.43%
Unemployed		
Total	145,200	10.98%
Male	76,900	5.81%
Female	68,300	5.16%
Inactive population		
Total	669,300	50.59%
Male	268,600	20.30%
Female	400,700	30.29%

Structure according to profession of employees in Southern Serbia region is also consistent to the overall national trend: male managers and senior official's reaches 2.4% compared to 0.9% women but women highly educated professionals (doctors, school teachers etc.) make out 5.2% of total population compared to 4% men. Men in agricultural professions represent 15.2% of total compared to 10.6% women, but women are more often employed as administrative workers - 3.7% compared to men 2.8%, but are much less employed for working on heavy and factory machinery - 1.3% compared to men 7.5%. This difference is not as large when architect and construction engineers are concerned - men 5.2% to women 4.7%³⁸.

³⁶ study of FREN – Foundation for the Advancement of Economics published in Belgrade "Gender Pay Gap in the Western Balkan Countries: Evidence From Serbia, Montenegro and Macedonia"

³⁷ Source - National statistical office of Serbia - <http://webrzs.stat.gov.rs/WebSite/Default.aspx>

³⁸ Ibid.

Table 17 Obtained education levels for all population 15 years and above³⁹

	Without any education			Unfinished primary education			Primary education		
	Total	Men	Women	Total	Men	Women	Total	Men	Women
Merošina									
Total	936	163	773	2374	994	1380	3249	1665	1584
Ratio	7.8%	1.4%	6.4%	19.8%	8.3%	11.5%	27.1%	13.9%	13.2%
Prokuplje									
Total	1729	278	1451	4437	1582	2855	8581	4270	4311
Ratio	4.6%	0.7%	3.8%	11.8%	4.2%	7.6%	22.7%	11.3%	11.4%
High schools - total			Vocational high schools - less than four years			Vocational high schools - four year education			
	Total	Men	Women	Total	Men	Women	Total	Men	Women
Merošina									
Total	4837	3005	1832	2631	1807	824	1978	1083	895
Ratio	40.3%	25.1%	15.3%	21.9%	15.1%	6.9%	16.5%	9.0%	7.5%
Prokuplje									
Total	17777	9666	8111	6661	4117	2544	8959	4522	4437
Ratio	47.1%	25.6%	21.5%	17.7%	10.9%	6.7%	23.7%	12.0%	11.8%
General education high schools - gymnasium			Higher education			University education			
	Total	Men	Women	Total	Men	Women	Total	Men	Women
Merošina									
Total	180	69	111	275	163	112	244	154	90
Ratio	1.5%	0.6%	0.9%	2.3%	1.4%	0.9%	2.0%	1.3%	0.8%
Prokuplje									
Total	1944	831	1113	2302	1234	1068	2700	1435	1265
Ratio	5.2%	2.2%	2.9%	6.1%	3.3%	2.8%	7.2%	3.8%	3.4%

In Prokuplje 18.7% (of total population) men are employed compared to only 12.4% women. Women supported by other family members make 22.1% out of complete population, which means that over 41% of all women inhabitants are supported compared to 27% supported men.

Education levels in Prokuplje and Merošina also shows a significant gender gap which is not present on the national level. Part of this statistic shown in Table 16 can be explained by the fact that women obtaining higher education levels more often leave poorer and rural municipalities to live in cities or abroad. Hyphenated in red in above table, statistic shows a significant number of women populations without any formal education. A study showed that a significant percentage of

³⁹ Source - National statistical office of Serbia - <http://webrzs.stat.gov.rs/WebSite/Default.aspx>

women are illiterate to some degree - more than 12% of all women⁴⁰ age 15 or above.

Gender issues - views from field survey

During focus group discussions it was understood that neither of the national and municipality census includes the universe of Roma population. Therefore, all gaps considering gender equalities would actually be larger, as Roma women are often less educated, more unemployed, married at younger age and more often supported persons. The data of local Roma community shows that there are three times more Roma population living in Prokuplje than national statistic shows.

During women focus group in Merošina we learnt that women in Merošina don't feel there is a gap between women and men in their community. They specified that in Merošina the Municipality President is a woman - Sanja Stajić. But after being asked, they agreed that in the more rural areas of the municipality men are usually property holders of the common property of spouses, that men will represent the household etc. in 80% of the cases.

5.5 Ethnicity

The Constitution of RS proclaims principles of ethnic equality and protection of all ethnic minorities (Art. 14), all internationally recognized human rights (Art. 18), prohibition of any form of discrimination (Art. 21), and protection of minority rights (Art. 22):

- Article 14 - The Constitution announces that Republic of Serbia shall protect the rights of national minorities. The State shall guarantee special protection to national minorities for the purpose of exercising full equality and preserving their identity.
- Article 18 The Constitution shall guarantee, and as such, directly implement human and minority rights guaranteed by the generally accepted rules of international law, ratified international treaties and laws. The law may prescribe manner of exercising these rights only if explicitly stipulated in the Constitution or necessary to exercise a constitute project specific right owing to its nature, whereby the law may not under any circumstances influence the substance of the relevant guaranteed right.
- Article 21 - All direct or indirect discrimination based on any grounds, particularly on race, sex, national origin, social origin, birth, religion, political or other opinion, property status, culture, language, age, mental or physical disability shall be prohibited.
- Article 22 - Everyone shall have the right to same legal protection of their human or minority rights guaranteed by the Constitution regardless of race, sex or ethnic affiliation. The citizens shall have the right to address international institutions in order to protect their freedoms and rights guaranteed by the Constitution.

⁴⁰ Study conducted by municipality of Prokuplje in 2002.

Table 18 Population by ethnicity in Serbia⁴¹

Ethnic group	census 1948		census 1953		census 1961		census 1971		census 1981		census 1991		census 2002 ^[1,2]		census 2011	
	Number	%	Number	%	Number	%										
Serbs	4,651,819	80.2	4,963,070	80.4	5,477,670	82.0	5,788,547	80.4	5,972,661	77.3	6,616,917	80.3	6,212,838	82.9	5,988,150	83.3
Hungarians	433,618	7.5	441,748	7.2	449,377	6.7	430,145	6.0	390,321	5.0	337,479	4.5	293,299	3.9	253,899	3.5
Roma	40,951	0.7	46,896	0.8	6,624	0.1	35,301	0.5	76,833	1.0	90,853	1.2	108,193	1.4	147,604	2.1
Muslims	7,636	0.1	74,840	1.2	85,441	1.3	127,973	1.8	156,604	2.0	176,401	2.3	19,503	0.3	22,301	0.3
Bosniaks													136,087	1.8	145,278	2.0
Croats	164,574	2.8	167,045	2.7	189,158	2.8	176,649	2.5	140,650	1.8	97,344	1.2	70,602	0.9	57,900	0.8
Slovaks	73,138	1.3	75,006	1.2	77,816	1.2	76,707	1.1	73,170	0.9	65,363	0.9	59,021	0.8	52,750	0.7
Albanians	33,769	0.6	40,954	0.7	53,167	0.8	68,593	1.0	76,296	1.0	74,303	1.0	61,647	0.8	5,809	0.08
Montenegrins	46,810	0.8	54,718	0.9	67,165	1.0	93,705	1.3	120,438	1.6	117,761	1.6	69,049	0.9	38,527	0.5
Vlachs	93,440	1.6	28,047	0.5	1,367	0.0	14,719	0.2	25,592	0.3	15,675	0.2	40,054	0.5	35,330	0.5
Romanians	63,112	1.1	59,689	1.0	59,492	0.9	57,399	0.8	53,676	0.7	37,818	0.5	34,576	0.5	29,332	0.4
Yugoslavs					14,873	0.2	122,904	1.7	439,265	5.7	312,595	4.1	80,721	1.1	23,303	0.3
Macedonians	17,391	0.3	26,302	0.4	35,146	0.5	41,627	0.6	47,930	0.6	44,028	0.6	25,847	0.3	22,755	0.3
Bulgarians	59,395	1.0	60,146	1.0	58,243	0.9	53,536	0.7	33,294	0.4	26,416	0.3	20,497	0.3	18,543	0.3
Others ^[1,3] /unspecified	114,493	2.0	132,549	2.1	102,700	1.5	115,093	1.6	122,506	1.6	97,953	1.3	266,067	3.5	368,136	5.1
Total	5,936,223		6,171,010		6,678,239		7,202,898		7,729,236		8,010,906		7,498,001		7,186,862	

Serbia is home to many different ethnic groups. According to the 2011 census, Serbs are the largest ethnic group in the country and constitute 83.3% of population. Hungarians are the largest ethnic minority in Serbia, concentrated predominately in northern Vojvodina and representing 3.5% of the country's population (13% in Vojvodina). Roma nationals constitute 2% of the total population but unofficial estimates put their actual number to be twice or three times as high. Bosniaks are the third largest ethnic minority mainly inhabiting Raška region in southwestern part of the country. Other minority groups include Croats (0.9%), Slovaks (0.8%), Albanians, Montenegrins (0.5%), Romanians (0.4%), Macedonians (0.3%), and Bulgarians (0.3%). The Chinese and Arabs are the only two significant immigrant minorities.⁴²

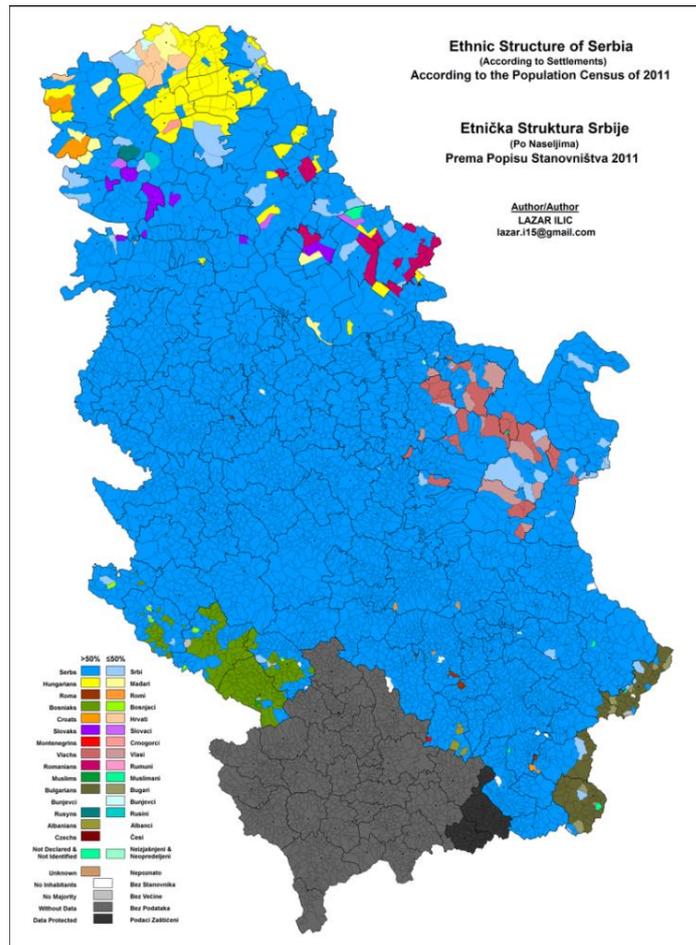
The official language is Serbian and is native to 6,330,919 or 88% of the population. Recognized minority languages are: Hungarian (mother tongue to 243,146 people or 3.4% of population), Slovak, Albanian, Romanian, Bulgarian and Rusyn as well as Bosnian and Croatian which are completely mutual intelligible with Serbian language. All these languages are in official use in municipalities or cities where more than 15% of population consists of national minority. In Vojvodina, provincial administration uses, besides Serbian, five other languages (Hungarian, Slovak, Croatian, Romanian and Rusyn).⁴³

⁴¹ Source: Wikimedia - all data came from Statistical office of Serbia and article was written by Serbian government representatives, based on Statistical office surveys. Taken from an article within the scope of WikiProject Serbia, a collaborative effort to improve the coverage of Serbia on Wikipedia.

⁴² Source: Wikimedia - all data came from Statistical office of Serbia and article was written by Serbian government representatives, based on Statistical office surveys. Taken from an article within the scope of WikiProject Serbia, a collaborative effort to improve the coverage of Serbia on Wikipedia.

⁴³ Ibid.

Figure 12 Ethnic structure map of Serbia⁴⁴



Unlike significant ethnic diversity that can be observed on national level, Prokuplje and Merošina are close of being mono-ethnic communities. Table 19 below shows population by nationalities.

Table 19 Population of Merošina and Prokuplje⁴⁵

	Total	Serbs	Serbs ratio	Roma	Roma ratio	All other ethnic groups combined	"All other" rate	Refused to declare	Unknown
Merošina									
Total	13968	13094	93.74%	736	5.27%	48	0.34%	59	31
Male	7174	6752	94.12%	380	5.30%			22	9
Female	6794	6342	93.35%	356	5.24%			37	22
Prokuplje									
Total	44419	40936	92.16%	2154	4.85%	443	1.00%	277	607
Male	22056	20282	91.96%	1132	5.13%			149	293
Female	22363	20654	92.36%	1022	4.57%			128	314

⁴⁴ Ibid.

⁴⁵ Source - National statistical office of Serbia - <http://webzrs.stat.gov.rs/WebSite/Default.aspx>, 2011 National census

In the table above "all other" ethnic groups are joined together as they represent a statistically insignificant category. This group includes many different national minorities: Albanians, Montenegrins, Yugoslavians, Romanians, and Croats etc. The group "refused to declare" includes people that exercise their constitutional right not to declare as part of any national group. The column "Unknown" includes unrecognizable or empty survey results, but also people that adorably declared themselves as extra-terrestrials, Redstarrrians (Belgrade football club), cosmopolitans etc.

The only significant ethnic minority group is the Roma national minority. National census reports around 5% of Roma population in both Prokuplje and Merošina. But, as well as on the national level, as a rule, a significant number of Roma ethnics are kept out of the survey for different reasons: living in remote or ghettoized part of the cities below poverty line, not being available for census, avoiding census out of fear, minor pregnancies not being reported by parents etc. On field survey we learned that the number of Roma population in both municipalities is around 10% - a fact confirmed by both municipality officials and Roma ethnic organization.

Ethnicity issues - views from field survey

Difference between official secondary statistical data and actual number of Roma population was confirmed by both Prokuplje municipality officials and Prokuplje Roma Association: as secondary data assesses number of Roma population to be between 1800 and 2100, the actual number is around 4500, what makes a little over 10% of all Prokuplje inhabitants. Association of Roma Citizens Prokuplje (ARPC) confirmed that during war years (1990s) in former Yugoslavia, migrations increased the number of Roma citizens.

There are no reported ethnic incidents in municipality of Prokuplje and ARPC has a satisfactory cooperation with all municipality and government officials. Yet, the ethnic equality cannot be regarded as satisfactory, reported the ARPC and there is a form of "silent discrimination" of Roma citizens. Roma citizens are more often effected by economic crisis, there are more unemployed Roma's then other citizens, more often they are social assistance dependent, the rate of employed Roma in all public and social services (police force, municipality administration, health institutions...) is well below 10%, and the possibility of Roma nationals to be employed by non-Roma private enterprises is extremely low. Many Roma nationals don't speak Serbian, yet there are no court interpreters for Roma language available in the municipality area.

Roma settlements are often separated from other settlements. There are several Prokuplje city settlements: Čerkez Mahala, Carina, Džungla with mostly Roma citizens, and some mainly Roma inhabited rural settlements, like villages of Bunburek, Jugovac, and Guba. Settlement of Čerkez Mahala, located in the very centre of Prokuplje city, was recently rehabilitated by a joint humanitarian project of UNICEF, government of Switzerland and municipality of Prokuplje, but living and sanitation conditions of two other city Roma settlements are reported to be very bad. These are slums - poor, informal settlements, with no sanitation and often, during summer, without running water. Therefore, any influence on these settlements by the project has to be regarded as important and Roma citizens

living in these settlements must be regarded as extremely vulnerable although not directly impacted.

During focus groups in Merošina a meeting with Roma national organization "Wheel" ("Točak") was held. The knowledge obtained with regard to the Roma community in Merošina is similar to Prokuplje. There are more of Roma inhabitants than officially reported, but many of them are temporary working abroad, Austria and other EU countries. The "Wheel" has around 1000 members, and most of them are unemployed. Main Roma settlements are located in villages of Jugbogdanovac and Biljeg. There is a Roma coordinator appointed by the Ministry of health, of Roma nationality too.

5.6 Religion

Articles of the Constitution of Serbia proclaiming ethnic equality proclaims at the same time religious equality. The State proclaims and guarantees special protection to freedom of religion and freedom of worship. Serbia can be seen as fairly free society to different religions and worship, yet some sources found that Serbia is one of the countries where religion government restrictions significantly rose from 2006 to 2009⁴⁶. Religious hostility is deemed to be moderate, but religious incidents reported are very rare, as Figure12 below shows.

Serbia is a religiously diverse country, with an Eastern Orthodox majority, and Catholic and Muslim minorities, among other smaller confessions. Orthodox Christians number 6,079,396 or 84.5% of country's population. The Serbian Orthodox Church is the largest and traditional church of the country, adherents of which are overwhelmingly Serbs. Other Orthodox Christian communities in Serbia include Montenegrins, Romanians, Vlachs, Macedonians and Bulgarians.

There are 356,957 Roman Catholics in Serbia, roughly 5% of the population, mostly in Vojvodina, especially its northern part, where majority of Hungarians and Croats live, as well as some Slovaks and Czechs. Protestantism accounts for about 1% of the country's population, chiefly among Slovaks in Vojvodina as well as among Reformist Hungarians.

Muslims, with 222,282 or 3% of population, form third largest religious group. Islam has a strong historic following in the southern regions of Serbia, primarily in southern Raška. Bosnians are the largest Islamic community in Serbia; estimates are that some third of country's Roma people are Muslim. Atheists numbered 80,053 or 1.1% of population and additional 4,070 are Agnostics⁴⁷.

⁴⁶ <http://www.pewforum.org/2011/08/09/rising-restrictions-on-religion2/>

⁴⁷ Source: Wikimedia - article was written by Serbian government representatives. Taken from an article within the scope of WikiProject Serbia, a collaborative effort to improve the coverage of Serbia on Wikipedia.

Figure 13 Religious hostility comparisons⁴⁸

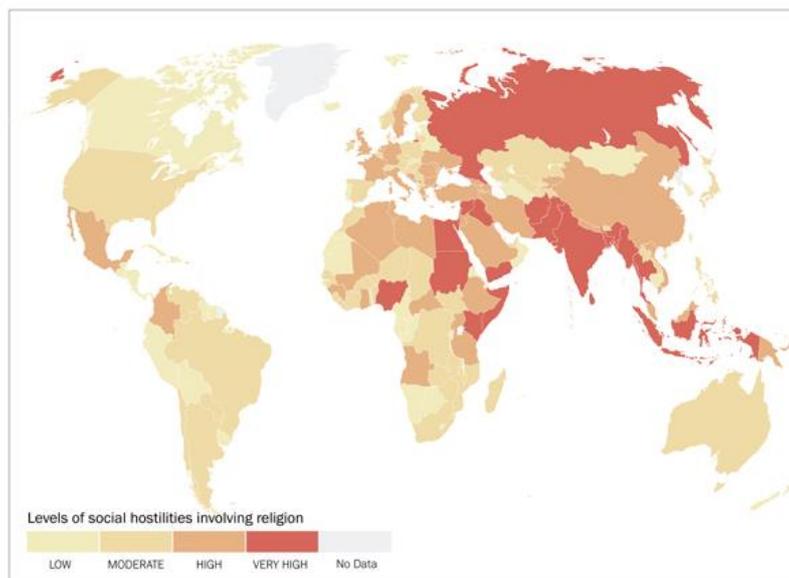


Table 20 Religion in Prokuplje and Merošina⁴⁹

	Total	Orthodox Christian		Other Christian		Islamic		Atheist		Refused to answer		Unknown	
		Total	% of all population	Other Christian	% of all population	Total	% of all population	Total	% of all population	Total	% of all population	Unknown	% of all population
Merošina	13968	13723	98.25%	19	0.14%	4	0.03%	14	0.10%	136	0.97%	44	0.32%
Prokuplje	44419	41494	93.41%	101	0.23%	299	0.67%	124	0.28%	731	1.65%	914	2.06%

The number of Muslims in the statistic showed above seems rather low. During focus group discussions it has been reported that a number of Roma people stay below the survey results, and if they would be included the number of people of Islamic religion should be higher. If we use the data provided by the Roma Association, that Roma nationals makes 10% of population of these municipalities, and that around one third of all Roma's are Muslims, the percentage of persons of Islamic faith should be at least around 3,5%.

⁴⁸ Source: Pew Research Center

⁴⁹ Source: NSA, population census 2011.

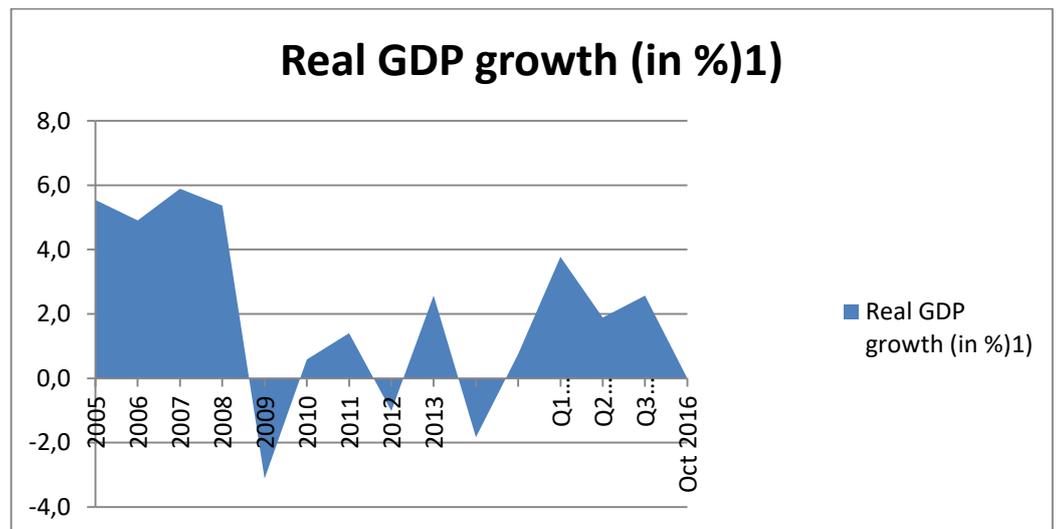
6 Economy and Livelihoods

6.1 National Level Overview

Serbia is considered to be an emerging market economy. Serbian nominal GDP in 2015 was officially estimated at \$36.56 billion or \$5,102 per capita.⁵⁰ The economy is dominated by services, like trade and tourism, which accounts for 60.3% of GDP, followed by industry with 31.8% of GDP, and agriculture at 7.9% of GDP.⁵¹ The official currency of Serbia is Serbian dinar, and the central bank is National Bank of Serbia. The Belgrade Stock Exchange is the only stock exchange in the country.

The economy has been affected by the global economic crisis. After eight years of economic growth (average of 4.45% per year - but following strong economy recession during the 1990's), Serbia again entered the economic depression in 2009 with negative growth of -3%, and in 2012 with -1.5%. The public debt has doubled in 5 years, from 2009 to 2014: from pre-crisis level of 29.2% to 63.8% of GDP.⁵² In recent years it is showing some signs of recovery.

Figure 14 Serbia GDP growth⁵³



Agricultural goods makes out around 15% of all Serbia export, and one third of all agricultural products goes out to fruits and vegetables.

⁵⁰ "Report for Selected Countries and Subjects". International Monetary Fund. Retrieved 10/10/2016

⁵¹ Source: <https://www.cia.gov/library/publications/the-world-factbook/geos/ri.html> last accessed on 10/10/2016

⁵² Source: <http://www.mfin.gov.rs/pages/article.php?id=7161> last accessed on 10/10/2016

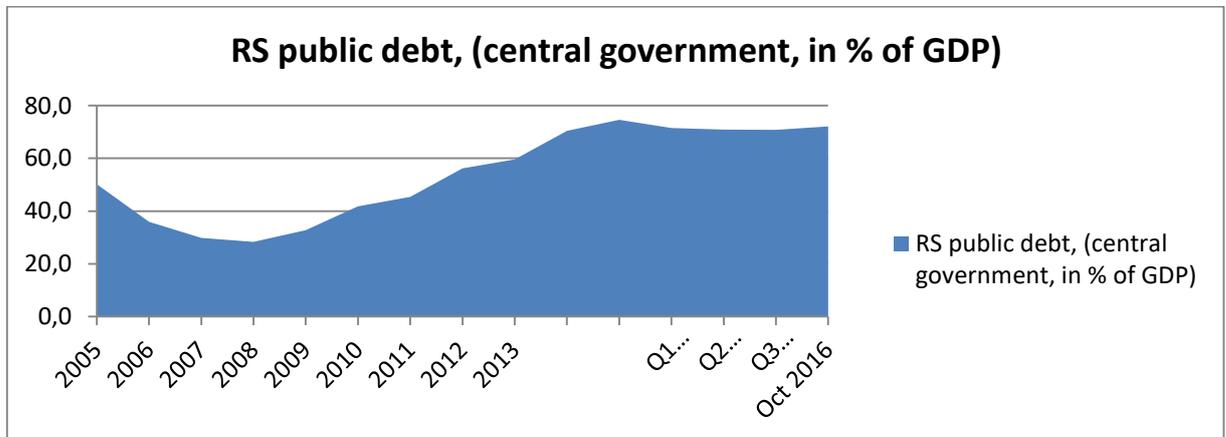
⁵³ Source: National bank of Serbia - <http://www.nbs.rs/internet/english/index.html>

Figure 15 Serbian exporting trend comparison⁵⁴



Many public utility construction project, but also constant budget deficit, triggered off a raise of the public debt. Presently, it reached around 81,4% of the GDP⁵⁵, with a tendency of further growth, making Serbia a moderately over indebted country (33rd on the list of all over indebted countries⁵⁶). Most of the debt goes out to the central government, and a small portion to local cities and municipalities, around 60% of the total public debt is a foreign debt.

Figure 16 Public debt, PP of GDP⁵⁷



6.2 Livelihoods in the Study Municipalities

Table 20 shows consistent results to those that were already shown in different statistical information. Around one third of all households depend on retirement pensions for livelihood (31% in Merošina and 35% in Prokuplje). As average pension keeps falling behind the average pay in Serbia (52.2% in 2015 compared to 66.6% in 2002), that the average monthly pension is around 200 EUR (this is a

⁵⁴ Source: National bank of Serbia - <http://www.nbs.rs/internet/english/index.html>

⁵⁵ Source: http://www.economist.com/content/global_debt_clock/

⁵⁶ Source: <https://www.cia.gov/library/publications/the-world-factbook/rankorder/2186rank.html>

⁵⁷ Source: National bank of Serbia - <http://www.nbs.rs/internet/english/index.html>

country average - we can consider that this average is much lower for study municipalities, more so as the average agricultural pension is by far the lowest).

The data shown on the left reveals a surprisingly low percentage of families living out of agriculture. But this data is misleading. As a rule most of agricultural households have mixed sources of income - from agriculture but also from other sources - income from paid non-agricultural work, pensions etc. Further study will show economic structure and indicators in the study municipalities for further comparison.

Table 21. Household income in Merošina and Prokuplje⁵⁸

Household livelihoods key income	Total
Merošina	
Total households	4046
Agricultural based income	147
Non-agricultural based income	476
Retirement pension	1260
Social help	120
Other income	169
Mixed income	1788
No income	86
Prokuplje	
Total households	15119
Agricultural based income	239
Non-agricultural based income	3767
Retirement pension	5283
Social help	546
Other income	692
Mixed income	4235
No income	357

In Merošina municipality 30.12% of all economically active population is reported to live from activities related to the agriculture, compared to 9.3% in Prokuplje. In Prokuplje, 20% of all population are employed in industry (see: <https://www.leoni.com/en/company/locations/>), and near 19% in Merošina.

Nearly 8.5% of Merošina active population are employed in commerce, compared to 12.88% in Prokuplje, but only 1,69% (Merošina) and 2.02% (Prokuplje) are working in services related to tourism⁵⁹. Construction related activities employ 6.5% in Merošina, and 3% in Prokuplje.

Compared to these economically related activities, state and municipality administration employs 8,75% of all employed persons in Merošina, and significant 17,13% in Prokuplje, 3,9% working population works in schools in Merošina (three times more women than men), and 7,71% in Prokuplje. In Merošina 4,45% works in health and social care institutions (five times more women than men) and 10,92% in Prokuplje.

⁵⁸ Source - National statistical office of Serbia - <http://webzrs.stat.gov.rs/WebSite/Default.aspx>, 2011 National census

⁵⁹ This includes restaurants, local bars etc.

6.3 Economy in the Study Municipalities

Economies of Municipality Prokuplje and Merošina encounters similar problems in economic development that are typical for all regions in Serbia, including less developed road, water management, and utility infrastructures, poor use of land in agriculture, poor use of natural resources, water, forest and other, as well as uncontrolled industrialization, economic problems inherited from the previous period, emigration of younger, working-age population to the major economic centres in Serbia, and abroad.

In the municipality of Prokuplje, there are close to 200 small and Moderate enterprises (number of enterprises continuously changes, but for last ten years it varies around this number). Nearly 8,5% of Merošina active population and 12,88% in Prokuplje are employed in commerce. Usually, these are retail businesses and smaller shops satisfying local needs for general goods. One third of all small businesses in Prokuplje and Merošina are active in the field of commerce. There are only four large companies in the municipality of Prokuplje, and none in the municipality of Merošina (this does not include public utility companies). Most of them are engaged in commerce (32.99%), small-scale industrial production (25.77%), and only a small fraction (7.22%) in agricultural production despite the fact that agriculture is the single most important economic sector in both municipalities. In providing tourist services (including restaurants and bars) deal only 2.06% of all company. The situation is very similar in the municipality of Merošina.

At the same time, in the municipality of Prokuplje operates around 1,000 shops, more than 55% are working in commerce activities, around 10% are restaurants and bars, 7% are providing personal services, only about 6% are in craftsmanship and 9% in the manufacturing industry.

In the municipality of Prokuplje there are four big utility companies - JKP "Čistoća" (waste management); JKP "Gradski vodovod" (water supply); JP " Directorate for Construction, Urban Development and Housing Affairs of the Municipality of Prokuplje 'and JKP' Markets', while in the municipality of Merošina operates one basic utility company - JP Directorate for construction of Merošina⁶⁰

Economy and livelihoods issues - views from field survey

One of key concerns in terms of negative impact was that most of the traffic that presently passes through the city of Prokuplje, coming from Kosovo and going to Niš and further north creates an influx of "occasional by passers" - people on the road stopping for shops, supermarket stores etc. That will not be the case when the Niš-Merdare highway is built, and local economy will suffer a blow.

The key possible mitigation measure, as it was suggested in that and several other meetings by the local community would be to plan and build gas stations, utility centres (auto-mechanics shops, tire services), shops etc. on highway exits

⁶⁰ Sources: Report on Strategic Environmental Assessment of the spatial plan for the municipality of Merošina for 2024, Study of urban transformation of municipality of Prokuplje done by Natural - Mathematical Science Faculty, University of Niš, Development Study of city of Niš and Nišavski administrative district and Study of municipality of Prokuplje - Community Profile.

to the city of Prokuplje, and not along the route, thus following a German model of highway utility services.

During dissolution of the old communist economy system and the privatization that succeeded, most of the industry production companies in Prokuplje went to bankruptcy or liquidation. Industry companies like: Toplica (ferrous metal plant), 9. Oktobar i Univerzalopromet (glass production factories), Fiaz, Topličanka (textile industry) either completely stopped their operations, or continued production with significantly decreased capacity. As a result over the last two decades industry production suffered a significant decrease in municipality Prokuplje, and the same can be observed in municipality of Merošina.

Therefore, there are only several larger industry companies still operating: Hissar (after 2006. operates within a large company group "PIONIR", production of chocolate and confectionery products, fruit and vegetables processing and natural fruit juice production - employs 158); Milan Toplica (production of mineral water and non-alcoholic beverages, based on river Toplica in the village of Tulare), Prokupac (renowned production of alcoholic beverages, fruit brandy, 70 employees), two construction material production etc.

A single most important industry enterprise in Prokuplje is a company LEONI Wiring Systems Southeast d.o.o, founded in 2009 by foreign investment of a German mother company LEONI AG, a renowned global wiring systems and cable technology production. LEONI Wiring Systems Prokuplje employs 2000 workers, out of which 85% are from Prokuplje municipality, making LEONI a largest employer in the municipality of Prokuplje by far. Their influence on population and families' livelihood is major. If we compare 2000 employed by this company to other data in social baseline, we will notice that around 5% of all population or nearly 11% of all active Prokuplje population are employed by Leoni. The influence of LEONI d.o.o. seems to be even more significant to study municipalities, but also to the entire region, as LEONI has two more factories in the region - one in Niš and another in village of Malošište, municipality of Doljevac. LEONI d.o.o. is planning expansion of production capacities and employment of additional 500 people in 2017. Leoni, Prokuplje produces goods for known buyers in automotive and commercial vehicles industry and for the healthcare sector, communications and infrastructure, household and electrical appliances, wires and strand. All production of LEONI is exported to foreign purchasers provided by the mother company and transported by Niš-Belgrade Highway to Hungary, Croatia and further.

Industry - views from field survey

During focus group discussion with industry producer companies, some positive and potentially negative effects of Highway Niš-Merdare were pointed out: Company Hissar deems the Highway construction beneficial to their endeavour to expand to Kosovo and Albania markets. The company has established a small market base, exporting some minor quantities of production goods (one lorry per month), but they plan to invest and expand influence on these markets. The export is going by Merdare administrative crossing, so shorter travel time will be regarded as beneficial. Hissar production complex is remote to the Highway planned route, so they are not expecting any interference during construction. Influence on the freight traffic passing through Prokuplje is minor,

as they have an average of one to two lorries per week coming and going to the factory.

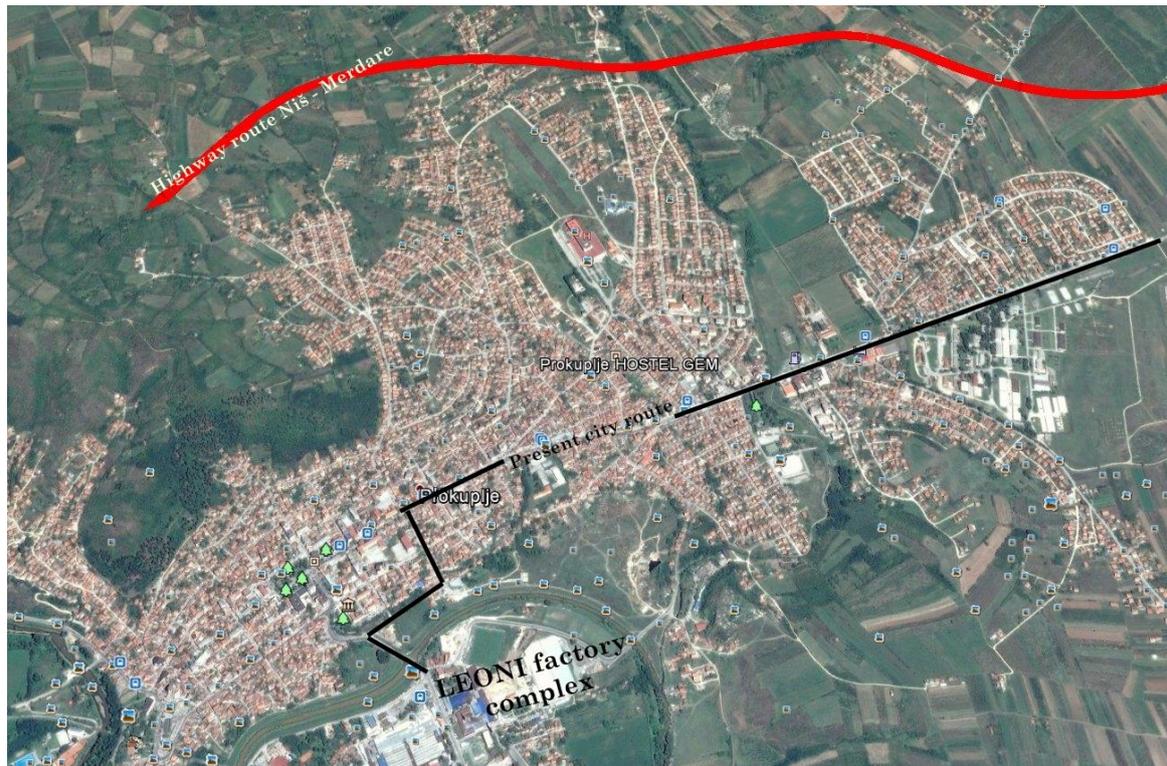
Mineral water production company Milan Toplica expressed concern as the village of Tulare, and their planned investment in new clear water springs and production, are close to the Highway route. Further, exact superposition will be management measures during construction should be implemented in the factory vicinity. See photos below.

Leoni d.o.o. enterprise has major influence explored and if needed, mitigation measures will be considered and special waste water on both passenger and freight traffic in the municipality. Several lorries and many passengers are accessing the factory on a daily basis, that are presently all passing through the city of Prokuplje. As the Leoni complex is far of the Highway route, in order to avoid that traffic route continues passing through the city centre after the construction of the Highway, bypass and easy access from the Leoni complex to the Highway should be planned if possible, see Photos below.

Figure 17 Milan Toplica water factory



Figure 18 Leoni complex position compared to the Highway route



6.3.1 Agriculture

Agriculture is the most important economic activity of the population in both observed municipalities. Prokuplje and Merošina produced various agricultural crops such as forage crops (alfalfa, etc.), wheat, corn and barley. Most farm households are also engaged in keeping livestock although these are mostly small herds - typically 2-3 cows per farm used for milk and meat production. But the main agriculture product of Prokuplje and Merošina is fruit growing. This region is known for its production of cherries, plums and above all well-known indigenous specie of "Oblačinska⁶¹ sour cherry". Only Prokuplje produces over 10,000 tons of Oblačinska and other varieties of sour cherry, in addition to another 7,000 tons of plums and 10000 tons of various other fruits (strawberries, raspberries, grapes, apples), which is why these municipalities are among the leading producers of fruit in Serbia. These municipalities belong to the part that is known as a "sour cherry region"⁶². More than 95% of all agricultural land in both municipalities is cultivated by agricultural households. Sometimes, households are joint in different forms of cooperation, but less than 5% are processed by any form of legal entities.

Considering production of sour cherries, Serbia is the seventh country in the world, ahead of all countries in Europe except Poland, with a production of about 90,000 tons per year, while the municipality of Prokuplje and Merošina are among the

⁶¹ Named after the lake and village Oblačina in Merošina municipality

⁶² Sources: Report on Strategic Environmental Assessment of the spatial plan for the municipality of Merošina for 2024, Study of urban transformation of municipality of Prokuplje done by Natural - Mathematical Science Faculty, University of Niš, Development Study of city of Niš and Nišavski administrative district and Study of municipality of Prokuplje - Community Profile.

leading municipalities in Serbia in terms of production of these fruit crops⁶³. Ninety percent of all produced sour cherries in Serbia are exported, so it is an important source of income for the local population.

Table 22 below shows an overall view of agricultural use of land in study municipalities compared to national level and districts. A quick look confirms an important percentage, considerably higher compared to national level, of used land in both municipalities for perennial crops, mostly for fruit production.

Table 22 Use of agricultural land⁶⁴

	Used agricultural land (in ha)	Perennial fruit crops (total in ha)	Perennial crops (%)
Serbia total	3,437,423	187,299	5.45%
Nišavski district	82,728	7,174	8.67%
Merošina	8,949	2,325	25.98%
Toplički district	51,552	10,248	19.88%
Prokuplje	17,789	4,741	26.65%

Agricultural production - views from field survey

During focus group discussions several grave concerns about Highway construction were expressed by the Associations of farmers and fruit growers of Prokuplje municipality summarized below:

- highest quality land is located on the planned route ; therefore in most cases it will be impossible to find replacement land of same quality and area in the municipality; also it will make a significant impact on agricultural potential of the municipality and region.
- they informed us that many agricultural parcels will be divided decreasing the value in terms of agricultural land, reversing the effects of land consolidation that was only partially effective in Prokuplje to begin with.
- Pollution through waste waters during construction phase, air pollution during construction phase, and most of all higher levels of air pollution and residue of heavy metals that could permanently reduce the quality, competitiveness even the acceptability of fruits on EU markets, mostly applicable to the indigenous breed of sour cherry "Oblačinska".
- air pollution influencing pollinating and honey bearing bees.
- Possible impact in terms of land acquisition of the cooperation "Đurovačka", 40 ha orchard with perennial plants of indigenous breed "Oblačinska", that produces around 6% of municipality yearly yield.

⁶³ USAID agrobusiness project, "Production of cherries and sour cherries in Serbia"

⁶⁴ Source - National statistical office of Serbia - <http://webzrzs.stat.gov.rs/WebSite/Default.aspx>, 2011
National census

Figure 19 Photo documentation from manifestation "Toplica days of sour cherry" held every year in Prokuplje



Oblačinska sour cherry is our autochthonous cultivar that was named after the small village Oblačina in south Serbia. Considering other sour cherry cultivars in producing orchards it is represented with the largest number of trees. MIŠIĆ cited that existing Oblačinska sour cherry population was developed by vegetative reproduction mainly by shoots. Possibility that the generative reproduction influenced to wide spreading of this cultivar should not be excluded. All of that influenced the fact that Oblačinska sour cherry represents heterogeneous sour cherry population, a mixture of a great number of clones (genotypes). General characteristic of Oblačinska sour cherry is low vigor, small canopy habit, self-fertility and high and regular yields. Fruit is small (around 3 g), rotundas, with uniformly size and ripening time. Skin is dark red and thin. Fruit flesh is red, medium firm, juicy, with lots of acids, aromatic, high quality and suitable for processing in numerous products. Stalk is easily separated from the fruit and pyramidal shape of scaffolds is giving Oblačinska sour cherry special possibility for the mechanical harvesting.



Agricultural production Merošina - views from field survey

Agricultural producers in Merošina emphasised the importance of keeping alternative roads to Niš and Prokuplje open during Highway construction phase. There are no cold storages for fruit in Merošina (despite the large production of sour cherry as the most important product), vegetables are being transported to Niš markets etc. The beekeepers expressed concern regarding atmospheric and noise pollutions, as the honey production established recently new trading routes to Germany, and beekeeping increased production in recent years.

6.3.2 Tourism

Tourism is relatively undeveloped in both observed municipalities, but we can observe some potential that resides in the unexploited natural and cultural resources.

Merošina municipality has a small number of domestic or foreign tourists staying overnight. The records are not kept properly, but in last few years there had been close to 1000⁶⁵ overnight stays yearly average, which is statistically negligible. Nevertheless, Merošina has two sites for daily trips that guests from Niš and Prokuplje visit often during weekends:

- Oblacina Lake - scouting and fishing competition are taking place during spring time. The water of the lake is clean. There is a motel with a restaurant and rooms for the overnight stay. Recently, sports facilities (basketball, tennis courts, small and large football, and tennis courts) were built and it is close to mountain Mali Jastrebac (distance from the seat of the municipality about 12 km) for the development of hiking, winter sports, camping and hunting wild game⁶⁶. During Labour day several thousand people visit Oblacina lake.
- Krajkovac Lake is an artificial reservoir created by building a dam on the river Krajkovica, left tributary of the South Morava. The lake is located on the western slopes of Mount Jastrebac, at about 2.5 km northwest of the village Krajkovac. The lake surface is about 1 km² and it provides nice natural scenery, but it is significantly less developed than Oblacina Lake.

⁶⁵ Most of smaller gusehouses and inns doesn't report all their guests, so no reliable records are available and it is probable that this number could be higher.

⁶⁶ Source: Official municipality Merošina site: <http://www.merosina.org.rs/cir/turizam>

Figure 20 Oblacina lake (left) and Krajkovac lake (right)



There is a significant and more diverse touristic potential that can be found in several historical sites, buildings and museums in the municipality of Prokuplje that is only partially exploited for touristic offer:

City hill "Hisar" as the most beautiful and the most important cultural-historical and tourist symbol of Prokuplje. The hill is located in the center of the city and there are a number of interesting content. On top of Hisar are the remains of the medieval city. But many problems are present on this site as unresolved property-legal relations, lack of investment, lack of adequate urban development plan.



Locality Beli Kamen is situated at an altitude of 1000 m and the highest peak Bandera is 1150 m. The largest astronomical observatory in the Balkans is built there and the Municipality owns a mountain lodge. Etno village has been built in recent years by a local investor significantly adding to Prokuplje touristic capacity and offer.



Pločnik is an archaeological site of Vinča culture, located in the village of Pločnik, off the coast of the river Toplice, near Prokuplje. The Pločnik complex is an archaeological settlement from the New Stone Age inhabited from 5500 to 4700 b.c., part of the Vinča culture that flourished from 5500 to 4000 b.c. in the territories of today's Bosnia, Serbia, Romania and Macedonia. Archaeological site Pločnik covers an area of 120 hectares, consisting from several parts, limited on three sides by the river streams. Pločnik site is located 25 km from city of Prokuplje and artefacts are in National Museum Toplice in Prokuplje.



Prokuplje hotel "Hameum" built during the sixties, used to be, and still is, the only larger accommodation facility in Prokuplje. It is located in the city centre and has its own parking. It has 12 single and 24 double rooms, restaurant with 120 seats, a cafe, banquet salon and a large patio which receives 140 guests. "Konak Kondželj" is a building built in recent years within the church; it has a restaurant with local specialties and lodging for 20 people. Skadarlija is a restaurant that can also accommodate 15 guests. Sport centre with tennis hall in its composition also has a room for rest and recreation for 8 people. The building 'Savićevac' located at the top of Hisar hill has a restaurant and a garden from which you can see the whole city and the possibility to accommodate 12 guests. Locality of Beli Kamen has a mentioned hotel and Ethno village owned by family Krivokuća.

Regardless of several monuments of cultural heritage and historic importance, tourism is not well developed in Prokuplje. Accommodation facilities are mostly neglected and tourist seldom stays overnight. There has been signs of improvement over the years (like the private investment in the Ethno village at Beli Kamen), but lack of further investment, bad touristic infrastructure at historic sites, lack of marketing, a failed privatization process of hotel facilities, bankruptcy, unresolved ownership issues etc. caused this economic sector to still linger .

6.4 Employment

6.4.1 Employment Laws and Regulations

The labour laws in Serbia are in line with international labour laws. The Serbian Constitution attributes a specific importance to the right to work for all citizens (article 60, 61). Right to work shall be guaranteed in accordance with the law and everyone shall have the right to choose his occupation freely. All work positions shall be available to everyone under equal conditions and everyone shall have the right of respect of his person at work, safe and healthy working conditions, necessary protection at work, limited working hours, daily and weekly interval for rest, paid annual holiday, fair remuneration for work done and legal protection in case of termination of working relations. Women, young and disabled persons shall be provided with special protection at work and special work conditions in accordance with the law. All employed shall have the right to strike in accordance with the law and "The collective agreement".

In Serbia, The Labour Law is the main legal source for all issues related to the relationship between employer and employee, employment rights, the protection of employees and other issues. This law was adopted in 2005 and amended since four times (2005, 2006, 2013 and 2014)⁶⁷. The collective agreement is a legal source that closely regulates the rights, obligations and responsibilities arising from the employment relationship and mutual relations between parties to a collective agreement. The general collective agreement is concluded between a representative association of employers and the representative trade union established for the territory of the Republic of Serbia. On the legal base of the

⁶⁷ The Labour Law ("Official gazette of Serbia", n. 24/2005, 61/2005, 54/2009, 32/2013 i 75/2014)

general collective agreement a Special collective agreement is signed for an economy sector, branch, group or subgroup between a representative association of employers and the representative trade union established a branch, group, subgroup, or industry. Stature of labour or Labour agreement is governing the rights, obligations and responsibilities arising from employment in cases when the employees within the employer has not established a union or no union does not meet the requirements of representativeness, or when no party to a collective agreement has taken the initiative to start negotiations in order to conclude a collective agreement or if the parties to a collective contract does not obtain approval to conclude a collective agreement within 60 days of the commencement of negotiations or if the union within 15 days of submission of the invitation to start negotiations for the conclusion of a collective agreement, does not accept the initiative of the employer. All collective agreements, Stature of labour and labour agreements must be in accordance with the Labour law.

Additionally, Serbia has ratified all ILO (International Labour Organization) conventions; the eight core *ILO conventions* are the followings:

- Forced Labour Convention, 1930 (No. 29)
- Freedom of Association and Protection of the Right to Organize, 1948 (No. 87)
- Right to Organize and Collective Bargaining Convention, 1949 (No. 98)
- Equal Remuneration Convention, 1951 (No. 100)
- Abolition of Forced Labour Convention, 1957 (No. 105)
- Discrimination (Employment and Occupation) Convention, 1958 (No. 111)
- Minimum Age Convention, 1973 (No. 138)
- Worst Forms of Child Labour Convention, 1999 (No. 182).

However, there are still some issues in Serbia with regard to implementation, including evidence that women are paid less, temporary employment, the practice of signing blank termination of employment in the same time as signing of the employment contract and unreported employment. Most unemployed persons, due to the economic crisis, are willing to balance between the rights in order to find employment. Despite the fact that Serbia has been highly graded in the report⁶⁸ (better than some countries that are part of EU - United Kingdom, Portugal, Poland and Greece, and better than countries known for their human rights evolution - United States of America) of "International Trade Union Confederation" as a country of significantly evolved labour rights, there are many issues that needs urgent attention and rectifying, mostly in a private sector i.e. it has been reported that around 20% of all employed persons in 2014 where informally employed⁶⁹.

⁶⁸ Source: ITUC Global rights index - http://www.ituc-csi.org/IMG/pdf/survey_ra_2014_eng_v2.pdf

⁶⁹ Source - National statistical office of Serbia - <http://webrzs.stat.gov.rs/WebSite/Default.aspx> - but this includes work in unregistered companies, work in registered enterprises, but without a formal employment contract and without social and pension insurance; as well as unpaid work contributing to working family members.

6.4.2 Unemployment

National level

There is 9.1% of unemployed (out of which 14.5% is of lower education, 64.5% are of secondary and 21% are of tertiary education) out of working age population (age 15+).⁷⁰

But, there is also a large number of "Inactive population", referred to as "all persons aged 15 and over who are not classified into employed and unemployed population. Inactive population covers students, retired persons, homemakers, as well as persons who did not perform any work in the reference week, did not seek actively work or were not available to start working within two weeks following the reference week."⁷¹ Including those groups the unemployment rate in Serbia increased in the first quarter of 2016 to 19%. Of the total population over 15 years of age 18.5 percent men and 19.6 percent women are unemployed⁷². The unemployment rate is highest in the Belgrade region.

It is worth mentioning that only 51% of the 74.9% of Roma population reached the working age is employed.⁷³ Number of unemployed women among Roma is four times higher than the number of unemployed men.⁷⁴

Unemployment in the study municipalities

Table 23 Employment/unemployment totals and rates at national level, district and municipality comparison⁷⁵

	Total population	Active population, total	% active population	Employed, total	% of employed	Unemployed, total	% of unemployed
Serbia							
Total	7186862	2971220	41.34%	2304628	32.07%	666592	9.28%
Male	3499176	1699664	48.57%	1333293	38.10%	366371	10.47%
Female	3687686	1271556	34.48%	971335	26.34%	300221	8.14%
Nišavski district							
Total	376319	157611	41.88%	107692	28.62%	49919	13.27%
Male	184966	87856	47.50%	61510	33.25%	26346	14.24%
Female	191353	69755	36.45%	46182	24.13%	23573	12.32%
Merošina							
Total	13968	4864	34.82%	3553	25.44%	1311	9.39%
Male	7174	3244	45.22%	2488	34.68%	756	10.54%
Female	6794	1620	23.84%	1065	15.68%	555	8.17%
Toplički district							
Total	91754	32014	34.89%	22039	24.02%	9975	10.87%
Male	46131	19342	41.93%	13659	29.61%	5683	12.32%
Female	45623	12672	27.78%	8380	18.37%	4292	9.41%

⁷⁰ National statistical office of Serbia - <http://webrzs.stat.gov.rs/WebSite/Default.aspx>

⁷¹ Source - National statistical office of Serbia - <http://webrzs.stat.gov.rs/WebSite/Default.aspx>

⁷² Ibid.

⁷³ Source: <http://documents.worldbank.org/curated/en/855151468102865205/Poverty-social-exclusion-and-ethnicity-in-Serbia-and-Montenegro-th-case-of-the-Roma> - (Bodewig & Sethi report from 2005)

⁷⁴ Source: <http://www.rs.undp.org/content/serbia/en/home/library/mdg.html> - MDG Monitoring Framework for Serbia (2006) Report

⁷⁵ Source - National statistical office of Serbia - <http://webrzs.stat.gov.rs/WebSite/Default.aspx>, national census 2011.

	Total population	Active population, total	% active population	Employed, total	% of employed	Unemployed, total	% of unemployed
Prokuplje							
Total	44419	16527	37.21%	11291	25.42%	5236	11.79%
Male	22056	9555	43.32%	6543	29.67%	3012	13.66%
Female	22363	6972	31.18%	4748	21.23%	2224	9.94%

In the Table 22 above we have shown a comparison of active total and rates of employed and unemployed population, additionally cut by gender. Marked in red are data that seem to more significantly deviate from national or district level average, vividly showing an issue that needs to be kept in mind when study municipality are concerned. So, the column "active population" shows a significant inactivity in the municipality of both female and male population - it has been previously shown that this is not due to larger percentage of children below working age, but rather due to larger percentage of older people living out of retirement pensions. The low rate difference of employed women in Merošina, but also in Prokuplje, is alarming. The overall unemployment rate of study municipalities is close to national level, being slightly higher in Prokuplje, but we have to bear in mind that this includes only active population group⁷⁶.

Unemployment, economic crisis and employment opportunities - views from field survey

During the focus group meetings in Prokuplje it has been stated that the actual number of unemployed person in Prokuplje is 7000, which is significantly higher than the official statistical data issued by National statistical office. The difference can be accounted on the fact that official statistic fail to count in part of Roma population, as explained earlier. Presumptions must be made that negative trends would be higher when Roma population is included in full (more inactive population, especially amongst women, less employed rate etc.).

6.4.3 Remittances and Social Assistance

Social assistance in Serbia is provided to various social groups of the population (e.g. old age, unemployment support, physical disability, poor families and survivors) for a number of reasons.

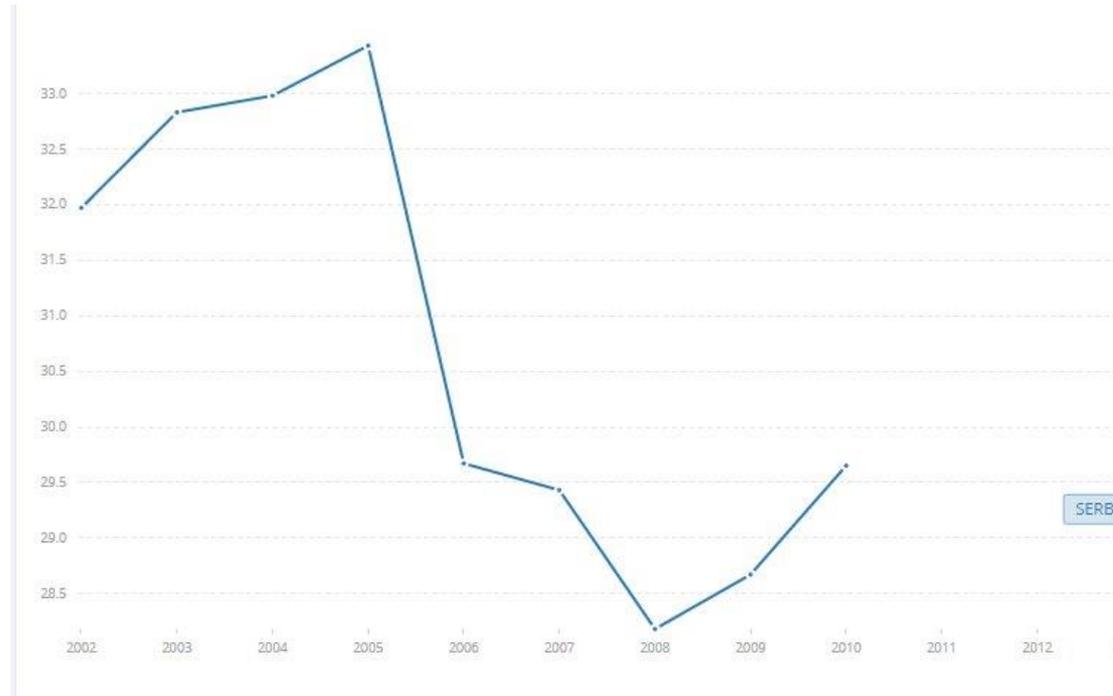
In Serbia 628,000 people live in absolute poverty, meaning there are 8.9 percent of people that cannot afford to feed according to nutritional standards defined for Serbia. The survey of income and living standards showed that in 2013 in Serbia at risk of poverty was 24.6 percent of the population, nearly 1.8 million people, the highest rate among all European countries in which applies this survey (EU Member States, Switzerland, Norway, Iceland and Serbia).⁷⁷

⁷⁶ Employed and unemployed statistical group are accounted only for active population - this is a National statistical office methodology rule.

⁷⁷ Source: The European Anti-Poverty Network - Serbia (EAPN) <http://www.eapn.eu/> " Household Budget Survey" last accessed 10/10/2016

By the relative Gini coefficient⁷⁸ estimate of the World Bank, the gap of inequalities seems to widen in last few years. It has been changing over the last decade more rapidly than usual for more stable economies (see Graph 9 below; i.e. 33% at 2005, 28% in 2008), but according to official estimation published by National statistical office, it reached 38.0% in 2015.⁷⁹

Figure 21 Gini coefficient changes in recent decade⁸⁰



In 2011, one out of every 10 citizen in Serbia had to use some sort of social assistance and help. One half of social help beneficiaries are adults (18-65 age) and one third are children (0-14 age).

Both study municipalities are belonging to the group of municipalities with lower average income. Out of 175 municipalities in Serbia, comparing average income of population, Prokuplje is ranked at 100rd place and Merošina at 107th place⁸¹. In Merošina, the 2014 average net salary amounted to 34.050 RSD, and 34.221 in Prokuplje, both below the average at national level, amounting to 44.530 RSD. The share of beneficiaries of financial social assistance was 5,3% in the total Merošina population in 2014, and 7,3% in total Prokuplje population, which was significantly higher than the rate of users of social assistance at the national level - 3,94%. Both municipalities are considered to be "less developed" municipalities in Serbia.

In Merošina 8.5% and in Prokuplje 9,6% of population have some sort of disability, both higher than the national average of 7,9% (9% women and 6,8% men). The reported disability rate of working age adults (15-65 years) is at 4.48% at national

⁷⁸ The Gini coefficient is a standard measure of income inequality, that ranges from 0 in the case of "perfect equality" (each person gets the same income) and 100 in the case of "perfect inequality" (all income goes to the share of the population with the highest income).

⁷⁹ Source: National statistical office - <http://webrzs.stat.gov.rs/WebSite/Default.aspx>

⁸⁰ Source: World Bank data bank: <http://data.worldbank.org/indicator/SI.POV.GINI?locations=RS>

⁸¹ Source: National statistical office, data for first quarter of 2016

level, higher for rural areas (10% of all population, 5.61% of working age population). In Merošina (which is all rural community) 4.13% of working age population have any sort of disability, which is significantly lower than the national level. Prokuplje, on the other hand, has a very high percentage of disability reported amongst working age population living in rural areas – 7.29%.

It should be noted that dependence on social help and disabilities are always higher with the Roma population, so as previously stressed (see: Roma population statistical error) the trends of people below poverty, in need of social help and suffering permanent disabilities can be even higher.

Poverty and social assistance in real terms - views from field survey

The Merošina "Red Cross" organizes a public kitchen in the municipality. Some meals are distributed to elderly users with inadequate vehicles to several villages, and every day 640 daily meals are given out, which means that around 5% of all population of Merošina receives a meal from public kitchen. According to the Red Cross representative, 65% to 70% of users are of Roma nationality. The distribution commences at 9 am and completes by 3pm.

7 Land Use and Ownership

7.1 Land ownership

Passed in 2006 (the constitution was approved in the constitutional referendum of 2006, held from the 28-29th of October. It was officially proclaimed by the National Assembly of Serbia on November 8, 2006), Constitution of RS proclaims an economic system of the Republic of Serbia that is based on market economy, open and free market, freedom of entrepreneurship, independence of business entities and equality of private and other types of ownership.

Article 58 generally acknowledges guarantees of peaceful tenure of a person's own property and other property rights acquired by law. It states that right of property may be revoked or restricted only in public interest established by law and with compensation which cannot be less than market value. In article 86 the Constitution defines types of property - private, cooperative and public to be guaranteed and equal legal protection. Article 88 proclaims private ownership rights on agricultural, forest and construction land.

The Law on foundations of property law relations ("Official Gazette of the SFRY", No. 6/80, 36/90,"Official Gazette of the FRY", No. 29/96 and "Official Gazette of the RS", No.115/2005) stipulates fundamental provisions of property relations, including ownership rights substance, subjects of ownership rights, co-ownership and joint ownership rights, acquiring the right of ownership, right on yields emanating from owned thing, possession rights, ownership acquired by adverse possession, ownership relations deriving in situations when structures was built on someone else's land, protection of ownership rights, protection of possession, cessation of ownership rights, etc.

Land can be under three types of ownership: private, public - state, or cooperative ownership:

- private ownership on agricultural land existed even during socialist polity, but only for smaller family owned quantities of land. Today, it is guaranteed to all real or legal entities; privatization of construction land is on-going, but most of the construction land is still owned by the state, with recognized right of use to legal owners of building on the land, in essence similar to ownership rights;
- public ownership is now defined as state owned land. It went through privatization process, but some large chunks of agricultural land and most of construction land is still owned by the state. State owned agricultural land is usually leased for cultivation on public tender;
- cooperative land - "zadruga" - was first established in Serbia during the XIX century, and it prevailed in a different forms during the socialist polity. It has been recently reinstated as a appealing form of cooperation amongst smaller agricultural producers. Zadruga is a voluntary, open, independent legal entity managed by its members. With combined work and other activities or use of its services, on the basis of unity and mutual help, members realize their individual and collective interests and achieve the goals for which the cooperative was founded. Small agricultural producers often cannot compete

in the market and be successful. Therefore, more and more of them join together in a *zadruga* in order to afford modern agricultural measures, machinery, better prices of materials etc.

7.2 Land use in Merošina and Prokuplje

Serbia is located on a total area of 8,840,000 hectares. Agricultural land covers 5,734,000 hectares (0.56 ha per capita), of which 4,867,000 hectares of this surface area is arable land (0.46 ha per capita). About 70 percent of Serbia's territory is agricultural land, while 30 percent is covered by forests⁸². The total area of utilized agricultural land on the territory of the Republic of Serbia amounts to 3,355,859 ha (37% of total area). Average family farm uses 4.5 ha of agricultural land, has one two-axle tractor and grown: one head of cattle, four pigs, three sheep, 26 cattle throat and one bee colony. However, most of them are farms that use less than 2 ha of agricultural land⁸³. In the total agricultural area in 2011, fields and gardens account for 64.6%, orchards 4.7%, vineyards from 1.1% meadows and 12.2% pastures 16.6%. In the structure of sown arable land and garden cereals accounted for 58.0%, industrial crops with 13.0%, vegetable crops with 8.3%, forage crops 13.8%.

There has been an on-going trend in Serbia of transforming agricultural to construction land for building industrial, logistic, commercial or similar complex, mostly closer to large urban settlements like Belgrade, Novi Sad and Niš, but also some smaller cities.

The municipality of Prokuplje covers an area of 75,896 ha. Agricultural land occupies 45,083 ha, or 60%, forest 26,895 ha or 35% and arid land 3,918 ha or 5% of surface area. Construction land covers around 15% of municipality area. Used arable land amounts to 81.6% of all agricultural land which is considerably higher than the average on the national level. The arable land area is divided into 210,000 plots, which means that 1 ha of arable land is divided into 4.3 parcels. Such fragmented landholdings endanger the exploitation of the land and its environmental protection⁸⁴. The used agricultural land area is 98% privately owned, while the rest is owned by the state, unlike forest lands that are usually state owned. Private properties are managed by 16,585 agricultural households, so one household uses about 2.8 ha of land, which is significantly below the national level average, but consistent to the regional (largest agricultural land masses are in Vojvodina, Šumadija and around Belgrade which significantly influences the national average). Land at its quality value ranges from the first to the eighth class. On cultivated land areas 89% amounts to farming crops (cereal cultures), only 4.6% on vegetable farming, 9% to orchards (two times more than national level average) and 2% for vineyards. Pastures occupy 24,8% of total agricultural land.

The municipality of Merošina covers a total area of 19,325 hectares, out of which 13,841 ha or 71,6% is considered to be arable land, forests cover 3,310 ha or

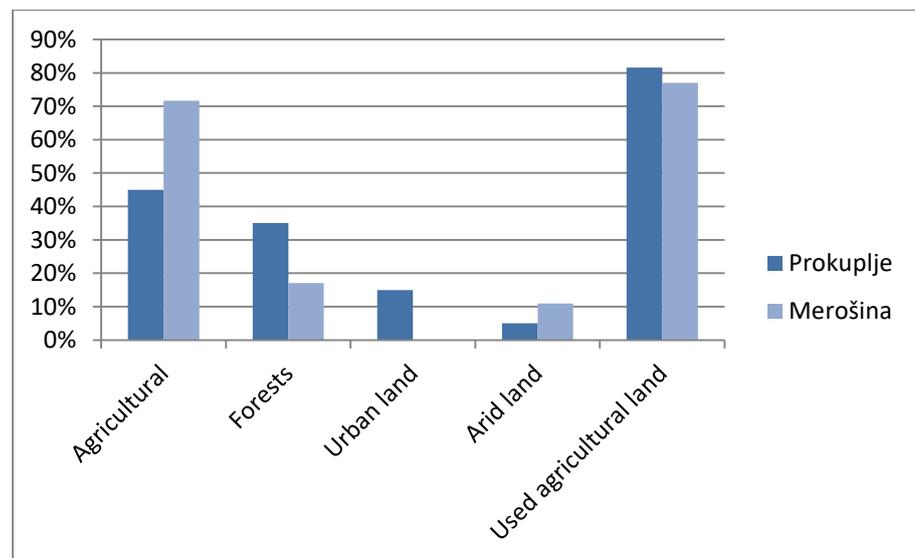
⁸² Source: web site of the Government of Serbia: <http://www.arhiva.srbija.gov.rs/cms/view.php?id=1024>

⁸³ Source: Statistical yearbook for 2012 published by National Statistical office

⁸⁴ Source: Regional spatial plan for Nišavski, Toplički and Pirotski district, 2011.

17,1%, construction land covers 2,059 ha or 10.7%. The agricultural land on the territory of Merošina municipality occupies 14,700 ha out of which 10,800 ha is being cultivated, or around 71%. Farming crops occupy 7,079 ha or 65,5%, vegetable cultures occupy 1,318 ha or 12.2% (i.e. beans, potatoes), and under forage crops (clover and alfalfa) occupies additional 1,251 ha or 11,5% of arable land. Orchards occupy 1.469 ha or 13,6% and the most important fruit crop is certainly the "Oblačinska" sour cherry. Vineyards occupy 445 ha or 4,1% and are mainly located in warm and semi hot exposures which favours production of high quality grapes. The share of meadows and pastures in relation to the total agricultural area is 1,904 ha or 12,9% of agricultural land. Pasture parcels are fragmented and scattered throughout the territory. The biggest meadow and pasture complexes are spread over the higher parts of the cadastral municipalities that stretch along the slopes of the mountain Mali Jastrebac and along alluvial plains of river. Agricultural land is 99% privately owned, cultivated by 3441 agricultural households and only 6 companies, which means that an average household cultivates 2,6 ha of land.

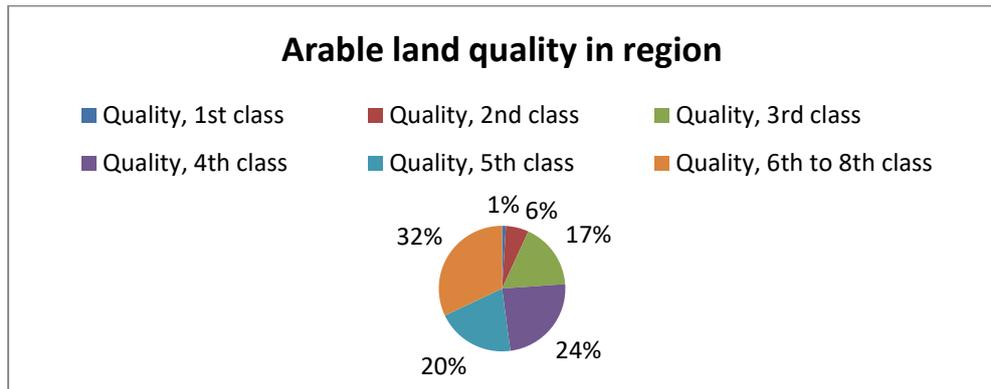
Figure 22 Land usage in study municipalities



By arable land quality in the region, areas of land under the first class⁸⁵ covers only about 1% of land, second class 5.8%, the third class of 17%, 24% fourth class, fifth class 20%, and from the sixth to the eighth class 32%. Agricultural producers considers land of third class and below "lower quality land", suitable only for certain kind of cultures, breeds and reaching only limited productivity.

⁸⁵ The quality and type of agricultural land is determined by the Ministry of agriculture and environment under the provisions of the Law of agricultural land "Official gazette of RS", nr. 62/2006, 65/2008, 41/2009 and 112/2015

Figure 23 Quality of land



Land use - views from field survey

Fruit and vine production has increased during last several years in both municipalities, as awareness of production possibilities of autochthonous breeds became more apparent to agricultural producers. Still, only around 12% of cultivated land is under orchards. This was partially justified by the slower capital turnover rate since investment in perennial breeds are larger, hence not all producers are ready to embark on such arduous production.

7.3 Minimization of impact to agricultural land

The alignment of the project and the technical solutions were selected among several options examined during the General Design and the Preliminary Design.

The evaluation of alternative solutions and the selection of the preferred one was performed using Multi-Criteria Analysis (Annex 5 of the EIA). The MCA included the following criteria:

- Engineering requirements expressed through construction and maintenance costs,
- Exploitation costs,
- Safety of traffic,
- Spatial consequences,
- Environmental and social consequences

In particular impact to the Social Environment in the analysis focused to expropriation of agricultural land and physical resettlement, amongst other criteria were part of the analysis contributing with 15% in the overall weighting.

A total of 18 alternative solutions were explored and based on the most feasible combination of criteria and the Alternative Na2 was finally selected. Impact to agricultural land varied in the alternatives. For a detailed overview of impacts and weighting of each alternative please refer to Chapter 2.6 Design Alternatives of the EIA.

The overall impact from acquisition of arable agricultural land translated into the entire land holding of the impacted municipalities translates into impact of less than 3% of the total area of agricultural land in Merošina and less than 1% of the total area of agricultural land in Prokuplje respectively.

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78 Preliminary Design and Feasibility Study with ESIA for construction of Highway E-80 (SEETO Route 7) in Serbia
Environmental and Social Impact Assessment Study -SIA

8 Infrastructure and Public Services

8.1 Transport Infrastructure

8.1.1 National Road Network

With the road network of 44.248 km Serbia has one of the smallest road networks in Europe, out of which 36% is still unpaved roads and 53% of roads are considered to be in poor or very poor condition, but it has one of the longest road network in the region, including Slovenia, Croatia, Bosnia, Bulgaria etc. Serbia is ranked 83rd out of 134 countries for the overall quality of infrastructure, with only FYR of Macedonia (8th), Bosnia and Herzegovina (107th) and Albania (108th) performing worst for South East European countries⁸⁶. In recent years a number of new important roads are being constructed.

Public roads are divided into several categories:

- State road ways I class⁸⁷:
 - › A class (motorways) - 669km
 - › B class - 4109km
- State road ways II class:
 - › A class - 7057km
 - › B class - 3183km
- Municipality roads - 23230km⁸⁸
- Unclassified roads

State roads class I are considered to be roads that are either connecting state area to the road network of other European countries, or to neighbouring countries, or roads that are connecting larger cities and economic centres. State roads class II are considered to be roads that are connecting areas of two or several administrative district areas, or area within districts. Municipality roads are connecting areas within municipalities, or areas of municipality to state roads network⁸⁹. Unclassified roads are major roads within settlements, which are available to multiple users and designated as such by the decision of the competent authority⁹⁰.

Public company "Roads of Serbia" is responsible for managing national road network and perform tasks related to the maintenance, protection, exploitation and development of state roads of the first and second order in the Republic of Serbia.

⁸⁶ World Economic Forum (2008), The Global Competitiveness Report 2008-2009.

⁸⁷ Decree on state road classification (Official Gazette of RS, 105/2013, 119/2013 and 93/2015)

⁸⁸ Source: Road network of RS - <http://www.putevi-srbije.rs> - last accessed on 18/01/2017

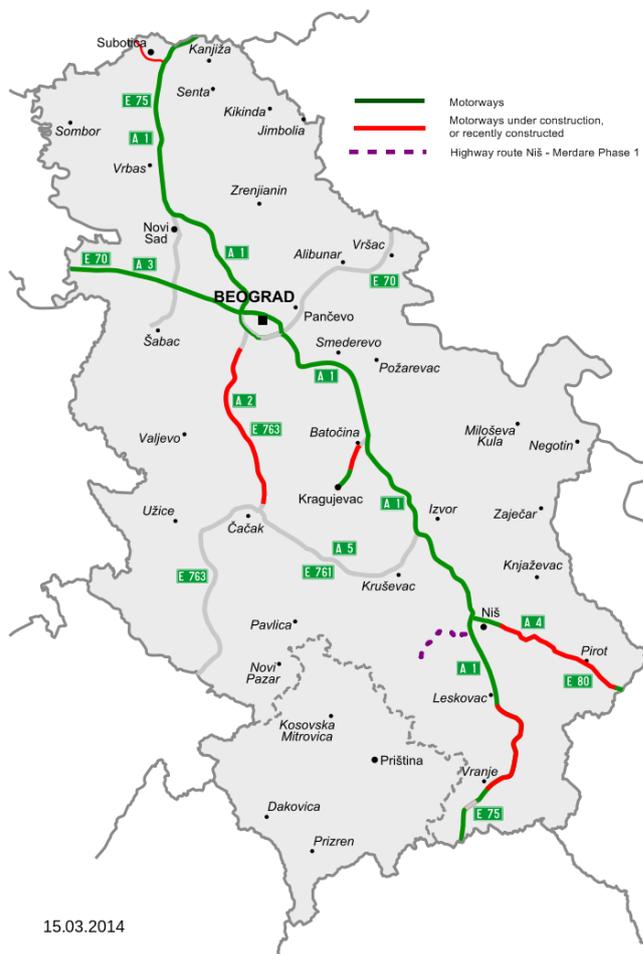
⁸⁹ Source: Law on Public Roads, article 5 (Official Gazette of RS, 101/2005, 123/07, 101/11, 93/12, 104/13)

⁹⁰ Source: Law on Public Roads, article 2 (Official Gazette of RS, 101/2005, 123/07, 101/11, 93/12, 104/13)

A network of state roads under the jurisdiction of the PERS, is defined in accordance with:

- Law on Public Roads (Official Gazette of RS, 101/2005, 123/07 , 101/11 , 93/12 , 104/13)
- Law on Ratification of the European Agreement on Main International Traffic Arteries (Official Gazette, 5/80)
- Decree on state road classification (Official Gazette of RS, 105/2013, 119/2013 and 93/2015)
- Decision on determining the main roads (Official Gazette, 39/1984, 4/1987)
- Regulation on the criteria for classification of state roads (Official Gazette of RS, 37/2009).

Figure 24 Motorway network in Serbia



Road traffic in Serbia has been increasing annually at a rate of between five and seven percent since 2000, with higher growth in and around the main urban areas. This trend is expected to continue, exacerbating problems of congestion in and around the main urban areas and road safety more generally. One study predicted that it would increase by 2.5 times by 2025⁹¹.

⁹¹ Source: CES Cowi

Table 24 Relevant countries road network per area, comparison with Serbia⁹²

Country	Length of road network (in km)	Country area (sq.km)	Road network road per square km (km/sq.km)
United States	5486610	9833517	0.56
France	1028446	643801	1.60
Germany	644480	357168	1.80
Hungary	206633	93030	2.22
Austria	124508	83879	1.48
Romania	86472	238391	0.36
Serbia	44248	77474	0.57
Slovenia	43670	20273	2.15
Bulgaria	40000	110994	0.36
Croatia	29410	56594	0.52
Bosnia and Herzegovina	23897	51197	0.47
Albania	18000	28748	0.63
Macedonia	14742	25713	0.57
Montenegro	7763	13812	0.56

Figure 25 Road network per area comparison⁹³

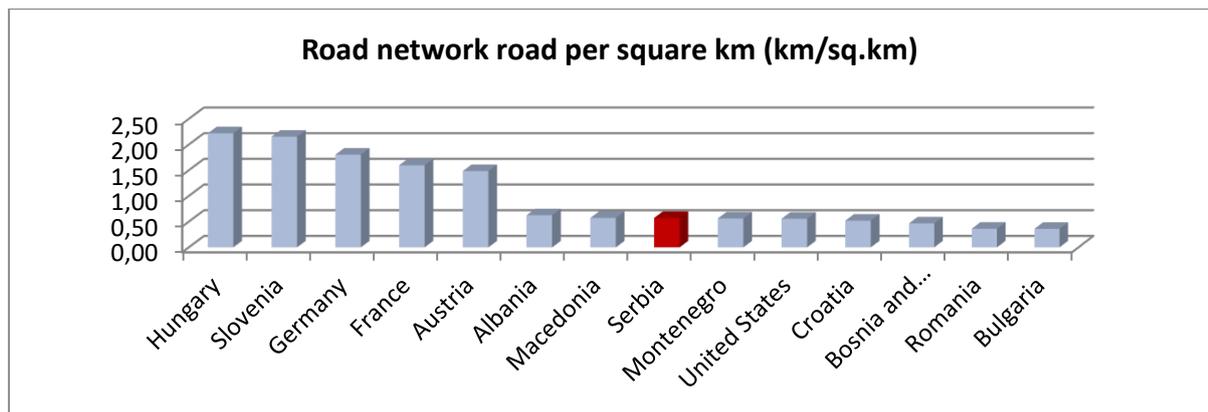


Table 24 and Graph 25 above shows a fair development of the Serbian road network. The road length/are ratio that presents a good comparison of evolvement of road networks of a certain area. It is well below highly developed European countries like France, Austria or Germany, and below countries with high density of road network like Hungary (partially due to favourable ground alleviation) or Slovenia (due to smaller area of highly developed country), it is similar to ratio in the countries in the region and US (as the country that has the longest road network in the world), and also higher than countries like Bulgaria and Romania which are part of the EU. Yet, we have to bear in mind that a significant part of these roads are in poor shape (damaged asphalt, potholes, unpaved roads with gravel or dirt), which can be said for some other countries in the region too.

Serbia has been investing significant amounts (for Serbia) in reconstruction and development of its road network. During five year period (2009 to 2013) Serbia invested around 1300 million EUR, which is an amount significantly lower than

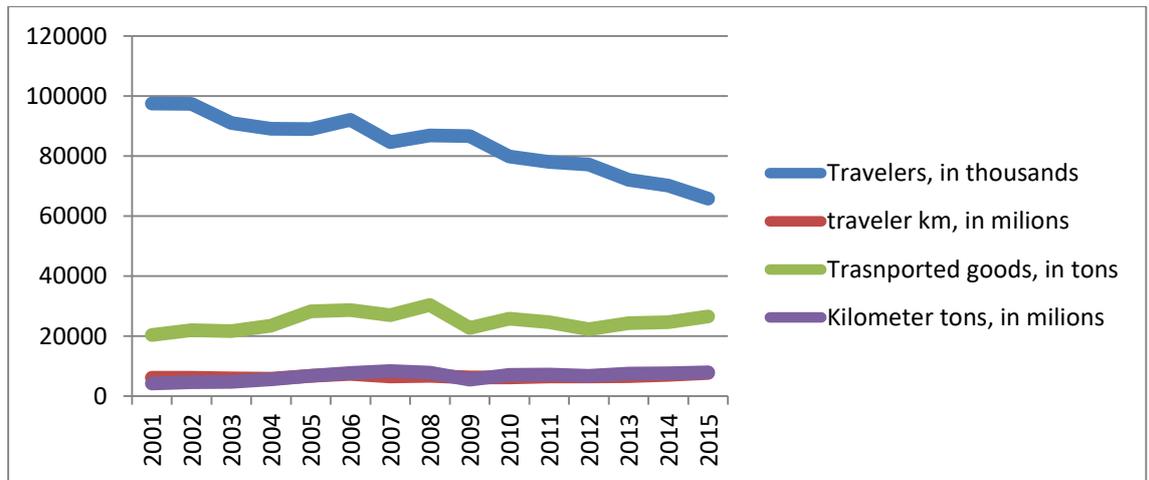
⁹² Ibid.

⁹³ Ibid.

most of the countries in the EU, but even five times higher investment made than some countries in the region like FYR Macedonia, Montenegro or Albania, and even two times more than Bulgaria which is a member of EU too.

Toll charges in Serbia are applied only for motorways. In Serbia is charged passage highway sections through charges levied at toll gates. Tolls are charged for motorcycles, passenger cars, buses and trucks, by a different rate. It is a closed system payment, meaning that at the beginning of the section printed ticket are distributed with the place, date of entry and vehicle category. Based on this certificate toll will be charged at leaving the toll section.

Figure 26 Historical view of passengers and good transportation in Serbia⁹⁴



There were 238 registered road motor vehicles per every 1000 inhabitants⁹⁵ in Serbia, which places Serbia on the 63rd place in the world, lower of the average of 534 in OECD countries, also below regional countries like Croatia (380), Montenegro (309), but higher than Bosnia and Herzegovina (214) and Albania (124). There are approximately 1.8 million registered road vehicles in Serbia, with private cars representing about eighty three percent of the total. The total fleet has been increasing by an average annual rate of just over four percent since 1999 although actual growth is likely to be much higher in and around the main urban areas where incomes have been growing faster⁹⁶.

Road safety is an important issue in Serbia, as anywhere else. Serbia had 10,3 road fatalities recorded per every 100.000 inhabitant in 2013, which is lower than the world average of 17,1, but higher than the European average (9,3). Compared to countries in the region, Serbia had lower rate of fatalities than Montenegro (11.9), Bosnia and Herzegovina (17,7) and Albania (15,1), but higher than Croatia (9,2), Macedonia (9,4) and Bulgaria (8,3)⁹⁷. The trend, shown in the left side Graph below illustrates that road fatalities in Serbia per capita are decreasing as there were 13 deaths per 100.000 inhabitants in 2004. Pedestrians are killed in 27% of

⁹⁴ Source: National statistical office - <http://webrzs.stat.gov.rs/WebSite/Default.aspx>

⁹⁵ Ibid.

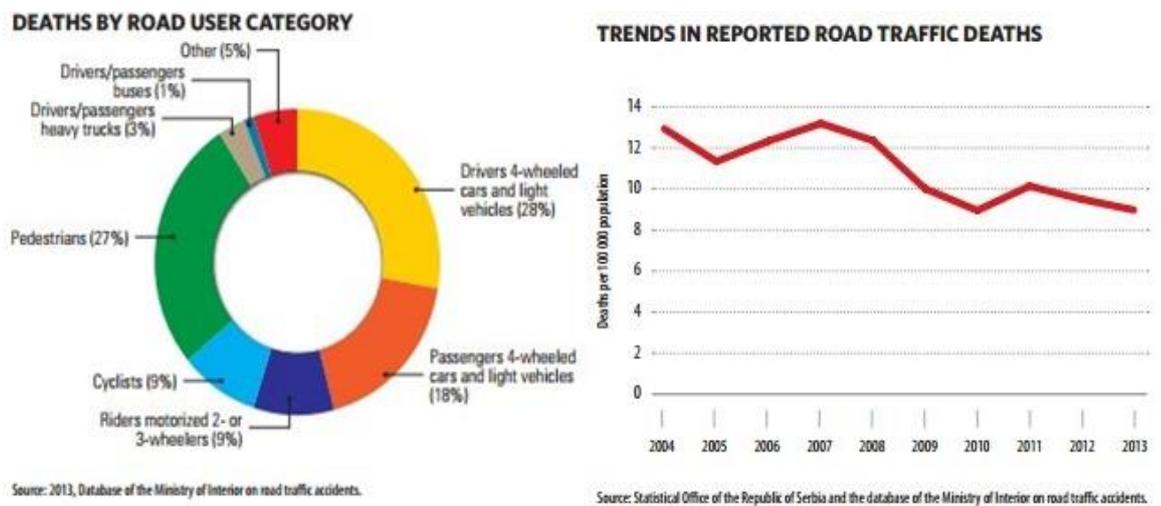
⁹⁶ Ibid.

⁹⁷ Global report on road safety 2015, by WHO, http://www.who.int/violence_injury_prevention/road_safety_status/2015/en last visited 18/01/2017

times, drivers of four-wheeled or light vehicles 28% of times, and passengers of four-wheeled or light vehicles in 18% cases. The number of cyclist killed on the roads in 2013 is at 9% of all road fatalities, which seems high as bicycle is not an usual form of transportation in Serbia, and proves bad road infrastructure and safety available for cyclists.

The maximum speed in urban areas in Serbia is 50km/h, on local non-urban roads maximum speed is 80km/h, and on motorway there is a speed limit of 130km/h. There is a national drink driving law, motorcycle helmet law, national seat belt law, national child restraint law and on use of mobile phones while driving prohibiting hand held mobile phone use.

Figure 27 Traffic safety information, road fatalities trends



The Table 25 below shows the current travel distance, costs and time for two main directions from Prokuplje and Merošina that will be significantly influenced by the construction and operation of the Highway Niš-Merdare. The direction to Niš is a key direction for traveling out of Merošina and Prokuplje to any destination in Serbia. Those directions also represent two key roads by travel density for these municipalities. Regarding travel costs concern see views from field survey.

Table 25 Key travel destination from Merošina and Prokuplje

	Travel distance	km/main road	Travel time	Cost toll (EUR)	Cost gas (EUR)
Merošina-adm.crossing Merdare	80km	E-80	01h43	0	8.3
Prokuplje-adm.crossing Merdare	66km	E-80	01h26	0	6.94
Merošina-Niš	16km	E-80	00h29	0	2.19
Prokuplje-Niš	29km	E-80	00h46	0	3.48

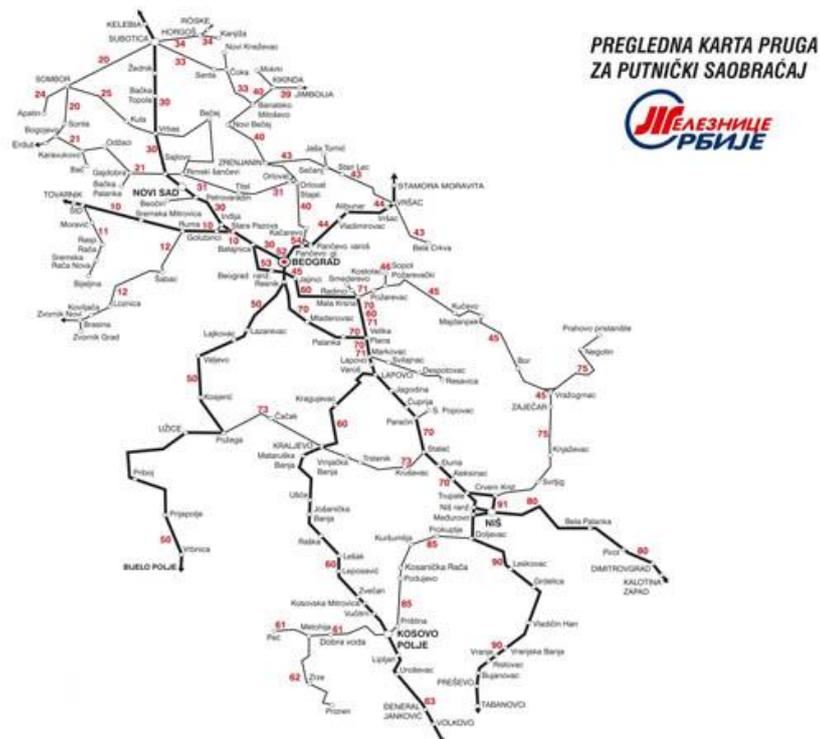
8.1.2 National Railway Network

The total length of the railway network in Serbia is 3,808 km (2015), of which 1,275 km are electrified (2015) and only 285 km are double track rails⁹⁸. This refers to the standard wide railways. In addition, there is narrow-gauge railway, which is now out of use, or they are used for special purposes (tourist railways like "Šargan Eight"). There are a small percentage of lines with two tracks.

The testimony about the state in which the railway network in Serbia is best understood when having in mind the fact that there are over 300 km of railways which railway workers call "light rides", where traveling at speeds of 20 to 50 kilometers per hour is necessary due to tracks damaged by age, groundwater or obsolete equipment that does not guarantee a minimum of safety. Not rare are the cases when railroad inspectors closed rails for to traffic, such as, for example, the railway between Kraljevo and Krusevac⁹⁹. The average speed of the Serbian train is 60km/h, there are no High speed trains or railways.

Serbian Railways (Serbian: Železnice Srbije) is the national railway company of Serbia. Serbian Railways is a member of the International Union of Railways (UIC).

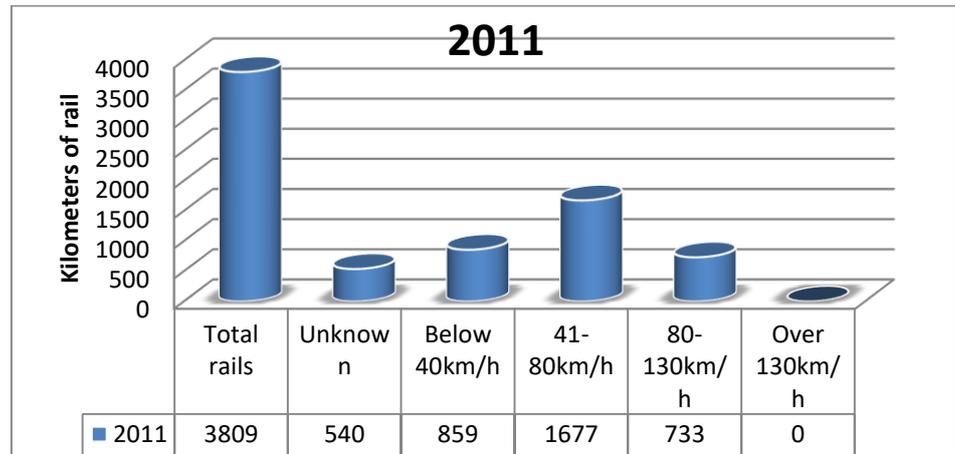
Figure 28 Serbian railway network



⁹⁸ Source: International Union of Railways (UIC) statistics report for 2015.

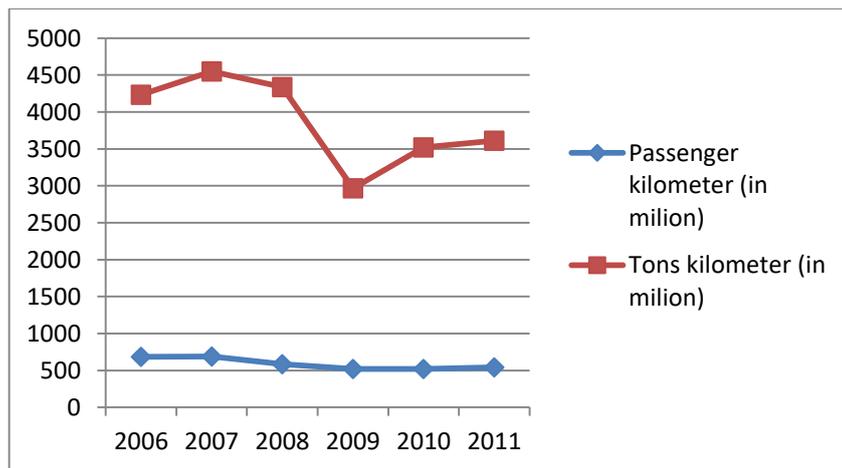
⁹⁹ Source: Politika - <http://www.politika.rs/scc/clanak/52158/Kolosek-varljivih-obecanja>

Figure 29 Allowed speed on Serbian railways¹⁰⁰



Due to its speed and common delays of several hours, the trains are not a favourite transportation mode in Serbia, neither for passengers or for goods. Number of passenger kilometres is at constant decrease, similar to freight transport shown in tons kilometre as Graph 15 below can show.

Figure 30 Passenger kilometres trend¹⁰¹



This negative trend continued, so only 307 million passenger kilometres were recorded in 2015 (decrease of 50% from 2014) and only 1666 million tons kilometres of freight (decrease of 35% from 2014). Nevertheless, it is significantly more passenger and freight transport by trains than any ex-Yugoslavia country, but five times less passenger and three times less freight than Bulgaria¹⁰².

The "Avala inter-city passenger train" covers destinations like Venice, Munich, Vienna, Budapest and Moscow and they all pass through "Mala Krsna" which is the second biggest railroad knot in Serbia (after Belgrade). There is a railway line connection to all neighbouring countries. Belgrade-Bar (Montenegro) is a very known and used railway line in Serbia¹⁰³. It passes into Bosnia and Herzegovina at the Štrpci station. It is an important railway as it possesses a large share in

¹⁰⁰ Source: National statistical office - <http://webrzs.stat.gov.rs/WebSite/Default.aspx>

¹⁰¹ Ibid.

¹⁰² Source: International Union of Railways (UIC) statistics report for 2015.

¹⁰³ Source: <http://www.zeleznicesrbije.com/>

passenger travel between Belgrade and Podgorica which is heavily competed by air, bus, and automobile travel. It is heavily used during the summer season for transportation to Montenegrin sea shore. The line is also operated by Railways of Montenegro. As of 2011, the tracks on the Belgrade-Bar line are said to be alarmingly neglected as some sections of the track are so deteriorated that they prevent passing trains from traveling faster than 25 kilometres per hour. As of March 2012 the duration of the Belgrade-Bar trip is slightly over 11 hours. The line is famous for passing the Mala Rijeka Viaduct, which is one of the tallest railway bridges in the world; it stands 200 meters above the Mala Rijeka¹⁰⁴. The Balkans Express line is a railway line that operates from Belgrade, Serbia, to Istanbul in Turkey¹⁰⁵. It goes through Bulgaria and serves several cities like Sofia and Plovdiv in between before crossing the Turkish border. The line is operated by Serbian Railways, Turkish State Railways, and Bulgarian State Railways. ICS – Inter-City Serbia is a local service network that offers domestic connections from Belgrade to Novi Sad, Subotica and Prijepolje stopping in each line to all the important local stations¹⁰⁶.

Recently, a new billion EUR investment has been announced by Serbian Railways public company into new high-speed railway line Belgrade-Budapest. The project is under development¹⁰⁷.

8.1.3 Airport facility, regional impact

In Serbia there are 39 officially registered airports, but only 5 of them on the list of airports with IATA code. The second largest airport in Serbia is placed at Niš. It is located only 21 kilometres away from Merošina centre, and 35 km away from Prokuplje, and this vicinity can be considered a major asset for both municipalities in regards of transportation possibilities and foreign investment opportunities. “Konstantin Veliki” Airport (IATA: INI, ICAO: LYNI) serves the southeast Serbia and is located 4 km from the city of Nis. It is the second largest airport in Serbia by the number of received passengers a year. The airport Konstantin Veliki is considered to be a smaller airport by capacity of three aircrafts per hour. After the reconstruction in 2003 and 2004 financed by the Norwegian Royal Government, the projected capacity of this airport is up to 120.000 passengers per year, but since then there has been an average of 20.000 passengers per year, and an average of 400.000 kg freight. The yearly trend is not showing increase.

Besides seasonal charters, two major low-cost companies are keeping regular lines from Konstantin Veliki airport: Whiz Air with lines to Eindhoven, Basel, Dortmund, Malmo and Memmingen; and Ryan air to Bergamo, Berlin and Bratislava. There has been an announcement of two more companies starting their lines in 2017 from Niš - Swiss International Airlines to and Germania Flug to Zurich (the reason for this is a considerable number of passengers known to be travelling

¹⁰⁴ Source: <http://www.serbiaconstruction.com/projects/the-mala-rijeka-bridge/>

¹⁰⁵ Source: <http://www.zeleznicesrbije.com/>

¹⁰⁶ Ibid.

¹⁰⁷ <http://gbtimes.com/world/budapest-belgrade-railway-agreed>

from Kosovo to Switzerland, and construction of Highway Niš-Merdare will improve their access to this airport).

8.1.4 Local Transport Infrastructure

Local road transport in Merošina and Prokuplje

At Prokuplje, the road marked as IB-35, or by old categorization M-25 ("magistralni" road - on some maps this road can still be marked M-25), is categorized as state road class IB¹⁰⁸ and it is the most important road to Prokuplje population. The state road IB-35 passes 6 km through the city and in length of 26 km through 8 settlements in the municipality of Prokuplje. It connects: state border with Romania (border crossing Djerdap) - Kladovo - Negotin - Zaječar - Knjaževac - Svrlijig - Niš (connecting to Niš traffic intersection: A1 (E-75), A4(E-80)) - Merošina - Prokuplje - Kuršumlija - Podujevo and administrative crossing Merdare¹⁰⁹. With other adjunct roads it represents the main road traffic artery that connects the municipality of Prokuplje to other parts of Serbia. Several studies, documents adopted by municipality assembly and planning documents their analysis base on a fact that that state road Niš-Merdare that is passing through the Prokuplje town centre should be relocated by building a north bypass.

Other main state roads connecting Prokuplje are:

- State road IA-38 (Kruševac - Razbojna - Blace - Beloljin). It extends over a distance of only 2.8 km (from the border with the municipality of Blace to the IB-35 near the village of Beloljin) and through it there is the shortest connection between the municipalities Prokuplje and Kruševac, and the tourist ski-resort of mountain Kopaonik. The road is completely covered with modern surfacing, the average width of the roadway is 6,9m and it is in good condition.
- State road IIA-216: connection to state road IIA-215 (road to Kruševac) - Kaonik - Ribare - Vukanja - Prokuplje - Žitorađa - Doljevac - connection to state road A1 (leading to border crossing to Macedonia);
- State road IIA-226: Prokuplje - Bojnik - Leskovac
- State road IIB-415: Veliki Jastrebac (mountain resort) - Mala Plana - Prokuplje
- State road IIB-418: Prokuplje - Stara Božurnja - Orljane - Malošište (connection to state road IIA-158).¹¹⁰

The IB-35 state road accounts for 8.9% of the total length of road network, it is paved, but with steep inclines and sharp cornering. The pavement condition on the road is at 70% unsatisfactory¹¹¹. The highway passes through the urban area, and the municipality has completed the work on the main street that is connected to IB-35 and turned it into a pedestrian zone, which additionally adds to traffic density.

¹⁰⁸ Decree on state road classification (Official Gazette of RS, 105/2013, 119/2013 and 93/2015)

¹⁰⁹ Ibid.

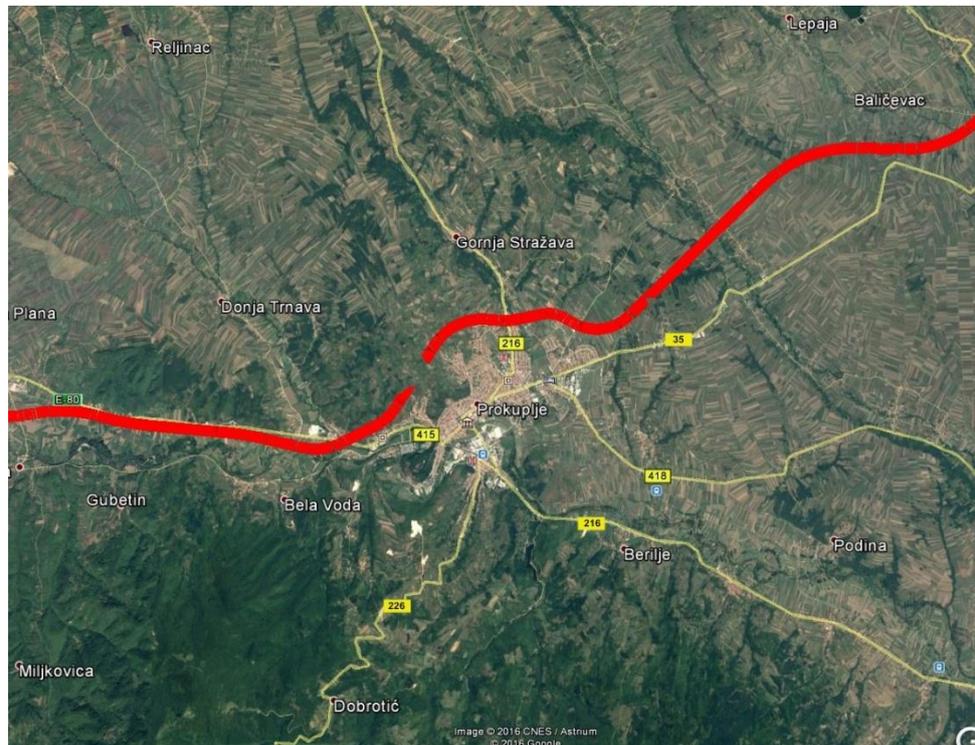
¹¹⁰ Ibid.

¹¹¹ Municipality of Prokuplje Master plan

Other state roads accounts for 29% of the total road network in Prokuplje and are asphalted in 96.5% rate, the rest 3.5% is with macadam pavement. Road conditions are poor or very poor at 52% and the remaining 48% is satisfactory¹¹².

Local or municipality roads, in total length of 226 km, make up 62.6% of the total length of the road network in the municipality and they are paved in 41.1% of the total length, with macadam pavement to 57.1% of the length and dirt of 1.8% of total length. This network is also characterized by very low average of roadway width (4,0m) which makes an additional disadvantage in traffic flow. Horizontal and vertical signalling generally do not exist. According to the information and views relevant municipal services for more than half of municipal roads highlighted the need for reconstruction in the future¹¹³. Local roads connects different villages inside the municipality and have major importance for accessing health centres and primary schools of the inhabitants of smaller villages as will be shown in appropriate part of this SIA.

Figure 31 Road map of Prokuplje, - Main state road network and in red the corridor of the planned Highway Niš-Pločnik



At Merošina too, the key road passing through Merošina is road marked as IB-35, connecting eastern and western municipality border. It connects Merošina directly to Niš. Traveling from Merošina by road IB-35, we reach a crossroad, where the right side leads to the A1 state road and the left side continues to Niš. Citizens of Merošina and Prokuplje expressed concern about the quality of this alternative road.

¹¹² Ibid.

¹¹³ Municipality of Prokuplje Master plan

The other state roads passing through the municipality of Merošina is the road connecting northern and southern municipality border, marked as state road IIB-417: Merošina - Oblačina - connecting to state road IIA-216 (connection to state road IIA-215 - Kaonik - Ribare - Vukanja - Prokuplje - Žitorađa - Doljevac - connecting to state road A1).

The municipality (local) road network with a total length of about 76km. Around 60km is asphalt paved, but over 50% in average to poor condition, in need for reconstruction, expansion and equipping with appropriate traffic signalization. The remaining 16km of local roads are covered in macadam or dirt. Major reconstruction of the existing infrastructure and construction of new local roads are needed in municipality of Merošina.

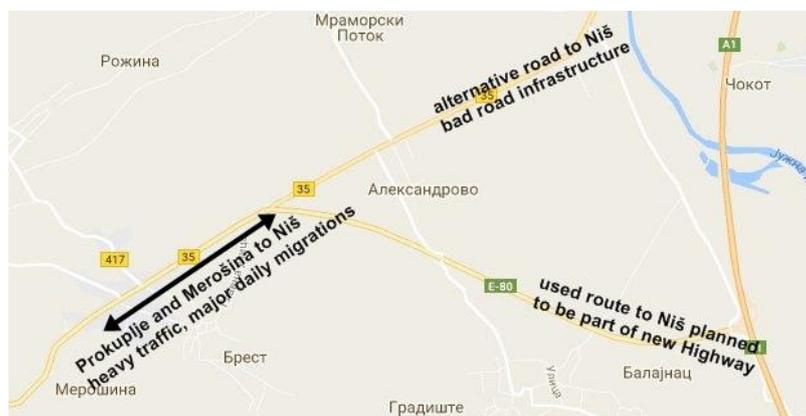
Travel costs - views from field survey

During focus groups concerns were raised about the traffic expenses for daily commuters from Merošina and Prokuplje to Niš. Merošina, according to focus group opinion, is bound to the city of Niš, especially as it is a small community with no urban region, which, in the opinion of the population Merošina, can be seen almost as a suburb of Niš. Accordingly, there is a constant and regular need for traffic between Niš and Merošina on a daily basis. If the new Highway tolls station is located before the Merošina highway exit, residents expressed concern that it will significantly influence travel expenses, even influence living and economic conditions of the municipality. They have proposed mitigation measures: either placing the payment station after the Merošina exit (as exit to municipality of Grocka is located prior to the main Belgrade payment station), or that the municipality of Merošina acquires special agreement with PERS as it was done in case of municipality Vrčin, near Belgrade.

Alternative passage to Niš - views from field survey

Further concerns were raised as the construction will follow an existing exit to the state road IB-35, which is the main road to Niš regularly used for all daily migrations to Niš. The only alternative road to Niš for the citizens of Merošina is the state road IB-35 continuing to Niš (as shown on Photo 8) poor condition, lot of potholes, sags and landslides, steep and sharp. Heavy traffic transferred to this alternative Niš is not possible, and it will further damage the road, making daily commuting even harder.

Figure 32 Alternative road to Niš



Local railway transport and station

There are no railway station in Merošina and only one in southern part Prokuplje. The arterial railway Belgrade-Mladenovac-Niš-Preševo administrative crossing passes along the eastern border of Merošina and across the southern border a single-track of non-electrified railroad line Niš-Doljevac-Prokuplje-Kuršumljia-Merdare administrative crossing. By the proximity of the railway Merošina population could benefit in better traffic communication with other parts of Serbia, but they can use only railway station in Prokuplje, Doljevac or Niš (15-20 kilometres from Merošina). There are no plans for construction of new railway anywhere in the region, or for building new railway stations anywhere in study municipalities.

Figure 33 Enlarged region with railway stations



Railway line Niš - Kosovo Polje (passing and stopping at Prokuplje etc.) was once a very important strategic direction for the fastest and best connection for Kosovo to the Corridor 10. However, during 1999 the tunnel at Merdare (on the administrative crossing with Kosovo and Metohija) was disabled and still is. Today, the railway passenger and freight traffic are mainly localized between Kuršumljia - Prokuplje - Niš. Based on available data on the number of passengers (four departure routes Prokuplje - Niš and one from Niš - Prokuplje - Kosanička Rača) train capacity is almost always fully utilized, and there is a need for increased capacity as well as the introduction of new departures¹¹⁴.

8.2 Water and Sanitation

Households in the urban parts of the city of Prokuplje are connected to the public, city water supply, but most villages in the municipality are using small local water supply divided by groups of households, or, more often, each household has its own water source. The water sources of the central waterworks of Prokuplje rely at 40% on water originating at arteriovenous underground wells and 60% from the reservoir at river "Bresnica". This ratio could be significantly altered if the new dam on Toplica river and water accumulation "Selova" at municipality Kuršumljia would

¹¹⁴ Source: Spatial plan municipality of Prokuplje

be finished, but financing for this 30 year old project is unreliable so there are no current development plans. As the available capacity of the Prokuplje water system supply is at 140 l / sec, and that the current water demand is 168.81 l / sec, there is a constant deficit in the water supply which culminates during the summer months, causing restrictions. The distribution network is connected to 9000 households and commercial structures (based on the report on registered water meter by PE "Waterworks")¹¹⁵, which is less than 50% of potential customers (around 6000 households are receiving water from another sources).

Domestic, commercial or industrial wastewaters are conveyed to a sewage system maintained by PC "Gradski Vodovod"¹¹⁶, covering only the city Prokuplje area. Households in rural settlements are equipped by individual cesspits. However, due to the terrain, small population density, distance between settlements, and in particular the characteristics and capacities of recipients in rural areas it is very difficult to develop a sewage network, it is more likely that a sewage system in the municipality tight sanitary-hygienic septic tanks could be built for 68 rural settlements. For the other 39 rural settlements that are closer and more densely populated, construction of 8 small and Moderate-sized sewage systems are planned¹¹⁷.

Merošina's water supply is through individually or a system in settlements Merošina and Brest. The waterworks system is receiving water from alluvial of river Krajkovica and from two wells drilled at the site south of the bridge on the river along the road Niš-Prokuplje. Available quantities of water are about 2.0 l / s. The water is taken from a depth of 10 m and pumped directly into the distribution network and the excess water in the reservoir at Debelo Brdo northeast of the source. The tank has the regulatory capacity of 60 m³ and is 296.45 meters above sea level elevation. The primary distribution network is made of profile pipes 50 mm wide. The distribution network covers only 5% of municipality consumption area, reaching only the Merošina village centre, close to the road Niš-Prokuplje. Water quality, according to laboratory analyses of the Institute of Public Health in Niš corresponds to the regulations for drinking water. Other settlements resolve the issue of water supply from local sources, by common local water supply systems or by wells in individual households, where no chemical or biological analyses have been done.

Merošina has only partially constructed sewage system available to a smaller, central part of the Merošina village, flowing directly into the Krajkovica River without any treatment which is contrary with the provisions of the Law on Water Act ("Official Gazette of RS, no. 46/1991). The rest of the villages use mostly inadequately built septic tanks or individual cesspits. Drainage of atmospheric surface waters is led by open channels towards the Krajkovica River¹¹⁸.

¹¹⁵ Source: Community profile of Prokuplje

¹¹⁶ City Waterworks

¹¹⁷ Source: Spatial plan municipality of Prokuplje

¹¹⁸ Source: Merošina spatial plan

Public services - views from field survey

In general, water supply in Prokuplje is below needed capacity. The city and surrounding villages connected to the city waterworks suffer summer restrictions, and the local village aqueducts are usually with little capacity and limited supply network. Various focus groups expressed concern about the water impact of the used water on constructions sites, and with supply of water needed by the influx of workers during Highway construction. The situation is even less favourable in Merošina where almost no central waterworks or sewage system exists.

Some of the Roma settlements have only recently been connected to public water supply system. Some Roma households don't have running water, and the living conditions are extremely unsanitary. There are ongoing efforts to rectify living conditions in several larger city Roma settlements done by several humanitarian NGO's, also by Serbian and other helping European governments (Switzerland, Norway), but the water and sewage conditions in Roma settlements still are worse than in the rest of the Prokuplje city and other settlements. The Roma settlement "Čerhez Mahala", mostly populated by Roma's of orthodox religion, is located next to the city of Prokuplje landfill, which adds to the unsanitary conditions of this settlement.

8.3 Irrigation and drainage of agricultural land

In the two municipalities study area the traditional approach to agriculture has been kept, meaning that irrigation is being rarely applied, as rare supplemental measures to stabilize primary agricultural production which offset the adverse effects of drought. This approach was developed as a result of land consolidation plan and lack of agglomeration measures. Excess waters and vulnerability of arable land occurs mainly in the valleys of the Krajkovica River. There are no built drainage systems.

8.4 Waste Management

The current state of waste management can be regarded as alarming. In certain segments it does not meet even the basic hygienic requirements and the coverage of waste collection services can be defined as being on the verge of tolerable limits.

All parts of the Prokuplje urban area are covered by collection of waste once a week which cannot be regarded as enough, especially when waste from the shops and industrial production is concerned. It should be noted that there is insufficient number of trash containers as well as their inadequacy. Lack of communal order in the area where the trash containers are located is important as well. It is often necessary to schedule the vessels near the residential buildings in order to provide undisturbed access to the containers. The number of transport waste vehicles to by types and range is insufficient too.

Daily amount in Prokuplje of the collected garbage is around 100 m³. Number of users covered by organized waste collection service is around 8,200 households (little more over 50%). There are 250 waste disposal containers; many of them are

worn out, sometimes destroyed by careless attitude of service users. Garbage cans in 90% cases are inadequate.

The situation is even worse when it comes down to the landfill because it is not properly equipped, and it does not constitute a landfill, but more a junkyard. The waste is disposed at the dump which is not acceptable by its location not by regulation. The current dumpsite is located next to the city, and water flows through the landfill. The waste is disposed to the landfill without any previous treatment or separation. Waste from industry is disposed without data of its composition, danger, recyclability and return to possibility of return to the manufacturing process, so the compliance with national regulations on the disposal of industrial waste is largely left to the conscience of the producers. There is not enough data about bio hazardous waste so it can be said that the situation in the study areas is not satisfactory especially in relation to the treatment at the source of the waste.

The situation can be considered to be slightly better in Merošina, as activities of collection, transport and disposal of municipal solid waste in the municipality is performed PUC Mediana from Niš. Organized solid waste collection covers around 50% of the Merošina municipality area (settlements: Merošina, Aleksandrovo, Brest, Gradište, Balajnac, Rožina, Oblačina, Baličevac, Lepaja, Mramorsko hill and lake village Oblačinsko) and it includes ten commercial entities. There is no waste separation on the waste collection sites and no prior treatment at landfill in Niš. Despite the fact that from 2009 solid waste is disposed in Niš landfill, the old landfill in Merošina is still used for disposal of municipal waste, packaging, construction, agricultural, metal and construction waste, waste tires and similar. The municipal landfill is located 3km south of the village Merošina.

8.5 Energy

8.5.1 National level

Serbia is the 59th country in the world by electricity production, and the largest producers of the ex-Yugoslav countries. The main producer of electricity in Serbia is the PC "Elektroprivreda Srbije" (EPS). Presently the company has an installed capacity of 8,379 MW and generates 38.9 TWh of electricity per year. Its installed capacity in lignite-fired thermal power plant is 5,171 MW, gas-fired and liquid fuel-fired combined heat and power plants is 353 MW, wind power is 320 MW, and hydro power plants is 2,835 MW. EPS is also the largest producer of lignite in Serbia operating in the Kolubara and Kostolac basins, producing around 37 million tons per year¹¹⁹. Installed capacity of 16 larger hydro plants is 2,835 MW and wind power is 20 MW (in the process of being expanded to produce a total of 320 MW). Serbia also makes use of geothermal and solar energy, currently 27% of Serbia's electricity comes from hydro while 4% comes from other renewable sources¹²⁰.

¹¹⁹ Source: <https://web.archive.org/web/20131106052002/http://www.energyfundamentals.com/power-companies/eps.php>

¹²⁰ Source: CIA World Factbook: <https://www.cia.gov/library/publications/the-world-factbook/geos/ri.html>

Serbia adopted EU standards and directives regarding production of electricity from renewable sources and installed a (semi)open electricity market. Serbia stimulates the production of electricity from renewable sources by construction of smaller, home solar power plants and all unspent KW produced EPS purchases at pre-defined, incentivize prices. Because of the fact that still as much as 70% of Serbia electricity is coming from lignite thermo plants, EPS is announced that it will invest as much as a billion EUR in next ten years in reconstruction and new technology equipment instalment on its major thermo plants to meet the standards of EU of environmental protection.

There are 16 larger hydro (above 10MW) plants in Serbia. The first one was built in 1900 near Užice, only four years after the first hydro power plant in the world. The second hydro power plant was installed in 1903 and both are still operational. Harnessing abundant hydro power for electricity production is defined as major power production goal and 317 locations (out of 857 possible locations¹²¹) for building mini (below 10 MW) hydro plants by private investment was announced by the government of RS. The use of wind for electricity production in Serbia is still at an early phase. The first wind farm was opened near Kula, in Vojvodina in 2009, but in 2014 the installed capacity was a merely 20 MW, but new wind energy projects announced over the last three years should increase the cumulative wind energy capacity in Serbia to 542 MW by 2025¹²². At the Serbian town of Kladovo, located 250 kilometres east of the capital city of Belgrade, now holds one of the largest solar PV plants in the country, along with the largest hydroelectric power station in the country, making it a major supplier of renewable energy in the country. Solar installations in Serbia are not expected to go beyond 10 MW by 2020¹²³.

Serbia is around 69th place by oil production and natural gas production in the world, but internal production does not meet its needs. Naftna Industrija Srbije (NIS) is the only company in Serbia which deals with exploration and production of crude oil and gas, as well as with production of geothermal energy. Srbijagas, public gas company operates the natural gas transportation system which comprises 3,177 kilometres of trunk and regional natural gas pipelines and a 450 million cubic meter underground gas storage facility at Banatski Dvor¹²⁴. The oil and gas production of Serbia reaches satisfactory levels:

Table 26 Serbia oil and gas production and consumption¹²⁵

Refined petroleum products	production:	60,220 barrels per day (9,574 m³/d)
Oil	production:	23,160 barrels per day (3,682 m ³ /d)
Oil	consumption:	81,540 barrels per day (12,964 m ³ /d) (2011)
Oil	proved reserves:	77.5 million barrels (12.32×10 ⁶ m ³) (1 January 2006)
Natural gas	production:	557 million cubic meters (2012)
Natural gas	consumption:	2.84 billion cubic meters (2012) ¹²⁶

¹²¹ Source: PC "Srbijavode": <http://www.srbijavode.rs/sr-latin/home/Aktuelno/mhe.html>

¹²² Source: <http://www.energynext.in/serbias-wind-energy-capacity-to-increase-rapidly/>

¹²³ Source: <https://cleantechnica.com/2014/11/26/good-bad-solar-power-serbia/>

¹²⁴ Source: <http://www.srbijagas.com/o-preduzecu/delatnost/transport/transport-prirodnog-gasa.67.html>

¹²⁵ Source: CIA World Factbook: <https://www.cia.gov/library/publications/the-world-factbook/geos/ri.html>

¹²⁶ Ibid.

Serbia's relatively lower power consumption per capita is not a consequence of the need for lower energy consumption and environmental awareness, but rather a result of four decades long industrial production crisis. Actually, the relative comparison below, keeping in mind the country's economic development, shows a lower rate of energy consumption and efficiency awareness.

Table 27 Comparison of electricity consumption per capita (2011)¹²⁷

Country	Electricity consumption (kW·h/yr)	Average power per capita (watts per person)
United States	4,986,400,000	1843
Germany	782,500,000	1160
Austria	65,670,000	990
France	451,100,000	904
Slovenia	14,700,000	815
Russia	1,016,500,000	801
European Union	3,237,000,000	788
Serbia	35,500,000	563
Croatia	18,870,000	502
Hungary	42,570,000	488
Bulgaria	28,300,000	438
World	25,320,360,620	385
Romania	51,460,000	315

8.5.2 Regional and local level

Both study municipalities are 100% electrified. There are no settlements without electricity. The electricity distribution is part of the national network and there are no restrictions of the electricity use. Settlement electricity supply is done through municipal over ground electricity transmission network.

The distribution and keeping of the electricity network, in accordance with the statutory amendments provided for the reorganization of "EPS" adopted by the Government of Serbia on 27 November 2014, the parent company of PC "EPS" founded regional EPS Distribution centers: "Elektrovojvodina", at Novi Sad for Vojvodina area, "Elektrosrbija", Kraljevo for the western Serbia region, "Centar", Kragujevac for the central part of Serbia and "Southeast", Niš for the southeast parts of Serbia. The local center of the EPS distribution and keep network is located in Prokuplje for both municipalities.

In the region, there are dozens of mini hydro plants, all of them owned by PC EPS. Five are located at Toplica river in the municipality of Prokuplje¹²⁸, with combined yearly production of 7.119.000 kWh.

The average annual value of daily emission of solar energy in the study municipalities is of more than 4.0 to 4.2 kWh / m² / day (horizontal measuring

¹²⁷ Source: CIA World Factbook: <https://www.cia.gov/library/publications/the-world-factbook/geos/ri.html>

¹²⁸ Source: Cadastar of MHP, <http://www.elektrosrbija.rs/me/images/dokumenti/Katastar%20MHE%20u%20Srbiji.pdf>

surface), a value ranging from 4.6 to 4.8 kWh / m² (measuring surface at an angle of 30 ° to the south), so the area belongs to favourable areas for the exploitation of solar energy. As a result, the installation of household or more often smaller business solar cell roofs is becoming more common¹²⁹, and one solar farm was opened in Toplica district, new Kuršumljija.

The study municipality is one of the areas with average annual wind power of 100-200 W / m² (at 100m height), which places them amongst municipalities with average possibility to produce energy using wind power. It would be necessary to make detailed measurements of the intensity of the wind and do studies that would show a possible feasibility of building wind generators, as well as the best location for their construction, but there are no wind farms and no proclamation on possible investments in that area anywhere in two municipalities of Prokuplje and Merošina. However, several larger milk producers installed a biomass electricity plant in the district, near Blace.

In the previous period of twenty years, in both municipalities electricity consumption in households increased significantly as a result of a more and more common use of electricity for house heating and its non-economic prices. The problem of electric heating of housing space has become one of the biggest problems of the city energy consumption, and which can be solved only through the development of modern systems of heating, while raising awareness for efficiency and rationalization of energy use¹³⁰. There is no gas network in the municipalities but there is a planned construction of the regional branch from the direction of Niš and connection to the national distribution pipeline.

8.6 Local telecommunications and media coverage

Republic Agency for Electronic Communications (RATEL) regulates the telecommunications market in the Republic of Serbia since it was founded in May 2005, in accordance with the Telecommunications Act of 2003. In July 2010 Serbia passed the new Law on Electronic Communications, based on the European regulatory framework of 2002 and 2007.

Serbian sector of electronic communications and telecommunications in the past two decades experienced an extremely rapid growth, accompanied by technological progress. During 2015 the process of transition to digital broadcasting television signal was completed. The process of digitization enabled better quality television signal to every household in Serbia. Mobile operators are getting significant a valuable part of the radio spectrum, which allows them to further develop wireless broadband system. Total revenue in the market of electronic communications in The Republic of Serbia in 2015 amounted to around 187.6 billion dinars (1.55 billion EUR) representing an increase of 8.3% compared to the previous year. The gross domestic product of Serbia Revenues from electronic communications in 2015 had a share of 4.72%. Total investments in

¹²⁹ Source: Spatial plan Merošina

¹³⁰ Source: Spatial plan Prokuplje

electronic communications sector in 2015 amounted to about 276 million EUR, which is 48% more than the previous year; this represents a very promising signal for the future. Fixed telephony services stagnated in terms number of users, but it is significant that, thanks to the introduction of number portability service, it can expect an increase due to competition in this segment in the becoming years¹³¹. The mobile segment has the highest income and investments, and is one the main generator of further development of electronic communication. The number of users is negligible decreased compared to 2014. It is important to note that during the previous four years the amount of transferred data grew at an average rate of 45% per annum. What is also interesting in regards of the segment of Internet services, in addition to the fact that the number of users, revenues, investments and access speed continues to grow steadily, is the fact that dial-up technology is officially no longer in use at the Serbian market. In the area of media distribution cable distribution systems in IPTV and DTH technology are prevalent. The postal services market continues to trend of the revenue growth and has reached about 16 billion dinars per annum. The total number of postal services has decreased by 2%, with the biggest drop by 3% recorded in the segment of universal postal service. On the other hand commercial services continue to grow, so their volume is 14% higher compared to the previous year¹³².

One of the most important issue is how the information about the Project: construction phases, traffic re-direction and temporary road closing due to construction, resettlement information, mitigation measures for any social impact etc. will be disseminated. The information about the use of communication technologies is therefore important as to assess and synergies ways of communication and publication of info, specifically information of certain importance to the process (closing of roads to Niš, or local roads between settlements in the municipalities, resettlement information, cut-off date etc.)

Table 28 Important information of use of communication technologies¹³³

	National level
Households owning radio	83,8%
Households owning TV set	99,3%
Households owning landline phone	81,8%
Households owning mobile phone (at least one)	90,3%
Persons using mobile phone	91,4%
Households owning a computer	63,2%
Persons using computer in last 12 months	68,8%
Households with internet at home	63,8%
Persons using internet	66,3%
Persons using internet to acquire news or local information from public and state institutions	38,9%
Persons using e-mail	66,0%

¹³¹ PC Telekom Serbia was for years the only company procuring landline telephone services. With this changes several other companies emerged which allready made some changes in the market, increasing the quality of the offer.

¹³² Source: Republic Agency for Electronic Communications report for 2015.

¹³³ Ibid

Unfortunately, information published and gathered by RATEL and National statistical office on telecommunication is not published, not even divided by municipalities. It can, however, be safely assumed that some negative trends presented in Table 27 above is even more evident in smaller and more rural municipalities like Merošina and Prokuplje. Close to 55% in Merošina and 50% of population in Prokuplje¹³⁴ are completely computer illiterate, hence have no basic ability to use a computer. Comparison to the 41% ratio of the computer illiterate on the nation level confirms that presumption. This was considered in the Project respective SEP.

In order to present the condition of telecommunication usage in Serbia, comparing to most developed countries and the countries in the region, we can see the Table 29 below:

Table 29 Using telecommunication, country comparison¹³⁵

	Serbia	Germany	Hungary	Bulgaria	Croatia	Montenegro	Albania
Landlines per 100 inhabitants	39	56	31	23	33	24	7
Mobile phones per 100 inhabitants	128	119	119	128	99	156	112
Internet users	66,3%	87,6%	72,8%	56,7%	69,8%	64,6%	63,2%

Influence of media and presence of hi-tech media technology in local households is also an important indicator. Toplički administrative district¹³⁶ is per household penetration of hi-tech services and per representation of technology at the district level the least evolved in comparison to all other districts in Serbia. The relative index of penetration of hi-tech media signal in Toplički district households is 38,6% (compared to Belgrade district 81.7%)¹³⁷ In real-terms this means that most households in Toplički district (Prokuplje, but including Merošina) depends on the old analogical technology, receiving only few national broadcasted TV-stations, in addition to some local stations from Niš.

Concerning registered and operational local media in two study municipalities, there are no local TV or radio stations registered in Merošina, but there are many regional and national radio stations that broadcasts their program and are heard in Merošina and Prokuplje. There are also three local radio stations in Prokuplje: Radio "Srce" (broadcasting music and local news, including small web portal dedicated to local news and events: <http://radiosrce-prokuplje.webs.com/>), radio

¹³⁴ Source: National Statistical office, National census 2011

¹³⁵ Source: CIA World Factbook, <https://www.cia.gov/library/publications/the-world-factbook/geos/ri.html>

¹³⁶ Prokuplje is part of Toplički district, but Merošina is not being part of the Nišavski district. Nevertheless, Nišavski district statistical data is influenced by city of Niš data, so Merošina could be closer in all aspects to the findings and statistics given for Toplički district.

¹³⁷ Source: Republic Agency for Electronic Communications report for 2015.

"Delfin" (similar broadcast - <http://www.delfinradio.rs/>) and radio "Toplica" (present on the FM scale, but no information could be found on the net). There are no TV stations in Prokuplje or Merošina, and no daily printed local newspapers.

Table 30 Local news web sites¹³⁸

Name:	Domain:	Content:
Southern journal "Južne novine"	https://www.juznevesti.com/	Southern Serbian region news portal, including Prokuplje and Merošina
Topličke news "Topličke vesti"	http://toplickevesti.com/	News web portal about Toplički district, including Prokuplje
Prokuplje in a glance "Prokuplje na dlanu"	http://www.prokupljenadlanu.rs/	Prokuplje news portal
027 Info "Info 027"	http://www.info027.rs/	Prokuplje news portal
SouthMedia "Jugmedija"	http://jugmedia.rs/	Southern Serbian region news portal, including Prokuplje and Merošina
Toplica News "NovostiTop"	http://www.novostitop.com/	Kuršumlija, Prokuplje, Aleksandrovac, Kruševac and some other municipalities in the region news portal
Prokuplje home land "Prokuplje moj kraj"	http://prokuplje.mojkraj.rs/	Prokuplje news portal

¹³⁸ Source: Cowi, internet search including several pages and over 100 results on "DuckDuckGo" search engine.

9 Education and Skills

9.1 Educational System

The first education enterprise ever in Serbia was established in the XI and XII century in monasteries. Historical sources have shown that in several monasteries of the Serbian Orthodox Church, such as Sopocani, Studenica and the Pec Patriarchate, also in Catholic monasteries of Titel and Bac regular educational services have been offered to public.

The first elementary school in Serbia was established in 1718 in Belgrade under the name "Little Serbian-Slav School". The first teacher that worked in that school was Stevan and he taught children from the neighbourhood in metropolitan house (bishop's house) of the "Saborna" church. The school was financed by the borough administration and by parents of children that attended the school. This building at the back of "Saborna" church remained a school to nowadays. Now it is Petar I elementary school. Metropolitan Stevan Stratimirović founded in 1791 the first Serbian gymnasium (high school) in Sremski Karlovac. The first school for girls was founded in 1840 in Zemun and the first public kindergarten was founded in 1858 in Subotica. First private kindergarten was established in November 1867 in Belgrade by a priest Tatomir Milovuk. The first school for hearing impaired children was founded in the Institute for the deaf, opened in Belgrade in early 1898. Belgrade University was founded in 1905, out of "Great school" that was founded in 1808 by known Serbian educator Dositej Obradovic.¹³⁹

Ministry of Education, Science and Technological Development (MoESTD) is the line ministry for education in Serbia. Educational reform¹⁴⁰ enabled foundation of privately owned Faculties, Universities, schools and kindergartens. The first private university after the World War II was founded in 1989, but first privately owned kindergartens were founded after reforms of the year 2000.

Children's education begins in preschool institutions which are held in a local kindergarten, and it is the first part of education. It is compulsory since 2006/07. It lasts at least 4 hours a day for 6 months during the year of enrolment in the first elementary school grade. The goal is to familiarize children with the education system and make preparation for primary school.

Children are enrolled in primary school at age six or seven years. Primary education is compulsory. Elementary school lasts eight years and is divided into two periods: the first cycle of basic education (1st to 4th grade) and the second cycle of basic education (from 5th to 8th grade). In the lower grades, students were

¹³⁹ Source: Historical data was mostly gathered and described in the study "Prvi u Srbiji", Laguna 2016. by Zoran Penevski

¹⁴⁰ There were several reforms of the educational system that took place simultaneously with general reforms that dissolved the socialist structure of the old SFR Yugoslavia. New educational reforms emerged after 2000 as part of overall political reforms and new policies towards the European Union. The former made possible foundation of first private universities, and the latter made possible organization of private kindergartens.

randomly divided into classes, and have only one teacher - and one classroom for all subjects. The only exception is classes of foreign language and religious education, for which children have different teachers. School children have following subjects: mathematics native language (Serbian, or language of the recognized national minority Hungarian, Albanian, etc.), Serbian as a second language (for those whose native language is not Serbian), English (the first compulsory foreign language), arts, musical culture, physical education, "the world around us" (in the first and second grade), nature and society (in the third and fourth grade), compulsory elective subject (religious or civil education).

In the higher primary school grades, children are taught by different teachers for each subject, and classes are held in the specialized cabinets: from fifth class: biology, geography, history, technical and IT education, second foreign language, sport and other optional subject (informatics or drawing, painting, sculpturing), 6th class: Physics, 7th grade: Chemistry.

When a child completes the eighth grade, they can choose whether they want to continue their education and where. The final exam for primary schools is mandatory from school year 2011/12. It consists of a math, Serbian and combined knowledge test (introduced in the academic year 2013/14. and contains questions of social and natural studies - biology, history, physics, geography and chemistry). Each test carries a maximum of 30 points. In addition, children receive points according to the grades from the elementary school, calculated by the average marks from the sixth to eight grade, making a maximum of 70 points. For special awards and results children can be awarded with additional 10 points. This point result is used for enrolment in high schools of their choice.

High school is the third part of education in general and the first part of optional education in Serbia. There are two types of secondary schools - gymnasium schools and vocational schools. Gymnasium lasts for four years, providing general and broad education, and students receive a diploma. Only a small number of jobs are accessible to the students who have finished gymnasium without further education. There are two particular, special talents schools the Mathematical High School gymnasium, which also enrolls children from the age of 12 (from the seventh grade of primary school) and Philological Gymnasium, which offer specialized education related to languages. There is also a Sports gymnasium, with special emphasis sport.

Vocational high schools are specializing students in defining the fields and rewarded them professional degree. There are two types of professional majors - four (relatively broad education with the possibility of further extension) and three years (almost entirely focused education without possibilities for further follow-up).

Usual courses of vocational training are shown in the Table 31 below.

Table 31 Typical vocational courses available in Serbian schools (not a complete list¹⁴¹)

Vocational school type	Vocational course	Years of education
Technical-industrial	Mechanical technician for motor vehicles	4
	Numerically controlled milling-machine operator	3
	Numerically controlled lathe machines operator	3
	Metal worker	3
	Metal welder	3
	Locksmith	3
	Plastic worker	3
	Paper technician	3
Technical-computer	Technician for computer control of industrial machinery	4
	Computer networks administrator	4
	Hardware computer technician	4
	Mechanical computer designing	4
Technical-construction	Architectural technician	4
	Construction technician	4
	Mason	3
	Carpenter	3
	Construction mechanization technician	3
	Geodesy technician – geometer	4
Technology	Laboratory technician	4
	Industrial pharmacology technician	4
	Technology technician	4
	Recycling technician	4
Agriculture and food production	Agricultural technician	4
	Biotechnology technician	4
	Winegrower-winemaker	4
	Floweriest	3
	Food technician	4
	Production of food goods	3
	Veterinarian technician	4
	Boucher	3
Medicine	Physiotherapy Technician	4
	Gynaecology and Obstetrics Nurse	4
	Medical nurse	4
	Paediatric nurse	4
Economy and commerce	Economy technician	4
	Financial administrator	4
	Business administrator	4
	Trader	3
	Commercialist	4
	Banking and insurance technician	4
Tourism and hospitality	Waiter	3
	Cook	4
	Pastry cook	4
	Tourist technician	4
	Baker	3
Other	Clothing designer	4
	Graphical designer	4
	Road traffic technician	4
	Nautical technician (river sail)	4
	Environmental protectionist technician	4
	Typographer	2
Mining technician	4	

¹⁴¹ Source: Cowi; there are many different vocational courses available to high school students. This table was prepared to show typical possibilities.

Higher education institutions in Serbia enrol students on the basis of success in high school and the results of entrance examinations for a particular faculty. There are three types of higher education institutions:

- "Higher" schools education lasts for three years, and can be compared to the craft universities operational in different countries. The difference is that Serbian high schools last only three years and offer special higher school diploma. However, Serbia signed the Bologna Declaration in 2003, so more schools should be reformed in institutions identical to craft universities.
- The College of Professional Studies in the performance of which unites educational, research, professional and artistic work. The College of Professional Studies can acquire basic professional studies and specialist professional studies. The higher education institution has the status of the College of Professional Studies achieved if at least five accredited study program of professional studies from at least three fields.
- University Faculties last for three years to baccalaureate, five to master, and eight to the doctorate. The exceptions are medical schools that last six years to vocations doctor of medicine (MD), which later continued a three-year specialist experience and two-year specialization (MD / Spec) or a three-year double doctoral studies (MD / PhD)¹⁴².

9.2 National and local education levels

In Serbia 127.000 people (above 10 years of age) are considered illiterate, out of which 82% are women. By far, the largest percentage is amongst older population: 70% of illiterates are 65 old and above. This number is significantly decreasing - during the last decade it was cut by half.¹⁴³

Table 32 Overview of qualification of working age population

	2015	
	REPUBLIC OF SERBIA	
Total in thousands)		Total percentage
Total (age 15+)	6059.9	100.0%
No education and primary education	1851.6	30.6%
Secondary - High schools	3120.6	51.5%
Tertiary - Higher education	1087.7	17.9%

It is important to note that around 80% of Roma population are either completely or functionally illiterate. The greatest number of illiterate and uneducated is in the Roma women group. The census provided information on the following educational level of the Roma population in Serbia: 61.9% have not completed primary school, 29% completed only elementary school, 7.8% completed secondary school, and only 0.3% was highly educated. The average length of schooling of Roma - men and women is 5.5 years.

¹⁴² Source: Ministry of Education, Science and Technical Development (MoESTD); <http://archive.is/d73K>, last accessed on 26/01/2017.

¹⁴³ Source - National statistical office of Serbia - <http://webrzs.stat.gov.rs/WebSite/Default.aspx>

It is difficult to estimate the number of Roma children never enrolled in school, and how many children left school. According to various sources, the only assurance that the number is significant: surveys have shown that there are 38% Roma children who do not attend compulsory pre-school program and 26% of Roma children do not attend primary school.¹⁴⁴ 73% of Roma enrolled children drop out of primary school. Reasons for leaving school are many, including the financial situation of the family, insufficient adaptation of educational institutions and a certain level of discrimination against Roma children.¹⁴⁵

Comparing national and municipality levels of attained education, we have divided the data research to several categories, presented in Tables below.

Table 33 Population above 15 years of age with little or no formal education¹⁴⁶

Populati on 15+	Total			No education						Started but not finished primary eight grades					
	Total	Male	Female	Total	% of total	Male	% of total	Female	% of total	Total	% of total	Male	% of total	Female	% of total
National level															
Total	6161584	2971868	3189716	164884	2.68%	30628	1.03%	134256	4.21%	677499	11.00%	241226	8.12%	436273	13.68%
Merošina															
Total	11989	6183	5806	936	7.81%	163	2.64%	773	13.31%	2374	19.80%	994	16.08%	1380	23.77%
Prokuplje															
Total	37729	18560	19169	1729	4.58%	278	1.50%	1451	7.57%	4437	11.76%	1582	8.52%	2855	14.89%

The Table reveals a slightly surprising (at least for this examiner) high percentage of people with little or no formal education, on all levels. When both categories are summed, the population ratio with little or no education amounts to 13,68% of all population above 15 years of age. In both categories, there are more female with no or little education than men, which show one more aspect of gender inequality. Prokuplje municipality education is somewhat worse than the national average, but in Merošina it can be called alarming. According to these data, 27,61% of Merošina population above 15 didn't finish compulsory eight grade primary education, and for women this percentage is 37,08%. As much as all of these percentages are high, it is actually even higher - low formal education among Roma nationals is much higher to other ethnic groups, and as previously explained a significant number of Roma nationals stay outside national census - see Roma population census issue.

¹⁴⁴ <http://www.care.org/country/serbia>, report NHSC from 2011.

¹⁴⁵ Source: <http://www.eknfak.ni.ac.rs/dl/FINALLY/Nacionalni-izvestaj-Srbija.pdf> - Grundtvig EU projects, last accessed 10/10/2016.

¹⁴⁶ Source - National statistical office of Serbia - <http://webzrs.stat.gov.rs/WebSite/Default.aspx>, National census results 2011.

Table 34 Population above 15 years of age with finished compulsory primary school¹⁴⁷

Population 15+	Total			Primary education					
	Total	Male	Female	Total	% of total	Male	% of total	Female	% of total
National level									
Total	6161584	2971868	3189716	1279116	20.76%	593463	19.97%	685653	21.50%
Merošina									
Total	11989	6183	5806	3249	27.10%	1665	26.93%	1584	27.28%
Prokuplje									
Total	37729	18560	19169	8581	22.74%	4270	23.01%	4311	22.49%

The Table shows data about people that finished only primary school. The percentage in Merošina is again significantly higher than at national level. Having in mind that finishing primary school doesn't qualify students for any vocation, this percentage is also quite high. It is similar for both genders.

Table 35 Population above 15 years, finished vocational high schools

Population 15+	Total			Vocational high schools - three or less years of study						Vocational high schools - four years of study					
	Total	Male	Female	Total	% of total	Male	% of total	Female	% of total	Total	% of total	Male	% of total	Female	% of total
National level															
Total	6161584	2971868	3189716	1186641	19.26%	744164	25.04%	442477	13.87%	1464981	23.78%	705859	23.75%	759122	23.80%
Merošina															
Total	11989	6183	5806	2631	21.95%	1807	29.23%	824	14.19%	1978	16.50%	1083	17.52%	895	15.42%
Prokuplje															
Total	37729	18560	19169	6661	17.65%	4117	22.18%	2544	13.27%	8959	23.75%	4522	24.36%	4437	23.15%

The Table is showing population with finished vocation training high schools. The percentage of men three year study courses is significantly higher than female finished same type of courses, but this can be accounted to the fact that many of these training are for physically strenuous occupations that are traditionally considered to be "occupations for men". Census data shows that only around 2% of vocational high schools graduates will continue specialization after finishing high schools (3% men and less than 1% women).

¹⁴⁷ Ibid.

Table 36 Population above 15 years with higher forms of education¹⁴⁸

Populati on 15+	Gymnasium					Higher schools education					Faculty education							
	Total	% of	Male	% of	Female	% of	Total	% of	Male	% of	Female	% of	Total	% of	Male	% of	Female	% of
National level																		
Total	311530	5.06%	118342	3.98%	193188	6.06%	348335	5.65%	173132	5.43%	175203	5.49%	652234	10.59%	308824	10.39%	343410	10.77%
Merošina																		
Total	180	1.50%	69	1.12%	111	1.91%	275	2.29%	163	2.81%	112	1.93%	244	2.04%	154	2.49%	90	1.55%
Prokuplje																		
Total	1944	5.15%	831	4.48%	1113	5.81%	2302	6.10%	1234	6.44%	1068	5.57%	2700	7.16%	1435	7.73%	1265	6.60%

Population with finished gymnasium high school which did not continue their education, as previously mentioned, is provided with general and broad education, and have only a small number of jobs that are accessible to them. So, it is not surprising that the number of people that finished gymnasium school as their final degree of education is much smaller than students with finished vocational high schools: 48% against 5% at national level. Again we notice a slightly higher ratio of women that stopped with education after gymnasium. The percentage of women finishing higher schools and faculties is slightly higher than that of men. But, comparatively, both percentages are significantly smaller for municipalities of Prokuplje and Merošina, completing the picture of less developed, rural communities. Only 2% of people living in Merošina finished faculty opposed to 10% on national level.

9.3 Local education infrastructure

There is no faculty in Prokuplje and Merošina. The nearest university centre is Niš. There is no high school in Merošina either, so high school students go to Niš or Prokuplje for attaining high school. All schools are part of the state owned educational system, there are no private schools.

Preschool institution "Neven" in Prokuplje is enrolling between 700-750 children¹⁴⁹ representing around 30% of the total children population. The number of children in nursery school is usually from 70-75, in the preschool compulsory program there are 425 children (102 from rural areas, 25 Roma children). The capacity of nursery is insufficient for present enrolment so the number of children exceeds the limit. There are two facilities in the city of Prokuplje, and additionally 10 facilities in villages, branches of "Neven" preschool institution.

In the municipality of Prokuplje there are seven primary schools as shown in the Table 36.

¹⁴⁸ Source - National statistical office of Serbia - <http://webzrs.stat.gov.rs/WebSite/Default.aspx>, National census results 2011.

¹⁴⁹ Source: Sustainable Development Strategy, municipality of Prokuplje

Table 37 Primary schools

Name of the primary school, location of main branch	Number of children per year average	School branches
Ratko Pavlović Čičko, Prokuplje	1000 children	Donja Trnava, Berilje, Čukovac, Vodice
Nikodije Stojanović Tatko, Prokuplje	1200 children	Rečica
9.Oktobar, Prokuplje	1300 children	Babin Potok, Donja Stražava
Milić Rakić Mirko, Prokuplje	650 children	Petrovac, Mikulovac, Donji Kordinovac, Bajčinac
Svetislav Mirković Nenad, Mala Plana	450 children	Velika Plana, Tulare, Donja Toponica, Resinac, Mršelju, Beloljin, Donja Bresnica, Bac, Bresničić, Kondželju, Mađaru, Donja Konjuša, Prekadin, Gubetin, Prekupac
Vuk Karadžić, Žitni Potok	100 children	Zlata, Kožinac
Sveti Sava, Prokuplje (school for children with special needs)	80 children	No branches

There are four high schools in Prokuplje municipality. Prokuplje gymnasium has an average of 600 students per year and 59 employees. Medical school "Dr Aleksa Savić" is a vocational school with three courses (Medical nurse, Gynaecology and Obstetrics Nurse and Paediatric nurse) with an average of 700 students per year. Agricultural School "R.J.Selja" Prokuplje with courses for Veterinary technician, food technician, agricultural technician, Baker, Milk processor and florist – Gardener, has an average of 408 students per year. The technical school "15 May", Prokuplje have an average of 700 students per year with eight different courses.

The only Higher school in Prokuplje is the Higher agricultural and food processing school, that was founded in 1977 with the following departments: Production and tobacco processing, Food technology, Technology of plant products, Fruit growing and viticulture, Farming and vegetable farming, Plant Protection and Livestock breeding.

In Merošina there is one preschool and one primary education institution with several branches dislocated to villages around the municipality. The school is called "Jastrebački partizani" and it has 5 branches with all eight grade lessons, and 12 branches with first four classes. The Table 37 below shows the locations per villages of preschools and primary school facilities.

Table 38 Merošina preschool and primary schools branches

Villages	Preschool	Four grades primary	Eight grades primary
Azbresnica	Yes	-	Yes
Aleksandrovo	-	-	-
Arbanasce	-	-	-
Balajnac	Yes	-	Yes
Baličevac	Yes	Yes	-
Batušinac	Yes	Yes	-
Biljeg	-	Yes	-
Bučić	-	-	-
Gornja Rasovača	-	-	-
Gradište	-	-	-
Devča	Yes	Yes	-

Villages	Preschool	Four grades primary	Eight grades primary
Dešilovo	-	Yes	-
Donja Rasovača	Yes	Yes	-
Dudulajce	-	Yes	-
Jovanovac	-	-	-
Jugbogdanovac	Yes	-	Yes
Kovanluk	Yes	Yes	-
Kostadinovac	-	-	--
Krajkovac	Yes	Yes	-
Lepaja	-	Yes	-
Merošina-Brest	Yes	-	Yes
Mramorsko Brdo	-	-	-
Oblačina	Yes	-	Yes
Padina	-	Yes	-
Rožina	-	Yes	-
Čubura	-	-	-

Because of the described educational institutions infrastructure in both municipalities of Merošina and Prokuplje, children attending kindergarten and schools from smaller and more remote settlements depend on kindergarten vans, school and regular local buses for transportation to their school. In some cases, pupils are travelling close to 10 kilometres every day to attend the primary school, and in some cases in Prokuplje even 15-20 km. During the Highway construction phase it is essential that the road routes of school buses and kindergarten vans are kept open during pick up and drop off of children, usually between 7 to 8 am, 12 to 2 pm. The detailed map and routes of school vehicles will be provided in the mitigation part of this SIA.

Educational issues - views from field survey

During focus groups in Prokuplje we were told that the school that is constantly decreasing in number of enrolled students over the past several years is, surprisingly enough, the agricultural vocational school. Despite its tradition and good teaching staff, and the school efforts to attract students from the municipality, but also from other parts of Serbia, there has been a constant decrease of enrolled students. On the other hand, the medical vocational training school is more and more popular among young people, having more enrolments per year. The reason for this can be found in migrations: as previously stressed, young people are leaving rural communities for larger cities and foreign countries, and this trend is not different in Prokuplje. Unlike agricultural school, medical school provides the possibility for employment abroad, so young people prefer that school over the agricultural, despite the possibility of continuing the education in their home town in higher agricultural school, and the agricultural possibilities and occupation offered in their home town of Prokuplje..

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110 Preliminary Design and Feasibility Study with ESIA for construction of Highway E-80 (SEETO Route 7) in Serbia
Environmental and Social Impact Assessment Study -SIA

10 Public health and health system

Health institutions in Serbia are generally divided by type of health protection they are providing. There are three types of health institution: at primary, secondary and tertiary levels. The health system in the Republic of Serbia organized and managed by the three institutions: The Ministry of Health of the Republic of Serbia which defines health policy, defines standards for the operation of health services, specifies quality control mechanisms, overlooks safeguarding and improvement of health of citizens, manages health inspection etc; Institute of Public Health of Serbia "Dr Milan Jovanovic - Batut" is responsible for collecting data on the health status of citizens and operation of health institutions, analysis of the collected indicators of public health, proposals for measures to improve public health etc; and National Health Insurance Fund which is mostly funded by the insured population as part of compulsory insurance and it provides services to the health care facilities in the public and private sector, defines a basic package of health services etc. National Health Insurance Fund is a national organization through which citizens exercise their right to health insurance, and finance their health care. Serbia has 158 health centres, 16 other institutions at primary health care, 40 general hospitals, 37 specialized hospitals, 6 clinics, 16 health institutes, 4 clinical centres, 4 hospital-clinical centres and 29 institutions of multiple levels of health care, including 23 institutes for public health and 6 specialized institutes (for forensic medicine, labour health, blood transfusion institutes etc.)¹⁵⁰

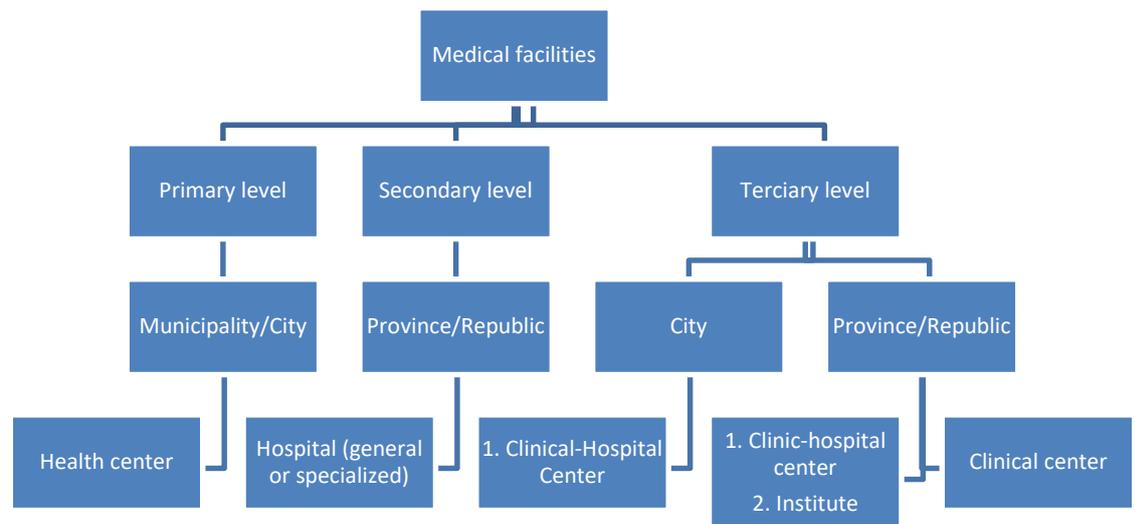
Primary health institutions provide health care at first and basic level to the population. These are facilities that citizens can go without a prescription and seek medical attention: health centre, pharmacy, student clinics, etc. The most important institutions at the primary level are the health centres. The key institution for secondary level of health care is 77 hospitals in Serbia. Patients are referred to the hospital when their health issues goes beyond technical possibilities of health centres or they need expert opinion a higher level. Lastly, if the health problem goes beyond the technical requirements of hospitals or there is a need of expert opinion at the highest level of health care, a patient is referred to in the clinical centres. There are 4 clinical centres (consisting of multiple branches and institutes) which are located in Belgrade, Novi Sad, Kragujevac and Niš, or to one of the clinics, institutes or clinical-hospital centres. For all visits to the tertiary level health care the law requires a referral from your doctor from the health centre, which is issued on the basis of recommendations of the doctors from the hospital. This referral must be certified by the competent branch of the National Health Insurance Fund.

In real terms, health system is one of the most criticized in Serbia, and by population it is deemed to be badly equipped, overwhelmed by number of patients, under financed, lacking capacity to respond to population need, slow and corrupt (out of several searches that was made on search engines, browsing through hundreds of articles we found 95% to be derogatory and critical about the services of the state owned health system). The patients tends to skip the municipality health centres and ask to be immediately transferred for examination to hospitals

¹⁵⁰ Source: Guide to the Serbian health care system,
http://www.zcvaljevo.rs/_down/Urbani%20vodic%20final%20mali.pdf

or clinical centres, which doctors in health centres acknowledge. The offered alternative is to seek health care in privately owned health centres and hospitals, which is out of financial reach for the vast majority of population, and the costs of such treatment can be covered by National Health Insurance Fund only if the treatment cannot be done elsewhere in public health care system, and there is an agreement for this kind of health care between the clinic and the Fund. Also, privately owned clinics are much smaller, equipped only with financially sound selection of health care equipment and cannot be even closely compared to state owned clinical centres. Therefore, most serious patients will depend only on state owned health care institutions of the highest lever, mostly located in the largest cities.¹⁵¹

Figure 34 State health care system with state jurisdiction levels¹⁵²



10.1 Health Overview of the Study Area

Health of the population of the Prokuplje municipality is safeguarded by Health Center "Toplica" in primary (health centres) and secondary level (General Hospital of Prokuplje). General Hospital in Prokuplje provides health care for the entire Toplica administrative region, and the closest general hospital to Kosovo, attending to many patients living in its northern part.

General Hospital in Prokuplje has 360 hospital beds, with capacity utilization is around 85% and average length of patient treatment of eight days. Number of beds of Intensive Care is 5% of the total number of hospital beds and 20% is reserved for Intermediate Care. There are around 100 permanently employed doctors. The hospital has a sectorized internal organization. All services and departments are grouped into the surgical sector, internist sector, sectors of polyclinic activities and non-medical tasks. Every year about 30.000 patient are treated in the hospital, and around 7500 surgical interventions are performed. The hospital performs specialist

¹⁵¹ Source: Kowi, research over 300 articles on the internet for public poll on health system functions

¹⁵² Source: Health care law; ("Off. Gazette of RS", no. 107/2005, 72/2009, 88/2010, 99/2010, 57/2011, 119/2012, 45/2013 etc.)

consulting services at annual turnover of close to 140000 outpatient medical examinations, medical interventions and other health care providers¹⁵³.

As a basis for structural reforms of 2009 the hospital adopted important institution acts (regulations about the internal organization, organization and systematization of jobs, office and archive operations, training and education, the decision on working hours, business code, etc.). The hospital formed the new department of emergency medicine, procured medical transport vehicles, division was made of the department of neuropsychiatry to departments of psychiatry and neurology, paediatric day hospital was created. Departments that are in very poor condition was reconstructed: infective, urology, orthopaedics, gynaecology, and paediatric. The plan is the reconstruction and other departments in the hospital. Hospital announced efforts in the renewal of medical equipment (new operating table for orthopaedics, 30 years surgical instruments were fully replaced, 4D ultrasound was purchased, new EMG and EEG, coffee physiotherapy, agregometar ...) An important stage in the development of Prokuplje general hospital is the introduction of new methods: trans obturator sling surgery for stress incontinence patients, fibrinolytic therapy in cases of ischemic stroke, aggregometry, osteosynthesis of distal radius, bronchoscopy, surgical treatment of glaucoma. Important was the reconstruction of Prokuplje hospital haemodialysis department. An area of 50 m² for haemodialysis patients, who for years dictated the 24 hours operations, with capacity of only 8 appliances was replaced with a new adapted space of 600 m² which enabled dialysis in 2 shifts and of expanded capacity of 17 appliances. Significant improvement of health care is the creation of the Department for extended treatment and care of the elderly with the unit for palliative care.

The health centre "Toplica" employs 68 doctors. In relation to the total number of residents in the municipality, one doctor tends to health of 298 inhabitants, while at the national level this average is one doctor to 390 inhabitants. But in primary health care of the municipality of Prokuplje, one doctor attends to health care of 736 inhabitants, and the national average is one doctor per 621 inhabitants¹⁵⁴.

The municipality of Merošina, being smaller and located between two larger communities and health centres of Niš and Prokuplje, has a small Health centre as the only health care institution within the municipality area. As much as both municipalities are close and well connected to Merošina (by the M-35 that will be partially under reconstruction during Highway construction - see chapter about traffic concern), the municipality health centre should be better equipped. There is a mobile health care service, on duty medical service, but there is no emergency medical centre. There is only one appliance for haemodialysis patients which are not enough¹⁵⁵, so the patients go to Prokuplje.

Prokuplje hospital is the largest in the administrative area, besides Niš, the largest in the southwest area, and the closest to the north of Kosovo. Niš clinical centre and hospitals, as part of one of the largest medical centres in Serbia, are quite

¹⁵³ Source: Prokuplje hospital web page: <http://bolnicaprokuplje.com/o-nama.html>

¹⁵⁴ Source: Prokuplje municipality profile

¹⁵⁵ According to Serbia average, Merošina should have 8-10 patients with kidney insufficiency.

close (15km from Merošina center, 25 km from Prokuplje), so there is no shortage of quality or urgent medical care for the population of those municipalities.

Nevertheless, Prokuplje and Merošina citizens share a same problem with primary medical care in more remote village and smaller settlements in the municipality. Health centres of both municipalities are located in the largest settlements (in the city of Prokuplje, and in Merošina-Brest village). Infirmaries are displaced to some villages, but only to the largest and those infirmaries don't work full time, but are on duty only once or twice a week. Closest medical attention for more remote and smaller villages are available in the nearest on duty infirmary, which creates problems for elderly patients. There is a mobile home medical service for immobile patients, and ambulance cars, but it still represents a medical care issue for the health system of two municipalities.

Similar to the education issues we spoke about earlier, health care of population living in smaller villages depend local transportation to nearby villages, and to Prokuplje city and Niš for secondary and tertiary medical attention. During the Highway construction phase it is essential that the road routes of local buses are kept open during certain times of day, and that local population is regularly informed about the timetable of road closings that could influence the possibility of local population to receive proper medical care.

Table below shows infirmary lay out in Merošina. We requested the same from Health center in Prokuplje, but they were not present during focus groups, and until today we didn't receive that information.

Table 39 Infirmaries in Merošina settlements

Villages	Infirmary	Villages	Infirmary	Villages	Infirmary
Azbresnica	Yes	Devča	Yes	Merošina-Brest	-
Aleksandrovo	-	Dešilovo	Yes	Mramorsko Brdo	-
Arbanasce	-	Donja Rasovača	Yes	Oblačina	Yes
Balajnac	Yes	Dudulajce	-	Padina	-
Baličevac	-	Jovanovac	-	Rožina	-
Batušinac	Yes	Jugbogdanovac	Yes	Čubura	-
Biljeg	-	Kovanluk	-		
Bučić	-	Kostadinovac	-		
Gornja Rasovača	-	Krajkovac	Yes		
Gradište	-	Lepaja	-		

11 Vulnerability

11.1 Vulnerability Assessment Methodology

Vulnerability to social impacts is defined as the capability of local communities to adjust to socioeconomic or bio-physical changes. Vulnerable individuals and groups are more at risk to negative impacts or have a restricted capability to benefit from positive influences. Vulnerability is a pre-existing category that is independent of the Project and may be seen as an existing low level of access to key socioeconomic resources.

This section of ESIA recognizes individuals and groups that are more vulnerable than the general population. The reason for this heightened vulnerability can be due to some specific aspect, or as a result of a wide variety of characteristics. Vulnerabilities of individual and groups provided here is analysed in the Social Impacts section of this report in order to assess if some impacts are more considerable for any specific population groups and, if necessary, to provide with additional targeted mitigation measures.

Some population groups are always considered to be potentially vulnerable due to their place in the society.

In the Project Area, the likelihood and cause of vulnerability for various stakeholders were assessed. Stakeholder groups that are potentially vulnerable are:

- **Women:** despite gender equalities are growing and being adopted and promoted as a general principle, women in the Project Area due to their socioeconomic position still suffer inequalities. Women have a higher unemployment rate, have more problem finding jobs etc. They generally suffer from less social representation, so separate interviews were performed with all women affected by the Project. Changes like access to early child and elementary education, health care, community transportation etc. was especially took into account.
- **Poor individuals/families/households:** Regardless of the reason of their socioeconomic position, poorer persons have less possibility to adapt to all changes.
- **Minority ethnic groups/families/settlements:** Regardless of proclaimed equality, minority ethnic groups, like Roma groups, always suffer of lower income, lack of education,
- **Elderly/retired:** potential vulnerabilities is related to lower income levels, limited ability to adapt to changes, and access to health care. The limited accessibility to transport and social services make the elderly particularly vulnerable.
- **Households dependent on low productivity agriculture:** Households dependent on low productivity agriculture generally have lower income and less access to resources and are likely to show low resilience to unexpected events, which make them more vulnerable to changes in land use and environment.

- **Indebted Households:** Households that are exposed to the banking system are highly vulnerable to changes, should these have an impact on their economic activity.
- **Unemployed:** This group includes young people and on the other hand adults who lost their job, as a result of the crisis, and struggle to find a new one. However, construction activities during Project implementation in the region will create new job opportunities, so concrete mitigation measures can be planned.
- **Large families:** Households who have to provide for a large number of minor children are more likely to drain faster their reserves and to suffer from high level of costs.
- **Immigrants:** Despite low presence of immigrants in the Project Area and in Serbia in general, possible abuse of labour rights of immigrants is possible, so it was taken into account during surveys.

12 Limitations

12.1 Data Adequacy and Uncertainty

The social baseline field surveys and in that way collected additional primary data was used to complement official, publicly presented and made available secondary information and is deemed to be sufficient to conduct the assessment of impacts and development of mitigation measures. However, there were certain limitations:

- **Secondary data:** Took from official studies, made by authorized government bodies (National Statistical office, Tax office administration, Cadastre, municipalities...) can prove to have some flaws and inaccuracies. Some of them are known (i.e. number of Roma population), some may not be, but can be of influence to some conclusions of this baseline;
- **Archeological findings:** Many archeological sites in Serbia are undiscovered, and are often discovered during large infrastructure, construction works. It is quite possible that something similar will happen during this Project implementation, so monitoring must be applied.
- **Participation:** some key informants and persons affected by the Project declined the invitation to participate in the ESIA data collection process and surveys as a result of their unavailability to cooperate with the Project. However, this refers to one event only and it has not limited the stakeholder engagement since the engagement was large stakeholder groups, and impact specific smaller ones through focus groups discussions during the main ESIA Phase, with focus on elderly, women, vulnerable etc. This participation and engagement was able to gauge the public sentiment and community perception of the Project.

12.2 Impact on socio-economic environment

In accordance with the SIA approach and Methodology the identification and assessment of the Project's social impacts has been conducted in a phased approach applied throughout all the different phases of the Project (Pre - construction, Construction and Operation) as well as unplanned events as follows:

- Overview;
- Potential Impacts;
- Mitigation Measurements analysis;
- Residual impacts assessment.

This approach has been applied to all the components potentially impacted by the various types of activity. The Figure below shows sequencing of the impact assessment at large.

Figure 35 Sequencing of Impact Assessment



12.3 General Mitigation Measures and hierarchy

In general the SIA aims to identify impact reduce the negative impacts and enhance the benefits of an intended activity by identifying impacts and benefits and the ways of dealing with them during the planning and design stages of the project. In this assessment the mitigation hierarchy for planned events was upgraded from the basic “avoid-mitigate-compensate” to allow multiple layer actions:

- Remove the source of the impact - avoid at source completely;
- Reduce the source of the impact - decrease as much as possible at source;
- Reduce the impact between the source and the receptor - weaken the intensity;
- Reduce the impact at the receptor - weaken the intensity at the receptor;
- Remedy – repair the damage caused by the impact after it has occurred; and
- Replace in kind or with a different resource of equal or higher value - Compensate /Offset.

Even when offset /compensated it does not automatically mean the impact has been deemed acceptable. If needed, further mitigation measures should be designed to the extent feasible.

13 Social Impact during Pre-Construction Phase

13.1 Local Overview and community support

The communities in the pre-construction phase have shown very little ambivalence, and are in general pro project oriented. There is large community support and expectations of the upcoming activities. Even investments are made in this early stage to capture the momentum to benefit from opportunities to arise during the construction period. The community characteristics will moderately change in its dynamics even in the pre-construction phase, but the measurable changes shall be in the construction phase. The Support of the local communities should be nurtured by implementation of the SEP and monitoring its adequacy, listen to the response of the community to its activities and maintain good communication channels. The Communities are partners in project development and should be recognized as such. During the field visits and interviews there were sporadically opinions on how the Highway itself might marginalize the two Municipalities impacted by the Project in a way that reduced travel time will in fact change existing visitors to transit travellers not entering the cities at all. This impact will be described in the chapter Employment and economy. However, the overall perception of the planned Project is that it will facilitate economic growth, attract investments and enhance connectivity.

13.1.1 Summary of impacts - Local Overview and community support

Pre - Construction Phase impacts
Expectations of the Project to commence.
Expectations of benefits.
Local business and entrepreneur rely on the Project and calculate the future effect into their business schedules in terms of connectivity and reduced travel time.
Expectation of employment opportunities.
Potential legacy issues.
Rumour induced conflicts and inadequacy of information.
Marginalization of Prokuplje and Merošina.

Table 40 Summary of impacts and mitigation measures - Local Overview and community support

Impact	Receptor	Receptor Sensitivity	Impact Categorization	Magnitude of Impact	Spatial, Temporal dimension and likelihood	Mitigation/Enhancement Measures	Responsibility	Management Plans, Policies and Procedures	Residual Effect Significance
Expectation of benefits related to the Project	Local Communities and Business	Moderate	Negative	Moderate	Local Temporary Likely	Manage expectations and avoid an express assurance on which expectation is to be based. Implement Transparency	Promoter Local Government	Stakeholder Engagement Plan	Negligible
Impact to business planning of local business	Local Business	Moderate	Negative	Low	Local Temporary Short-term	Make sure understanding of the timeline of the Project is clear. Make sure the business decisions are not Project dependent to avoid liability of implementing entity , contractor or National Government	Promoter Local Government	Stakeholder Engagement Plan Individual meetings with business	Negligible
Expectations of Employment opportunities	Local communities (unemployed and employed)	Moderate	Positive	Moderate	Local Long-term Certain	Make sure the employment strategy is disclosed in a transparent manner early in the Project. Ensure the Contractor holds contractual obligation to prepare a transparent Employment Plan and ways of communicating the plan to the local communities	Promoter Contractor Local Government Local Employment offices	Stakeholder Engagement Plan Employment Plan	Minor
Legacy issues	Project Local Community Local Government	Low	Negative	Minor	Local Short-term Highly unlikely	Understand the social Context. Identify any legacy issues from another Project or activity or as a result of political context already at the pre-bid meeting stage	Promoter Contractor	Stakeholder Engagement Plan Key informants interview	Negligible

Impact	Receptor	Receptor Sensitivity	Impact Categorization	Magnitude of Impact	Spatial, Temporal dimension and likelihood	Mitigation/Enhancement Measures	Responsibility	Management Plans, Policies and Procedures	Residual Effect Significance
Rumour induced conflicts and inadequacy of information.	Local community Local Government Promoter	Moderate	Negative	Minor	Local Long-term Unlikely	Make trustworthy information sources known to local community. Prove value of communication channels and formal forums for information exchange.	Promoter Local Government Contractor	Stakeholder Engagement Plan	Negligible

13.2 Gender

The construction of the Highway with the most evident outcome indicator of enhancing connectivity, reducing travel time, adding to the geopolitical capital of the Republic of Serbia has more of gender neutrality quality than distinguishable difference in impacts towards men and women. However, mainstreaming gender is needed to touch base on the gender roles and responsibilities in the project area to ensure the positive impacts brought by the project are focused on the gender aspects and enhanced and the negative effectively mitigated and tailored to fit the site specific environment.

The impact assessment with gender sensitivity was persistent to identify the social difference between men and women and the equality between women and men (gender equality). It was driven by the overview of status of women in the project area, legislation that might discriminate women's access to law and justice, employment, labour conditions, wage gaps, family status, access to financing, community status etc. Furthermore, the broader gender division of labour, household chores, childcare, travel patterns, transport needs, and time allocated to each of the activity and the impact on either of the categories from development of the Project were overlapped with the physical footprint of the project and weak spots prone to impact identified.

During the pre-construction phase it is necessary to promote, for both men and women, the equality of access to the benefits of these projects in particular to employment. Women were moderately interested in the employment opportunities and were more interested in employment opportunities for their male family members, husbands and adult children. The interest increased during the discussions and once more information and details have been presented. Expectations of an early dissemination of employment opportunities and the need for transparency are expected. More interest was shown in services providing opportunities rather than in actual engagement in construction and related works.

The Baseline indicates that the informal or unregistered employment consumes 20% of the overall employment and that ½ of this percentage are women. Therefore strong mitigation measures should be in place to prevent any informal employment under the civil works contract overall through a strong employment policy, strict provision for Contractors liability under the contracts for construction works and penalty clauses for breach of required labour and working conditions. Concerns were raised about travel patterns disruption, road and construction site safety, and overall road safety during the operation period.

Impacts anticipated to occur during the construction period should be picked in this stage, during the pre-construction phase and concerns especially about safety should be addressed by inclusion of women and awareness and information campaigns.

13.2.1 Summary of impacts - Gender

Pre - Construction Phase impacts

Expectations of the Project to commence and expectation of benefits
Expectations of gender equality for employment through transparency.
Concerns about unregistered employment.
Road safety issues.
Assess the local pool of experts and work force to identify suitable and qualified staff
could be available amongst the women.

Table 41 Summary of impacts and mitigation measures - Gender

Impact	Receptor	Receptor Sensitivity	Impact Categorization	Magnitude of Impact	Spatial, Temporal dimension and likelihood	Mitigation/Enhancement Measures	Responsibility	Management Plans, Policies and Procedures
Disruption of travel patterns	Women	High	Negative	Moderate	Local Long-term Unlikely	Prior to commencement of civil works disclose and discuss tentative timetable of disruption of transport. Alternative routes should always be considered	Contractor Supervising Engineer	Stakeholder Engagement Plan Announcement through local medias and posters
Impacts to safety of children	Women	High	Negative	Moderate	Local Long-term Unlikely	Announce the strategy for road safety and regularly update the events. Child safety awareness and training program in schools	Contractor Local Law enforcement	Stakeholder Engagement Plan Road safety Plan Awareness campaigns Road safety training
Uncertainty about Project commencement and timelines	Women	Moderate	Negative	Moderate	Local Short-term Unlikely	Clear and timely dissemination of Project dynamics	Contractor	Stakeholder engagement plan Focus groups discussion
Assessment of local women pool of experts	Women	High	Positive	Minor	Local Long-term Unlikely	Early assessment of available workforce and skills amongst women for all positions needed	Contractor Local Employment office Promoter	Stakeholder engagement plan Assessment of local pool report

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13.3 Infrastructure and utilities

During the pre-construction phase of the project, there will be no direct impacts on the provision of services such as water supply, sewage system, electrical energy and telecommunications. These services will be provided as per standards identified in the baseline conditions.

The Preliminary design has integrated the requirements and conditions of all utility service providers in the Project Area. Along with the conditions, maps were received with exact locations of existing and planned utility infrastructure and corridors. The design contains technical solutions of relocation of electrical and transmission lines consistent with the requirements set forth in the respective conditions.

The absorption capacity of the impacted communities is high except for water where the initial assessment is very cautious and recommends mitigation measures of higher intensity with the emphasis on prevention of impact.

During the pre-construction phase there will be no impact to the infrastructure and utilities in the area. This phase involves a pre-bid meeting on site, and at a later stage detailed surveys, investigations activity involves road alignment and condition survey, detailed topographical survey, detailed soils and materials investigation etc. Land surveying and materials teams will conduct topographical surveys along the proposed alignment and should closely liaison with the local Utility Companies to understand the area and agree on how to avoid impacts to water supply especially during the summer period.

Assessment of the absorption capacity of the local water network should commence at this stage and agreements made.

13.3.1 Summary of impacts - Infrastructure and utilities

Pre - Construction Phase impacts
Site visits and surveys of utility infrastructure
Material and soil investigation.
Inspection of conditions of local roads
Setting out

Table 42 Summary of impacts and mitigation measures - Infrastructure and utilities

Impact	Receptor	Receptor Sensitivity	Impact Categorization	Magnitude of Impact	Spatial, Temporal dimension and likelihood	Mitigation/Enhancement Measures	Responsibility	Management Plans, Policies and Procedures	Residual Effect Significance
Material and soil investigation	Local communities	Moderate	Negative	Moderate	Local Long-term Unlikely	The presence of these utilities shall be assessed by the Construction Contractor by means of a survey prior to construction works	Contractor	Survey Emergency response plan	Negligible
Inspection and assessment of condition and absorption capacity of local roads	Local communities	Moderate	Negative	Moderate	Local Short-term Unlikely	The presence of these utilities shall be assessed by the Construction Contractor by means of a survey prior to construction works	Contractor	Survey Emergency response plan	Negligible
Setting out	Local communities	Low	Negative	Low	Local Short-term Unlikely	survey to identify the utilities along the alignment, located under and above ground such as water supply, sewerage, cable network, telephone and power supply	Contractor	Survey Emergency response plan	Negligible

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13.4 Tourism

The tourist sector, during this phase, will be given due consideration for the project not to compromise access to any of the existing tourist destination. The Project has no physical impact to any of the tourist location. However, there is a noticeable expectation of the local accommodation facilities on the Oblačina Lake to provide accommodation for potential labour influx. They can offer accommodation for 60 persons and provide for food. This should be taken into consideration when the assessment of absorption capacity is conducted.

The study area attracts tourists for sport of recreational hunting during the hunting season, namely from October to January. During this period wild hogs, pheasants, rabbits and other species are allowed to be hunted. The alignment does not impact the hunting area, and is but could bring impact through noise, increased traffic etc. It is recommended that the Hunting association is engaged and informed at all times of the planned activities. No livelihood dependency to hunting has been reported but the socio-economic survey during preparation of RAP/ARAP shall identify whether such dependency exists amongst PAPs and provide adequate livelihood restoration assistance. A broader picture of the ecosystem functions in this respect will be taken into account.

Other than that no impacts are envisaged during the pre-construction phase.

13.4.1 Summary of impacts - Tourism

Pre - Construction Phase impacts
Expectation of shared benefits from accommodation of potential influx. Disruption of hunting season and impact to sport of recreational hunting

Table 43 Summary of impacts and mitigation measures - Tourism

Impact	Receptor	Receptor Sensitivity	Impact Categorization	Magnitude of Impact	Spatial, Temporal dimension and likelihood	Mitigation/Enhancement Measures	Responsibility	Management Plans, Policies and Procedures	Residual Effect Significance
Expectation for economic benefits from accommodation of potential labour influx	Local Hotel on Oblacina Lake	High	Positive	Negligible	Local Long-term Unlikely	Include the Hotel management during assessment of absorption capacity of influx workers	Contractor Local Government	Stakeholder Engagement Plan Close coordination between the Local government and Promoter	Negligible
Disruption of hunting season and impact to sport of recreational hunting	Hunters	High	Negative	Negligible	Local Short-term Highly unlikely	Clearly delineate the construction site from the hunting area	Contractor	Stakeholder Engagement Plan	Negligible

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13.5 Land acquisition and Resettlement

This section presents the potential impacts as a result of permanent land acquisition and involuntary resettlement as a result of the Project and its development.

Although there is strong encouragement in the wording of the applicable IFI standards and the EBRD PR 5 in particular to enter into negotiated settlements, rather than expropriate by use of eminent domain power, the National legislation does not offer such encouragement. Development of infrastructure projects in the public interest is guided by the Law on Expropriation broadly compatible with the eligibility standards and principles of the EBRD PR 5. The National framework, the gap analysis and the entitlement Matrix are in detail covered within the respective resettlement umbrella document adopted for this Project further explained below.

The land acquisition and resettlement process will be guided by the Resettlement Policy Framework, a stand-alone document annexed to this ESIA, prepared in line with the National legislation and the Policies and requirements of IFIs (the EBRD, EIB and World Bank namely). The procedures and key principles shall be presented in this document. Therefore, no specific disaggregation of the formal and informal structures shall be presented in this chapter since the eligibility to receive compensation shall not be restricted based on whether the structure was constructed with or without a building permit. However, the detailed asset and socio-economic survey and assessment during preparation of the resettlement tools the ARAP/RAP (as appropriate) shall include these details on legal status as well. Guidance on the outline for the resettlement tools shall be given in the Project RPF.

The design in its current stage requires only permanent acquisition of land and structures and has no indication of needs for temporary occupation by rent or temporary expropriation or easements on land. However, if during Project execution due to changes in design, unforeseen and unforeseeable circumstances should arise and additional land should be required for permanent or temporary use, such land shall be acquired in a manner consistent with the principles set forth in the RPF. If the RAP/ARAP has at that time been completed, consulted on and disclosed, an addendum to the respective document shall be prepared following the same preparation, consultation and disclosure requirements.

Development of the Project has impacts on:

- Land;
- Physical Residential Structures;
- Physical Commercial structures;
- Ancillary structures and utility connections;
- Attachments to the land (crops, trees, vineyards and other tangibles)
- Livelihoods.

Based on the preliminary design and geodetic survey conducted, complemented by field verification and confirmation from the cadastre, the Project execution will require permanent acquisition of land by using eminent domain power and expropriation in the total are of approximately 398.4 ha of different types of land, represented in 3440 land parcels and 72 physical structures in both municipalities Merošina and Prokuplje as the direct area of influence. The land record in Serbia is kept by cadastral municipalities (CM) and the impacts of land acquisition are spread over 28 CM whilst resettlement is occurring in 14 CM. The inventory of CM per type of impact is presented in table below.

Table 44 Summary of impacts and mitigation measures - Tourism: Overview of impacted Cadastral Municipalities due to physical relocation and impacts on non-residential structures

MUNICIPALITY MEROŠINA	MUNICIPALITY PROKUPLJE
CM Gradište	CM Nova Božurna
CM Brest	CM Djurovac
CM Merošina	CM Donja Stražava
CM Baličevac	CM Prokuplje Grad
CM Arbanasce	CM Prokuplje
CM Jug Bogdanovac	CM Gubetin
	CM Potočić
	CM Donja Konjuša

Table 45 Overview of impacted Cadastral Municipalities impacted by land acquisition

Municipality	Cadastral Municipality	Number of parcels per municipality	
Merošina	Balajnac	206	
Merošina	Gradište	182	
Merošina	Brest	93	
Merošina	Merošina	21	
Merošina	Baličevac	611	
Merošina	Lepaja	4	
Merošina	Jug Bogdanovac	41	
Merošina	Arbanasce	221	Total I: 1379
Prokuplje	Nova Božurna	66	
Prokuplje	Pojate	36	
Prokuplje	Djurovac	28	
Prokuplje	Donja Stražava	114	
Prokuplje	Prokuplje grad	78	
Prokuplje	Prokuplje	311	
Prokuplje	Bela voda	103	
Prokuplje	Djukovac	180	
Prokuplje	Gubetin	109	
Prokuplje	Potočić	176	
Prokuplje	Donja Toponica	20	
Prokuplje	Mala Plana	58	
Prokuplje	Drenovac	120	
Prokuplje	Prekadin	16	
Prokuplje	Bresničić	221	
Prokuplje	Kondželj	128	
Prokuplje	Donja Konjuša	67	
Prokuplje	Viča	71	
Prokuplje	Tulare	139	Total II 2041
Kuršumlja	Donje Točane	20	Total III 20
Grand Total Number of land parcels TTL1+TTL2+TTL3			3440

The alignment does not influence the the most productive land which is spread mainly on the alluvial plains, river terraces and moderately steep and sunny slopes of Jastrebac Mountain away from the physical footprint of the Project. Large vineyards, either as part of the vinery itself or as fruit bearing complexes are not impacted.

The patterns of use indicate that 77% of arable land comprises plough land and gardens, 5% of land is under grain cultivation, and the remaining land is under vegetable production. This area has not been subject to the agricultural reform and process of merging small land parcels (in Serbian legislation known as "komasacija" - land consolidation). This explains the large number of small individual land parcels impacted which is not entirely commensurate with the physical footprint of the project. For example, in other recent comparable infrastructure Projects the number of parcels was 30% lower for an alignment 6 time longer.

The assessment of impact in terms of the area of land needed is indicative and approximate since the exact area is dependent to the completion of design for expropriation when the exact amount of land will be known. However, the impact shall be smaller than the one approximated in this chapter since the detailed design for expropriation will prepare the land plan schedule and identify the extent to which each parcel is needed for the Project by identifying the exact area. Notwithstanding, the mitigation measures described further in this chapter shall equally apply and cover all impacts regardless of the area of land acquired and loss of assets attached thereto.

The assessment identified 72 physical structures occupying a total area of 13679 m² to be impacted by the development. By disaggregation per actual use of structures it has been identified that 60 residential structures for dwelling, 10 ancillary structures such as barns, 10 storage houses, pig stays, outdoor WC, 1 local football stadium, 1 swimming pool are impacted. The table below gives an overview of impacted physical structures by size, type and section.

Table 46 Physical structures by size and type pattern

Overview of structure size pattern	m ²	Overview of structure type	No of structures	Overview of impact per sections	No of structures
Total area impacted by expropriation	13679	Total area impacted by expropriation	72	Section I	1
Average area	198,24	Residential purposes	60	Section II	6
Smallest area	11	Ancillary structures (Barns, shacks, pig stays, bunkers and ...)	10	Section III	50
Largest area	5321	Recreational purposes	2	Section IV	3
				Section V	12

The total number of private owners affected by permanent land acquisition, their disaggregation by gender was not available at this stage.

The development of the Project is divided into 5 Sections. The distribution of impacts across the sections is not unified and as presented in the above table and ranges from minor impacts on 1 structure at section I, to 50 structures at section III. This distribution is easily explained by the actual position of the planned Highway. Section I follows the alignment of the existing road in a length of 5 km and is executed mainly within the right of way for one carriageway, whereas Section III passes through the broader periphery of Prokuplje, a part of a settlement with a relatively high density of structure common in this part of Serbia.

The inventory of impacts on physical structures presented per sections and land plots is presented in tables below.

Table 47 Inventory of impacted structures per sections

SECTION I, NIŠ(South)-MEROŠINA, km 0+000-km 5+500, L=5.5km Structures impacted							
No	Municipality	Cadastral Municipality	Cadastral Parcel	Area	Total area of parcel (m2)	Structure - Total area impacted (m2)	Comments
1	Merošina	Gradište	654/1	42	1038	42	Informal structure

SECTION II, MEROŠINA-PROKUPLJE (East), km 5+500 - km 17+100, L=11.6km							
No	Municipality	Cadastral Municipality	Cadastral Parcel	Area	Total area of parcel (m2)	Structure - Total area impacted (m2)	Comments
1	Merošina	Brest	2796	63	6642	63	Residential Structure not registered in Cadastre
2	Merošina	Baličevac	1359	588	2326	588	Greenhouse - used for agriculture production
3	Merošina	Baličevac	964/1	314	2987	314	The area includes the terrace, residential structure
				90		90	Ancillary structure
				55		55	Swimming pool
4	Merošina	Arbanasce	1306/1, 1306/2, 1306/3, 1306/4, 1307	5321	7570	5321	Local informal football stadium located on private land
5	Merošina	Arbanasce	1306/8	130	331	130	Uncategorized structure owned by the agricultural institute
6	Merošina	Arbanasce	1306/7	201	519	519	Abandoned structure ruined
7	Prokuplje	Nova Božurna	178/10	79	511	79	Residential structure
				43		43	Ancillary structure

SECTION III, PROKUPLJE (East)-PROKUPLJE (West), km 17+100 - km 23+700, L=6.6km							
No	Municipality	Cadastral Municipality	Cadastral Parcel	Area	Total area of parcel (m2)	Structure - Total area impacted (m2)	Comments
8	Prokuplje	Donja Stražava	378/4	40	2721	40	Residential structure informal
9	Prokuplje	Prokuplje grad	71/2	239	5786	239	Registered structure Veterinarian institute
				135		135	Informal structure Veterinarian institute
10	Prokuplje	Prokuplje grad	61/2	69	649	69	Residential structure with building permit
11	Prokuplje	Prokuplje grad	73/3	106	1420	106	Residential structure
12	Prokuplje	Prokuplje grad	68/1	14	1833	14	Ancillary structure
13	Prokuplje	Prokuplje grad	56/2	108	782	108	Residential Structure
14	Prokuplje	Prokuplje grad	47/6	79	776	79	Informal structure not registered
				123		123	Informal structure not registered
15	Prokuplje	Prokuplje grad	45	84	3489	84	Residential Structure with building permit
				43		43	Ancillary structure
16	Prokuplje	Prokuplje grad	46/1	115	300	115	Residential Structure informal without building permit
10	Prokuplje	Prokuplje grad	5/2	85	465	85	Residential Structure informal without building permit
				16		16	Ancillary structure
16	Prokuplje	Prokuplje grad	1	139	9966	139	Residential Structure informal without building permit
17	Prokuplje	Prokuplje	2020/17	61	578	61	Residential Structure informal without building permit
18	Prokuplje	Prokuplje	2021/4	83	590	83	Residential Structure with building permit
				83		83	Residential Structure informal without building permit
				48		48	Residential structure without building permit not

SECTION III, PROKUPLJE (East)-PROKUPLJE (West), km 17+100 - km 23+700, L=6.6km							
No	Municipality	Cadastral Municipality	Cadastral Parcel	Area	Total area of parcel (m2)	Structure - Total area impacted (m2)	Comments
							registered in the cadastre
19	Prokuplje	Prokuplje	2022	86	2443	86	Residential structure without building permit not registered in the cadastre
20	Prokuplje	Prokuplje grad	6/2	64	551	64	Residential structure without building permit not registered in the cadastre
21	Prokuplje	Prokuplje grad	6/3	102	432	102	Residential structure without building permit not registered in the cadastre
22	Prokuplje	Prokuplje grad	7/2	55	518	55	Residential structure without building permit
				16			
23	Prokuplje	Prokuplje grad	7/1	82	4702	82	Residential structure without building permit
24	Prokuplje	Prokuplje grad	8/2	101	745	101	Residential structure without building permit
25	Prokuplje	Prokuplje	2235/2	112	782	112	Residential structure without building permit
26	Prokuplje	Prokuplje	2235/3	99	1014	99	Residential structure
27	Prokuplje	Prokuplje	2235/1	174	480	174	Residential structure without building permit
28	Prokuplje	Prokuplje	2235/4	94	633	94	Residential structure without building permit
29	Prokuplje	Prokuplje	2229/4	42	595	42	Residential structure without building permit
30	Prokuplje	Prokuplje	2229/2	11	987	11	Ancillary structure/shack
31	Prokuplje	Prokuplje	2215/5	30	410	30	Ancillary structure/shack
32	Prokuplje	Prokuplje	2216/6	14	869	14	Ancillary structure/shack
33	Prokuplje	Prokuplje	2216/6	14	869	14	Ancillary structure/shack
34	Prokuplje	Prokuplje	2216/6	14	869	14	

SECTION III, PROKUPLJE (East)-PROKUPLJE (West), km 17+100 - km 23+700, L=6.6km							
No	Municipality	Cadastral Municipality	Cadastral Parcel	Area	Total area of parcel (m2)	Structure - Total area impacted (m2)	Comments
							Ancillary structure/shack
35	Prokuplje	Prokuplje	2187	69	1549	69	Residential structure without building permit
				45		45	Barn
36	Prokuplje	Prokuplje	2561/3	57	3329	57	Residential structure without building permit
37	Prokuplje	Prokuplje	2566/4	104	2608	104	Residential structure without building permit
38	Prokuplje	Prokuplje	2668/3	72	738	72	Residential structure without building permit
39	Prokuplje	Prokuplje	2668/2	50	734	50	Residential structure without building permit
40	Prokuplje	Prokuplje	4469/3	86	254	86	Residential structure without building permit
41	Prokuplje	Prokuplje	4468	48	1144	48	Residential structure without building permit
42	Prokuplje	Prokuplje	4469/2	40	865	40	Ancillary structure
43	Prokuplje	Prokuplje	4469/1	117	3142	117	Residential structure without building permit
44	Prokuplje	Prokuplje	4470/2	39	2538	39	Residential structure without building permit
45	Prokuplje	Prokuplje	4470/2	50	892	50	Residential structure without building permit
				38		38	Residential structure without building permit
46	Prokuplje	Prokuplje	4446	85	8155	85	Residential structure
47	Prokuplje	Prokuplje	4530	98	1524	98	Residential structure
48	Prokuplje	Prokuplje	4532 and 4530	80	1524	80	Residential structure
49	Prokuplje	Prokuplje	4534/4	159	4376	159	Residential structure without building permit

SECTION III, PROKUPLJE (East)-PROKUPLJE (West), km 17+100 - km 23+700, L=6.6km							
No	Municipality	Cadastral Municipality	Cadastral Parcel	Area	Total area of parcel (m2)	Structure - Total area impacted (m2)	Comments
50	Prokuplje	Prokuplje	4381	118	748	118	Residential structure without building permit
51	Prokuplje	Prokuplje	4383/1	143	307	143	Residential structure without building permit
51	Prokuplje	Prokuplje	4382/2	175	1866	175	Residential /Commercial structure without building permit
52	Prokuplje	Prokuplje	4383/3	119	220	119	Residential structure without building permit
53	Prokuplje	Prokuplje	4342	58	9688	58	Bunker
54	Prokuplje	Prokuplje	6392/2	49	20198	49	Bunker
55	Prokuplje	Bela Voda	280/1 and 280/2	91	1519	91	Residential Structure
				63		63	Ancillary structure
				89		89	Ancillary structure
SECTION IV, PROKUPLJE (West) - BELOJIN, km 23+700 - km 32+000, L=8.5km							
No	Municipality	Cadastral Municipality	Cadastral Parcel	Area	Total area of parcel (m2)	Structure - Total area impacted (m2)	Comments
56	Prokuplje	Prokuplje	4264	79	10396	79	Ancillary structure
				71		71	Residential structure without building permit
57	Prokuplje	Gubetin	157	34	780	34	Residential structure without building permit
58	Prokuplje	Potočić	2050	90	856	90	Residential structure with building permit
				6		6	Shack

SECTION V, BELOLJIN - PLOČNIK, km 32+000 - km 39+300, L=7.3km							
No	Municipality	Cadastral Municipality	Cadastral Parcel	Area	Total area of parcel (m2)	Structure - Total area impacted (m2)	Comments
59	Prokuplje	Donja Konjuša	387	73	2899	73	Residential structure without building permit
				50		50	Ancillary structure
				74		74	Ancillary structure
60	Prokuplje	Donja Konjuša	384/2	86	1009	86	pig stay
				78		78	Garage
61	Prokuplje	Donja Konjuša	445	108	487	108	Residential structure with building permit
				72		72	Residential structure without building permit
62	Prokuplje	Donja Konjuša	446	49	1028	49	Ruined structure
63	Prokuplje	Donja Konjuša	444	242	1443	242	Ruined structure
64	Prokuplje	Donja Konjuša	447/1	12	508	12	Ruined structure
	Prokuplje			62		62	Ruined Barn
65	Prokuplje	Donja Konjuša	447/2	70	647	70	Residential structure without building permit
				25		25	Ancillary structure
66	Prokuplje	Donja Konjuša	1706/5	53	53	53	Residential structure
67	Prokuplje	Donja Konjuša	1706/2	162	162	162	Railway station
68	Prokuplje	Donja Konjuša	1706/1	33	50321	33	Shack

Table 48 Affected land per type

Type of land affected	%
Fertile field (uncultivated) first class	45
Construction land	2
Unfertile	15
Meadows	9
Orchards	10
Other	19
Total	100

13.5.1 Summary of impacts - Land acquisition and Resettlement

Pre-Construction Phase impacts

Loss of agricultural land.
Loss of construction land.
Loss of annual crops.
Loss of perennial crops.
Loss of other assets attached to the land.
Physical displacement (relocation).
Loss of Ancillary structures and utility connections.
Loss of business.
Loss of livelihoods.
Damage to assets during construction works.

Table 49 Summary of Impact and Mitigation/ Enhancement measures- Land acquisition and Resettlement

Impact	Receptor	Receptor Sensitivity	Impact Categorization	Magnitude of Impact	Spatial, Temporal dimension and likelihood	Mitigation/Enhancement Measures	Responsibility	Management Plans, Policies and Procedures	Residual Effect Significance
Loss of Land	PAPs	Moderate	Negative	Major	Local Permanent Certain	Compensation at full replacement cost including transaction costs/ taxes or Replacement land and additional assistance before displacement or imposition of access restrictions. Data on economic and socioeconomic conditions of displaced persons must always be sex disaggregated and include gender analysis specifically related to resettlement impacts and risks	Promoter	SEP Gender-inclusive consultation, information disclosure, and grievance mechanisms RPF RAP/ARAP Socio-economic survey Asset survey and full inventory of PAPs	Negligible
Physical displacement (relocation or loss of shelter)	PAPs	Moderate	Negative	Major	Local Permanent Certain	Choice of replacement property of equal or higher value, or cash compensation at full replacement value where appropriate. Include gender analysis specifically related to resettlement impacts and risks. Data on economic and sociocultural conditions of displaced persons must always be sex disaggregated	Promoter	SEP RPF ARAP/RAP Socio-economic survey Asset survey and full inventory gender-inclusive consultation, information disclosure, and grievance mechanisms	Negligible

Impact	Receptor	Receptor Sensitivity	Impact Categorization	Magnitude of Impact	Spatial, Temporal dimension and likelihood	Mitigation/Enhancement Measures	Responsibility	Management Plans, Policies and Procedures	Residual Effect Significance
Economic displacement (loss of assets or resources, and/or loss of access to assets or resources that leads to loss of income sources or means of livelihood)	PAPs	Moderate	Negative	Major	Local Permanent Certain	Compensate economically displaced persons for loss of assets or access to assets. This process should be initiated prior to displacement. Include gender analysis specifically related to resettlement impacts and risks. Data on economic and sociocultural conditions of displaced persons must always be sex disaggregated	Promoter	SEP RPF ARAP/RAP Socio-economic survey gender-inclusive consultation, information disclosure, and grievance mechanisms	Negligible
Loss of commercial structures	PAPs	Moderate	Negative		Local Permanent Certain	Compensation to establishing commercial activities elsewhere; (ii) lost net income during the period of transition; and (iii) the costs of the transfer and reinstallation of the plant, machinery or other equipment, as applicable. Provide additional targeted assistance include gender analysis specifically related to resettlement impacts and risks Provide transitional allowance. Data on economic and sociocultural conditions of	Promoter	SEP RPF ARAP/RAP Socio-economic survey gender-inclusive consultation, information disclosure, and grievance mechanisms	Negligible

Impact	Receptor	Receptor Sensitivity	Impact Categorization	Magnitude of Impact	Spatial, Temporal dimension and likelihood	Mitigation/Enhancement Measures	Responsibility	Management Plans, Policies and Procedures	Residual Effect Significance
						displaced persons must always be sex disaggregated			
Loss of livelihood	PAPs	Moderate	Negative	Major	Local Permanent Certain	Restore the livelihoods and standards of living of displaced persons to pre-project levels, through measures that can be enterprise based, wage-based and/or enterprise based, so as to facilitate sustainable improvements to their socio-economic status	Promoter	RPF SEP ARAP/RAP Socio-economic survey gender-inclusive consultation, information disclosure, and grievance mechanisms	Negligible
Loss of crops (annual, perennial)	PAPs	Moderate	Negative	Major	Local Permanent Certain	Compensate for loss at replacement cost	Promoter	RPF ARAP/RAP Socio-economic survey gender-inclusive consultation, information disclosure, and grievance mechanisms	Negligible
Damage to properties during construction	PAPs and Communities	Moderate	Negative	Major	Local to Regional Short-term Unlikely	Any damage inflicted shall be assessed and valuated and compensated at replacement cost or replacement of asset if in cash compensation is not suitable	Contractor Supervising Engineer	Insurance Policy Grievance mechanism National judicial mechanism	Negligible

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14 Social Impact During Construction Phase

14.1 Local overview and community support

Community support to the project is evident. If mitigation measures are implemented during the pre-construction phase the construction works should not commence in a different community spirit. However, the gained trust and support must be nurtured through ongoing stakeholder engagement and understanding of local context. Despite difference in views, particularly towards the second planned phase and the justification of connecting with Kosovo*, the community at large is supportive and customary tends to identify development opportunities with improvement of road infrastructure. This Project has not been “misused” in the past by political authorities and bears therefore no legacy weight. The support will be commensurate to the behaviour of the Contractor, Local Government, Supervising consultants and management of incidents, emerging issues during construction by all of the listed Stakeholders.

14.1.1 Summary of impacts - Local overview and community support

Construction Phase impacts
Continued expectation of the community to be engaged and informed. Continued expectations of benefits. Loss of support or indifference in case of adverse breach of contractual obligation, traditional norms, local customs etc. Legacy issues. Changes in community dynamics. Familiarization with the local communities way of living, daily habits, and anecdotal acceptable and unacceptable behaviour.

Table 50 Summary of Impact and Mitigation/ Enhancement measures - Local overview and community support

Impact	Receptor	Receptor Sensitivity	Impact Categorization	Magnitude of Impact	Spatial, Temporal dimension and likelihood	Mitigation/Enhancement Measures	Responsibility	Management Plans, Policies and Procedures	Residual Effect Significance
Continued Expectation of benefits related to the Project	Local Communities	Moderate	Negative	Moderate	Local Regional Long-term to permanent Certain	Manage expectations and avoid an express assurance on which expectation is to be based. Implement Transparency	Contractor Promoter	Stakeholder Engagement Plan	Negligible
Legacy issues	Local Community	Low	Negative	Negligible	Local Short-term Unlikely	Identify in an early stage any potential issues from the past which could amplify any negative impact	Contractor	Stakeholder engagement plan	Negligible
Loss of support and reputation risk	Project	High	Negative	Moderate	Local Long-term t permanent	Adhere to the commitment to the Project. Keep the community a Partner in development	Contractor	Stakeholder Engagement Plan	Negligible
Loss of support and project risk	Project	High	Negative	Negligible	Local Long-term to permanent	Respect all provision of the safeguard tools. Adhere to any obligation set out therein,	Contractor	Stakeholder Engagement Plan	Negligible

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14.2 Temporary worker influx and population change

The influx of workers and subsequently followers is not expected to be large and is not expected to have adverse social impacts on the two local communities. Many of the impacts associated with influx are broadly identified but will become fully known once a Contractor has been appointed and decides on sourcing the necessary labour force.

The impacts associated with even the minor influx anticipated may include the following:

- increased demand and competition for local social and health services,
- Increased demand for goods and services,
- Increase of prices as a result of increased demand
- increased volume of traffic and higher risk of accidents,
- increased demands on the ecosystem and natural resources,
- social conflicts within and between communities,
- increased risk of spread of communicable diseases,
- Increased risk of spread of STD and HIV/AIDS
- Increased pressure on accommodations and rents and induced price hikes affecting the receptor
- Increased number of traffic accidents
- Gender based violence/ Fraternization
- Social tension and violence
- Increased risk of illicit behavior crime (including prostitution, theft and substance abuse).

The magnitude of these individual impacts have been assessed as minor and are proportionate to the local absorption ability which can either amplify or reduce the impacts and are in the study area such to reduce them.

Many of the impacts are identified but are largely dependent to the Contractor its Policies and overall social cohesion skills only to be known once the contractor is appointed and the Project commences. Thus, measures defined in this impact assessment, and set out as requirements in the contract will be on the shoulders of the Contractor to be implemented.

The Influx is in general assessed as negative and complex as it links and overlaps with numerous other themes- Based on available knowledge a rapid assessment of capacity of locally available pool of workforce was conducted. Since no Project specific data were available the assessment was based on the best of knowledge by comparison of latest similar regional projects,

Based on comparable data on infrastructure Projects of similar size, scope and time for completion, implemented and developed during the past three years in Serbia, with similar complexity and surface terrain (excluding the geological conditions) it is roughly assessed that Construction works will most likely require a

minimum of 20 Engineer, 300 direct workers and 60 indirect workers including office backstopping.

In addition to the above initial assessment it was not possible to conduct the in depth and detailed screening as part of the SIA since the information necessary for effective screening was not available. The information relate to the exact size of the Project in terms of quantity of works, the duration of construction (and possible stages) likely number of contractors and sub-contractors. Such in depth screening should be conducted prior to tendering of the works to include results from the screening and turn them into requirements for the Contractor through the Bidding documents, ESMP, the Employment Plan and other as appropriate. The screening should be based on, but not limited to, the following set of questions:

1. Will the project potentially involve an influx of workers to the project location, and will the influx be considered significant for the local community?
 - How many workers will be needed for the project, with what skill set, and for what period?
 - Can the project hire workers from the local workforce?
 - What is the size and skill level of the existing local workforce?
 - If the skill level of the local workforce does not match the needs of the project, can they be trained within a reasonable timeframe to meet project requirements?
 - How will the workers be accommodated? Will they commute or reside on site? If so, what size of camp will be required?
2. Is the project located in an urban or rural area?
 - What is the size of local population in the project area?
 - Is the project carried out in an area that is not used to outsiders?
 - What would the nature and frequency of contact between the locals and influx persons be?
 - Are there any sensitive, vulnerable social groups?
3. Based on the socioeconomic, cultural, religious and demographic qualities of the local community and the incoming workers, is there a possibility that their presence or interaction with the local community could create adverse impacts?

Below are the results of the rapid assessment in assistance with the local Employment Service in Prokuplje and Niš.

Table 51 Overview of available pool of workforce in Prokuplje

Occupation	Education degree	Prokuplje		Blace, Kuršumlja, Žitorađa (within the daily migration)	
		Total	Women	Total	Women
Civil Engineers	VII	1	0	2	0
Specialist for construction works Engineer	VII	0	0	1	1
Master civil Engineer (VII - 1 SSS)	VII	4	2	1	0
CiVil ENgineer (VI - 1 SSS)	VI	1	0	2	0
Construction tehnicion (IV SSS)	IV	4	0	8	3
Road construction technician	IV	4	2	5	3

Occupation	Education degree	Prokuplje		Blace, Kuršumlija, Žitorađa (within the daily migration)	
		Total	Women	Total	Women
Survey Engineer	VII	0	0	0	0
Survey technician (IV SSS)	IV	1	1	3	1
Surveyer	IV	6	2	3	3
Construction worker	III	2	0	6	0
Assistant construction worker	II	9	0	2	0
Construction equipment operator	III	3	0	11	0
Mason	III	2	0	6	0
Reinforcement placer	III	2	0	2	0
Administrative technician		1	1	3	2

Not listed in the table are approximately 2907 person without any formal vocation, with elementary and partly completed high school from which pool about 500-700 persons could be engaged directly during the construction works. The Employment Service offers a number of tools to assist the future Employer and the Contractor should rely on this assistance heavily. This assistance includes performance of skill and capacity tests, initial selection of appropriate candidates, organizing interviews, physiological evaluation for high risk positions, organizing health examinations for special positions etc.

Table 52 Overview of available pool of workforce in Merošina and Niš¹⁵⁶

Occupation	Education degree	Merošina		Niš (Doljevac, Niška Banja) Within daily migration routes	
		Total	Women	Total	Women
Civil Engineers	VII	1	1	87	34
Specialist for construction works Engineer	VII	0	0	9	3
Master civil Engineer (VII - 1 SSS)	VII	1	1	41	12
Civil Engineer (VI - 1 SSS)	VI	0	0	9	2
Construction technician (IV SSS)	IV	12	6	335	122
Road construction technician	IV	2	2	148	53
Survey Engineer	VII	0	0	3	0
Survey technician (IV SSS)	IV	1	1	3	1
Surveyer	IV	1	0	66	35
Construction worker	III	9	0	104	3
Assistant construction worker	II	9	0	2	0
Construction equipment operator	III	6	0	85	0
Mason	III	1	0	32	0

¹⁵⁶ From Niš only persons with daily commuting possibilities to engage in construction activities have been included

Occupation	Education degree	Merošina		Niš (Doljevac, Niška Banja) Within daily migration routes	
		Total	Women	Total	Women
Reinforcement placer	III	1	0	10	0
Administrative technician		5	5	77	64

Not listed in the table are approximately 2885 men from Niš and 438 in Merošina without any formal vocation, with elementary and partly completed high school from which pool 1/3 could be engaged directly for the construction works. The Employment Service offers a number of tools to assist the future Employer and the Contractor should rely on this assistance heavily. This assistance includes performance of skill and capacity tests, initial selection of appropriate candidates, organizing interviews, physiological evaluation for high risk positions, organizing health examinations for special positions etc.

Despite the fact the above presented initial screening will be elaborated in detail at a later stage, in general, it was concluded that the arrival of new workers will have minor impacts and that the absorption capacity is high. Nonetheless, appropriate mitigation measures shall be taken into account.

The focus shall be on the prevention side to avoid hostile interaction between the receptor communities and the in-migrants. In addition lesson learned show that employment opportunities could be transformed into opportunistic behaviour among empowered locals (including employment centres, agencies etc.). Therefore The Contractor shall be contractually obliged to prepare an Employment Plan with transparent employment procedures, hiring workers through the official Employment Services or recruitment offices, and make use of their support tools, and avoid hiring “at the gate” and the obligation to cooperate with the implementing agency and local authorities on hiring issues. The Contractor shall draw on the screening results and tap into the local works force to the extent skilled workforce is available.

The analysis of the baseline conditions were cross referenced to the risk factors. The risk factors considered where the institutional capacity of the implementing agency, high volume labour influx, pre-existing social conflict and tensions, weak local law enforcement, and prevalence of gender-based violence, local prevalence of child and forced labour. The in depth analysis of the risk factors resulted in the conclusion that it is a low risk environment that can be managed through the broad requirements to be set forth in the contract specific ESMP and there is no need to develop a more specialized instrument.

The local law enforcement officers have confirmed the absorption capacity to be high and in the position to adequately respond to the assessed influx. They further confirmed that the latest Syria Refugee crisis had no impact in influx of migrants nor was the study area part of the transit corridor thus eliminating a combined and cumulative risk factor environment.

14.2.1 Summary of impact - Temporary worker influx and population change

Construction Phase impacts
Influx of workers. Influx of followers in anticipation of benefits related to the Project. Pressure on local services Impacts on community dynamics. Increased risk of communicable diseases, STD and HIV /AIDS. Gender based violence. Social tension and conflicts. Increased prices of services and goods due to higher demand.

Table 53 Summary of impacts and mitigation measures - Temporary worker influx and population change

Impact	Receptor	Receptor Sensitivity	Impact Categorization	Magnitude of Impact	Spatial, Temporal dimension and likelihood	Mitigation/Enhancement Measures	Responsibility	Management Plans, Policies and Procedures	Residual Effect Significance
Influx of workforce	Local Communities	Low	Negative	Moderate	Local Long-term Likely	Avoid or reduce influx by tapping into the local pool of workforce. Screening of capacity of locally available pool of workforce. Assess and manage labour influx. Incorporate social mitigation measures into the civil works contract (Through the PCC) Ensure supervision engineer's responsibilities regarding oversight of, and reporting on, labour influx and workers' camps (if any)	Contractor Promoter Local Government Supervision Engineer	Stakeholder Engagement Plan. ESMP Bidding documents. Initial screening on whether the project will require influx. ToR for procurement of supervision Engineer	Negligible
Influx of followers, spontaneous job seekers	Local Communities	Low	Negative	Moderate	Local Short-term Unlikely	Contractor to hire workers through recruitment offices and avoid hiring "at the gate" to discourage spontaneous influx of job seekers, Local government to address this additional influx of the "followers" to ensure that no illegal and unsafe settlements develop	Contractor Supervision Engineer	ESMP Employment Plan	Negligible
Pressure on local public services	Local service provider	Low	Negative	Moderate	Local Short-term Unlikely	Liaison with local services to keep track of changes in capacity of local services in	Local Government	ESMP	Negligible

Impact	Receptor	Receptor Sensitivity	Impact Categorization	Magnitude of Impact	Spatial, Temporal dimension and likelihood	Mitigation/Enhancement Measures	Responsibility	Management Plans, Policies and Procedures	Residual Effect Significance
						respect to anticipated influx. Contingency plans for temporary rise in demand for utilities and Public service provision.			
Impacts on community dynamics existing social conflicts may intensify	Local communities	Low	Negative	Negligible	Local Temporary Highly unlikely	Liaison with civil society and local Law enforcement organizations to create integrative action plans; provision of upfront information on potentially impacts on local communities Measures to reduce incentives for mixing with local community	Contractor Local Law enforcement	ESMP Awareness raising program amongst workers Preventive measures of increased awareness	Negligible
Increased risk of communicable diseases specially amongst the vulnerable and burden on local health services	Local communities Vulnerable Local health services	Low	Negative	Minor	Local Short-term Highly unlikely	Implementation of CD and HIV/AIDS education program; Information campaigns on STDs among the workers and local community; Special education program for the Roma population Education about the transmission of diseases; Provision of condoms. designated as contractor responsibility);	Contractor Local health service provider	ESMP Health and Safety Plan	Negligible

Impact	Receptor	Receptor Sensitivity	Impact Categorization	Magnitude of Impact	Spatial, Temporal dimension and likelihood	Mitigation/Enhancement Measures	Responsibility	Management Plans, Policies and Procedures	Residual Effect Significance
						Monitoring of local population health data, in particular for Transmissible diseases.			
Increased pressure on accommodations and rents and induced price hikes affecting the receptor	Local accommodation facilities Local communities	Moderate	Negative	Moderate	Local Short –term Unlikely	The in depth workforce assessment to include accommodation assessment	Promoter	Stakeholder Engagement Plan	Negligible
Increased number of traffic accidents	Local communities	Moderate	Negative	Moderate	Local Long-term Unlikely	Awareness training on health and safety during construction and due to increased traffic Distribute a road safety leaflet Preparation and implementation of a traffic management plan to be approved by supervision engineer; Organization of commute from camp to project to reduce traffic; Road safety training and defensive driving training for staff f; Sanctions for reckless driving	Contractor Local government and respective institutions	Community road safety awareness program Traffic management Plan Road safety leaflets	Negligible

Impact	Receptor	Receptor Sensitivity	Impact Categorization	Magnitude of Impact	Spatial, Temporal dimension and likelihood	Mitigation/Enhancement Measures	Responsibility	Management Plans, Policies and Procedures	Residual Effect Significance
						Local government engagement with contractor and communities to identify accident hotspots and Formulation of solutions.			
Gender based violence/ Fraternalization ¹⁵⁷	Women and girls	Moderate	Negative	Moderate	Local Long-term Unlikely	Mandatory and repeated training and awareness raising for the workforce about refraining from unacceptable conduct toward local community members, specifically women informing workers about national laws that make sexual harassment and gender based violence a punishable offence which is prosecuted; introducing a Worker Code of Conduct as	Contractor Supervising Engineer	Labour Contracts mandatory clauses Gender based violence prevention program	Negligible

¹⁵⁷ Fraternalization refers to conducting close social relations, which are considered inappropriate with people who are unrelated to one another. In the context of labor influx, this refers to incoming workers' pursuit of social contact, typically with female members of the local community

Impact	Receptor	Receptor Sensitivity	Impact Categorization	Magnitude of Impact	Spatial, Temporal dimension and likelihood	Mitigation/Enhancement Measures	Responsibility	Management Plans, Policies and Procedures	Residual Effect Significance
						part of the employment contract,			
Social tension and violence	Local receptor communities	Low	Negative	Negligible	Local Lon-term Unlikely	reinforcing local enforcement capacity to maintain public order after the influx, ensuring that. Complaints about gender-based violence to be taken seriously by local law enforcement, which may be supported by deploying female officers to the project area. Preventive training with workers to demonstrate the presence of government authority in the project area.	Contractor Local Law enforcement Local Government	Violence and tension prevention program	Negligible
Increased risk of illicit behaviour crime (including prostitution, theft and substance abuse)	Local communities	Low	Negative	Negligible	Local Long-term Unlikely	Paying adequate salaries for workers to reduce incentive for theft Paying salaries into workers' bank accounts rather than in cash for prevention of robbery. Police monitoring to prevent drugs trafficking; Sensitization campaigns both for workers and local communities.	Contractor Local Law Enforcement	The Labour Law ESMP	Negligible

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14.3 Gender

It is often wrongly assumed that infrastructure projects are gender neutral. However, the impacts are heavily dependent of the local context. While construction of local roads, or other micro infrastructure projects (street lighting, improvement and modernization of public transport, opening of new transport lines etc.) are more likely to easily distinct gender relevance construction of Highways are challenging the assessment. Acquired knowledge about the benchmark conditions of communities likely to be impacted by the project, and collected sex-disaggregated data have helped in determination of gender relevance and impact.

Prokuplje has a slight prevalence of women while Merošina is men prevalent. The assessment of impacts has shown that although different topics tend to worry women if not directly affect them differently they are rather unified amongst these two municipalities.

One of the topics differently comprehended is related to the impact from temporary influx of construction workers including the management team and road safety in general.

Women have shown great concern for transport routes of children commuting to and from school daily. Degradation of local infrastructure was also a significant concern. Children safety during construction works and the increased risk from incidents and accidents from heavy machinery and vehicles was at the top 5 concerns especially given the statistic that children during 2011-2015 were not involved in any fatal road accident in the study area. Therefore women have expressed the concern of a possible occurrence of accident influencing factors such as unsafe surrounding, increased traffic, influx of workers and potential substance abuse and driving under influence of alcohol.

Women have access to fewer transport choices and in the age between 50 -65 have a tendency to use public transport modalities over private motorized modes of transport. The study has shown that in households where there is a private car, men usually get priority for its use.

Women will more likely walk or cycle and understand that the construction of the Highway will not influence their walking and cycling paths but stay firm that this is a concern especially for women.

What has been expressed as a concern is the possible increase of price of public transport fares once the public transportation is diverted to the Highway. This impacts equally daily fair rates as well as monthly, and women have expressed their concerns for the students monthly tickets (elementary and high school) which should be subject of subsidies by the local Government but are often not due to the budget deficit and will after completion of the highway additionally burden the household budget.

The general impact as identified through the gender lens is the disruption of the women's travel patterns, typically influenced by the multiple tasks they are committed to for their household and the households of their parents and/or in-laws. Therefore mitigation measures should be designed to allow unhindered and timely performance of their activities. This includes traveling for work, childcare, school drop-off, and visits to health facilities both in Prokuplje, Merošina and Nis and daily shopping. Women have daily mobility patterns that are more complex than men, owing to their gender roles, which combine domestic and care giving tasks with paid employment, income-earning activities, and community and social obligations. It has been identified that women are primary family caregivers. Wearing these hat women identified that they accompany children to school and medical services in 8 out of 10 times and their parents or in-laws in 7 out of 10 cases. They are responsible to purchase household necessities and purchase fresh goods from markets and stores located in the municipal centers of Prokuplje and Merošina. During focus group discussions women have shared that they often combine daily chores and trips, and tend to make multiple stops for multiple purposes within one journey known as "trip chaining".

Daily mobility for non-wage employed women is mostly off-peak times to allow more effective completion of tasks and women have therefore expressed concern that construction works and disruption of traffic will not respect their needs and better comfort than travelling off-peak than during peak hours.

There are, as shown in the baseline, daily migrants are represented in 42,35 % in Merošina and 18,61% in Prokuplje. The wage-employed women are represented in daily migration trends by almost 25%. Therefore their concern was to keep an undisrupted travel route not to influence their timely arrival to the place of employment or back to their home. Disruption would influence their trip chains and in some cases even delay very important chorus which can be only u to a specific time of day. This is very evident with kindergarten working hours, pre-school and school (1st to 4th grades of elementary school- day care). These facilities have a working hour until 5 or 6 pm (the later one being in exceptionally cases). It is therefore very important not to disrupt public transportation timetables and transportation routes. Disruption of the routine is a trigger for stress for mothers as for children alike.

As for the opportunities to get employed under the Project women were less interested than man. They think of the construction sector to be male dominant and are more interested in the opportunity for their spouses to be employed or adult children. Women employment on this particular Project will be rather limited.

14.3.1 Summary of impacts - Gender

Construction Phase impacts
Temporary direct and indirect employment opportunities
Risk form violence and traffic safety risks from influx of workers
Degradation of local infrastructure
Walking and cycling path intersection
Increase of transport costs
Reduction in traveling time to access health services by rural and urban residence
Affordability of cost.
Employment for women.
Training for women to benefit from transport-related ancillary work
Improved safety and security among mobile women and girls during travel
Improved delivery of basic and extension services closer to home.
Disruption of daily migration routes.

Table 54 Summary of Impact and Mitigation/ Enhancement measures - Gender

Impact	Receptor	Receptor Sensitivity	Impact Categorization	Magnitude of Impact	Spatial, Temporal dimension and likelihood	Mitigation/Enhancement Measures	Responsibility	Management Plans, Policies and Procedures	Residual Effect Significance
Temporary direct and indirect employment opportunities	Women	High	Positive	Moderate	Local Long-term Unlikely	During assessment of available experts and workers in the local pool identify the positions suitable for women and those equally suitable for both sexes in order to identify possible available workforce. The employment Plan could set a quota of women to be hired under the Project	Contractor Promoter	Stakeholder Engagement Plan Employment Plan Assessment Report	Moderate
Risk from violence and traffic safety risks from influx of workers	Women and children	Moderate	Negative	Moderate	Local Long-term Unlikely	With the local law enforcement agree on increased measures of prevention of violence especially gender based, and conduct road and traffic safety awareness campaigns	Contractor Local law enforcements offices	Stakeholder engagement Plan Traffic Management plans	Moderate
Degradation of local infrastructure	Women	Moderate	Negative	Moderate	Local Long-term Uncertain	Adhere to the restriction of movement of construction vehicles and equipment through the local roads. Construct access roads for transportation of material and equipment. Contractually oblige the Contractor to bring to pre-construction stage and reconstruct any local infrastructure degraded in	Contractor Supervising Engineer for monitoring	Contract for Construction works	Negligible

Impact	Receptor	Receptor Sensitivity	Impact Categorization	Magnitude of Impact	Spatial, Temporal dimension and likelihood	Mitigation/Enhancement Measures	Responsibility	Management Plans, Policies and Procedures	Residual Effect Significance
						quality during construction works.			
Accessibility of health care	Women	Moderate	Negative	Moderate	Local Long –term Uncertain	Ensure undisrupted access to health care facilities by responsible management of traffic and disruption of routes only in close consultations with the communities	Contractor Supervising Engineer	Traffic Management Plan Stakeholder engagement Plan ESMP	Moderate
Accessibility of education for children	Women/children	High	Negative	Major	Local Lon-term Uncertain	Traffic management plan to take into account daily transportation timetable of children especially during the school year, September to December and February to June. This is to be done in coordination with the schools and transport provider	Contractor Supervising Engineer	Traffic Management Plan Stakeholder Engagement Plan ESMP	Negligible
Walking and cycling path intersection	Women	Moderate	Negative	Moderate	Local Long-term	Consult with women predominantly walking or cycling to attend to daily work and household chorus.	Contractor Supervising Engineer	Traffic Management Plan	Negligible
Increase of transport costs	Women	Moderate	Negative	Moderate	Local Permanent Likely	Broadly consult with community. Assess the impact of increased costs on livelihood	Local Government MCTI	Policy of subsidies or exemption from tolling	Moderate

Impact	Receptor	Receptor Sensitivity	Impact Categorization	Magnitude of Impact	Spatial, Temporal dimension and likelihood	Mitigation/Enhancement Measures	Responsibility	Management Plans, Policies and Procedures	Residual Effect Significance
Disruption of routes and schedules of public transport	Women	Moderate	Negative	Moderate	Local Long-term Uncertain	Provide adequate service routes and schedules of disruption commensurate to community dynamics	Contractor Supervising Engineer	Traffic Management Plan Stakeholder Engagement Plan	Negligible

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14.4 Education and skills

It is expected that there will be greater opportunities for on-the-job training and learning for the workforce on civil works during the construction of the Project. But in general, given the short timeframe for the construction phase there will be limited possibility for unskilled workers to develop other, new skills on the job.

In addition to training and experience at the level of individual workers, the Project could represent an opportunity for local sub-contractors smaller companies to tender for work on certain components of construction works. If and where such sub-contractor agreements are signed there will be the possibility for capacity enhancement and experience benefits from working on a major international project at highest safety and performance standards.

Summary of impacts - Education and skills

Construction Phase impacts
Development of skills. On –the-job training and learning. Opportunities for sub-contractors smaller companies to gain references. Opportunity to direct engage some vulnerable groups such as Roma

Table 55 Summary of impacts and Mitigation measures - Education and skills

Impact	Receptor	Receptor Sensitivity	Impact Categorization	Magnitude of Impact	Spatial, Temporal dimension and likelihood	Mitigation/Enhancement Measures	Responsibility	Management Plans, Policies and Procedures	Residual Effect Significance
Development of skills	Local workforce	High	Positive	Moderate	Local Long-term Certain	Promote during employment training programs to upgrade existing skills or add a new	Contractor	Employment Plan. Stakeholder Engagement Plan	Moderate
On-the-job training and learning	Local workforce	High	Positive	Moderate	Local Long-term Certain	Capacity enhancement during the construction works. Conduct on-going training during construction works.	Contractor	Employment Plan Labour Contracts	Negligible
Opportunities for sub-contractors smaller companies to gain references	Local companies	High	Positive	Moderate	Local Long-term Unlikely	During assessment of available workforce in the local pool announce the tentative services, works subject to possible sub-contracting so small companies can cooperate in order to maximize the opportunity	Contractor Local Government	Employment plan Stakeholder Engagement Plan	Moderate
Temporary employment and on-the-job training of vulnerable groups	Vulnerable groups particularly Roma population	High	Positive	Low	Local Long-term Unlikely	The Contractor shall explicitly include Roma community leaders in the advertisement effort for job openings and reflect this in his Employment Plan in collaboration with the Roma Association from Merošina and Prokuplje. Prior to that Roma community should be included during the in depth assessment of available local pool of workers	Contractor Local Government Promoter	Employment Plan Stakeholder Engagement Plan	Major

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14.5 Employment and Economy

The baseline has shown that the economic environment in general offers limited economic activities but with an increasing trend during the past two years.

The construction activities of the Project are likely to give the opportunity for new employment. However the announced new employment opportunities, and creation of 500 new positions, from one of the local business (Leoni Wiring system), already employing 2000 persons (11 % of the universe of unemployed in the impact area) might limit the positive impact on employment under this Project. Since the local business, with a sustainable orientation, employs in most of the cases under open-ended contracts, people already qualified or qualifying for this particular employment might hesitate in accepting employment for the construction works of the Project. The majority of new created jobs will be Project dependent. It is likely that, backstopping staff and skilled, semi-skilled and unskilled labour workers will be in demand. Practice shows that not all will be part of the contractors team initially (key staff excluded) but will be employed amongst the local population. The temporary employment opportunities will be mostly at the local level.

Although the share of men and women is almost equal in both impacted municipalities the share of unemployed women is higher in both municipalities. In addition the share of women with a university education is also less represented in this cluster.

It is during this period that the Project will need to hire workers and purchase goods and services, potentially resulting in positive impacts on the local economy. Temporary employment during the construction phase includes people directly employed by the contractor and sub-contractor for the construction works. It also includes jobs supplying the goods and services needed to support the construction process, including food and transport services and support staff in site offices.

The purchase of goods and services during construction will also generate some ancillary employment, mainly in the two municipalities Prokuplje and Merošina and with limited effect in smaller settlements close to the planned construction sites.

A temporary induced impact from worker and Project staff spending will be evident in the local area.

Influx of workforce, although minor, including the contractor's staff, and supervising engineer's staff will require accommodation. The accommodation will be partly in private accommodation facilities since only one hostel in the urban parts of the study area is functioning with limited capacity. To compensate lack of larger accommodation facilities such as hotels interest shall be focused to private flats and even houses adequately equipped which are available in the impacted municipalities. Accommodation for all workers and staff should be in the vicinity of the site to avoid additional stress from daily commuting and allow the development of the sense of space in respect to the construction site. A smaller number of site staff will seek accommodation in the nearby city of Nis a large urban centre with

several dozens of large hotels, hostels, private B&B etc. The accommodation will be income generating for the local communities. Not only accommodation but restaurants, laundry and other services will benefit from these changes in the community dynamics. Some restaurants will likely provide catering for daily meals on site as has been experienced in similar projects in the region.

The local spending and earning will most likely occur during this phase and are likely to be localized and short-term. The economy is likely to benefit from an increase in spending and earning of personnel employed by the Project and of households and individuals owning services and facilities in the area surrounding the Project. Temporary employment during the construction phase includes people directly employed by the primary contractor for the construction and upgrading of roads and infrastructure (pre-construction) and construction of the road and other project components. It also includes jobs supplying the goods and services needed to support the construction process, including food and transport services and support staff in site offices.

14.5.1 Summary of impacts - Employment and Economy

Construction Phase positive impacts
Temporary direct and indirect employment opportunities
Temporary economic impact from taxes and fees, procurement and worker spending
Long-term benefits of capacity enhancement (on-the-job, vocational training and formal training opportunities)
Economic benefits through direct, indirect and induced employment by Project activities
Payment of local taxes
Payment of Employment related fees and taxes at national level
Skill and Capacity Enhancement

Table 56 Summary of Impact and Mitigation/ Enhancement measures - Employment and Economy

Impact	Receptor	Receptor Sensitivity	Impact Categorization	Magnitude of Impact	Spatial, Temporal dimension and likelihood	Mitigation/Enhancement Measures	Responsibility	Management Plans, Policies and Procedures	Residual Effect Significance
Changes in tax income	National and Local Budget	Moderate	Positive	Moderate	Local and National Long-term Certain	Timely payment of all taxes, Tax payment awareness campaign Tax inspections	Contractor Tax Administration Office	National legislation Contract for construction works	Negligible
Changes in customs, duties and levies income	National and Local Budget	Moderate	Positive	Moderate	Local and National Long-term Certain	Timely payment of custom duties, and levies by the Contractor.	Contractor Tax administration office Custom offices	National legislation	Negligible
Changes in direct employment	Local Communities	High	Positive	Moderate	Local Long-term Certain	Maximize local employment, as defined in the Employment Plan Adhere to any Labour Management Plan and human resources policies that seek to establish fair, transparent and Equal opportunity employment. Identify opportunities to increase women's and Roma employment	Contractor Promoter	Labour Management Plan Grievance Procedure Employment Plan Stakeholder Engagement Plan	Moderate
Changes in indirect employment	Local communities	Moderate	Positive	Moderate	Local Long-term Certain	Maximize local indirect employment opportunities by sourcing local services and goods	Contractor Promoter	Local procurement plan	Moderate
Changes in procurement	Local service and goods provider	Moderate	Positive	Moderate	Local Long-term Certain	Maximize local indirect employment opportunities by sourcing local services and goods	Contractor Promoter	Local Procurement Plan	Moderate
Long-term benefits of capacity	Directly employed local workers	Moderate	Positive	Moderate	Local Long-term Certain	Identify and target specific skills gaps.	Contractor Supervision Consultant	HR Policies	Moderate

Impact	Receptor	Receptor Sensitivity	Impact Categorization	Magnitude of Impact	Spatial, Temporal dimension and likelihood	Mitigation/Enhancement Measures	Responsibility	Management Plans, Policies and Procedures	Residual Effect Significance
enhancement (on-the-job training opportunities)						Provides employees with hands-on learning. Focus on how well the employee is performing the required job skills in relation to specified performance standards and train to elevate the quality of performance		On the job training Program	
Opportunity for local suppliers and sub-contractors	Local suppliers of materials and goods and small companies from the industry	Moderate	Positive	Moderate	Local Short-term	Advance information on tendering opportunities will be provided to local businesses through trade and industry chambers and local business organisations. Transparent and competitive engagement policies	Contractor Industry chamber	Local Procurement plan SEP	Minor Moderate - Positive • Temporary impacts • Local purchasing by employees expected to be relatively minor; potentially larger
Opportunities for women	Local unemployed women or women seeking specific experience to enhance capacity	Moderate	Positive	Minor	Local Long-term Unlikely	The Project will identify female employment opportunities where possible and advertise them accordingly digging into the available pool of experts and workforce	Contractor Promoter	Employment Plan Contract for construction works SEP	

14.6 Infrastructure and utilities and public amenities

Direct collisions with existing infrastructure vary in significance and will have Moderate to major impact magnitude since the first 5,5 km of the new alignment, SECTION I, NIŠ(jug)-MEROŠINA, km 0+000-km 5+500, L=5.5km will follow the route of the exiting road towards Merošina and Prokuplje. Therefore the potential and most significant impact will stem from construction of this part of the alignment. The challenges on this section are particularly influenced by construction which will be conducted under traffic.

The perceptions and priorities of local residents about impacts are associated to the disruption to traffic and transportation due to road crossings if travel routes, increased car or bus travel times, long stand still of traffic during peak hours or even their fear that they will be forced to use the alternative road to Niš (as depicted in Figure 31) which is a deteriorated road with landslides on some parts narrowing the carriageway or increasing the risk during transport of sensitive vegetables and fruits to the markets, or children, elderly and person with health conditions.

Figure 36 Alternative road to Niš



Concerns regarding disruption to transportation routes were raised mainly in Merošina and communities where people rely heavily on poor quality roads for livelihood and access to services (e.g. emergencies, selling of produce, daily migration.). This makes it important for traffic of civilians but also for emergency transport of patients from Merošina and Prokuplje to the Clinical Centre in Niš. The traffic management plan during construction will have to take into account alternative for the 5 km section, to allow unhindered traffic flow during all times of the day, reduce traffic speed, limiting the working hours of works that could pose substantial impact on road users and the public, minimizing disruption during peak traffic periods, public holiday weekends and school holidays by limiting the extent of traffic management undertaken during these times, maintaining public access to affected properties.

The further concern is possible pressure on existing local utility supplies and short-term planned and unplanned disruption to drinking water. The major risk might be imposed due to increased water use on the construction sites for general activities, wet trades, groundworks, dust suppression, cleaning of tools etc. However the current knowledge of where water will be used on the construction sites and the volumes involved is limited and will be needed to be in detailed addressed in a later stage. General mitigation in eliminating water wastage should apply. As communicated by the local communities, during summer times the area experiences shortage of drinking and household water. It is therefore crucial the ESMP clearly shows the planned consumption and that the Contractor liaisons with the public water supply company to get directives and permissions as necessary to connect to the water supply system for the Construction site camp. Access to clean water is a basic human right as identified by the Universal Declaration of Human Rights and complemented by the UN Resolution 64/292¹⁵⁸ and will need to be considered from this perspective as well.

Disruption in supply of electricity is not anticipated as an impact from regular operations. However, since the design has identified the need to relocate transmission lines the relocation and disconnection from the network will not only be permitted by the relevant authority but will have to be disclosed to the community immediately after commencement of works clearly providing with the timeline of relocation, disconnection, duration of disconnection, impacts on electrical supply etc. The engagement of stakeholders and consultation for this impact will be most important with the health care facilities, since provision of care relies on electricity operated medical equipment and disruption of supply, for a longer period of time, if not agreed could lead to serious adverse impacts to people's health and more importantly lives (such as baby incubators, dialysis equipment, x rays, surgery rooms etc).

Disruption to infrastructure and utilities could result in impacts to livelihood or quality of life and if unmanaged could result in health impact (e.g. water restrictions, inability to pass roads in an emergency etc.). It would further lead to

¹⁵⁸ On 28 July 2010, through Resolution 64/292, the United Nations General Assembly explicitly recognized the human right to water and sanitation and acknowledged that clean drinking water and sanitation are essential to the realization of all human rights.

deterioration of the wellbeing and loss of social license to operate and community distrust.

The baseline identified that a cadastre of utilities does not exist and possible incidental collisions could be expected with uncharted utility networks such as optical cables for mobile networks, internet, and similar services. The ESMP will need to have clear emergency response measures provisions in such cases.

Electricity infrastructure in the social study area is satisfactorily developed, and apart from a few hamlets on Jastrebac Mountain, the remainder of the receptor communities are connected to the grid from a number of substations in the region, and reporting good accessibility to electricity and no problems in power supplies. The electricity supply to the Project area is sourced from a number of substations, and is generated from a variety of non-renewable sources. The increased consumption of electricity generated by the Project will not significantly impact the grid.

Increased demand for local services like restaurants, laundries, will not impact the communities since the absorption capacity is high and the increase commensurate with the anticipated influx will be easily addressed and provided under existing capacity and with available resources.

Increased demand for local accommodation is assessed to be minor since the anticipated influx of migrant workforce and followers will not be significant as in detail covered in relevant chapter.

14.6.1 Summary of impacts -Infrastructure and utilities and public amenities

Construction Phase impacts
Increased Project traffic (discussed in community health and safety) Road closures during construction and possible damage to existing road surfaces from heavy traffic Loads. Upgrade of existing secondary roads and creation of new small access roads in the proximity of the main working sites. Increased demand for local services: restaurants, laundries, etc. Increased demand for local accommodation. Potential increased demand of health services Increased demand of local utilities and services (e.g. electricity, waste sanitation) Collision with uncharted utilities Disruption and shortage in water supply.

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Table 57 Summary of Impact and Mitigation/ Enhancement measures - Infrastructure and utilities and public amenities

Impact	Receptor	Receptor Sensitivity	Impact Categorization	Magnitude of Impact	Spatial, Temporal dimension and likelihood	Mitigation/Enhancement Measures	Responsibility	Management Plans, Policies and Procedures	Residual Effect Significance
Temporary loss of, or access to, infrastructure or services;	Settlements near construction sites or along access roads; Households reliant on local services and infrastructure	High	Negative	Moderate	Local Long-term Unlikely	Inform local communities of program and sequence of works. Traffic Management plan Infrastructure and Utilities Management Plan; Emergency Response plan in respect to supply of water and electricity.	Contractor Supervising Engineer	SEP Traffic management plan Utilities management plan Emergency response plan	Negligible
Disruption of mobile providers or TV network , internet services due to collision with uncharted utilities	Settlements Households Provider of service	High	Negative	Moderate	Local Long-term Unlikely	Conduct a reconnaissance survey to identify possible location of uncharted utility and liaison with the Service providers to identify the location of uncharted utilities	Contractor	SEP Utilities Management Plan	Minor
Change in demand for services restaurants, laundry	Local Services Local communities	Moderate	Negative	Moderate	Local Long-term Unlikely	Promote equal distribution of increased demand for services thus equally sharing the benefits	Contractor Local Government	SEP Local procurement plan	Negligible
Change in water supply with possible shortage of water	Local communities Local public services (schools, hospital)	High	Negative	Major	Local Short to Long term Unlikely	Undertake water supply monitoring Liaison with water utility company regularly to design response plans and alternative water supply and prevent disruption in supply.	Contractor Supervising Engineer Local water company	Water supply management plan Assessment meetings with water companies Monitoring reports	Minor

Impact	Receptor	Receptor Sensitivity	Impact Categorization	Magnitude of Impact	Spatial, Temporal dimension and likelihood	Mitigation/Enhancement Measures	Responsibility	Management Plans, Policies and Procedures	Residual Effect Significance
						Exchange of information on water supply and monitoring results			
Disruption of electricity supply	Local Communities Local Health care services	High	Negative	Major	Local Short term	Undertake electricity supply monitoring. Liaison with Electricity supply company regularly to design response plans and alternative electricity supply to the most vulnerable users (hospitals) and prevent disruption in supply. Exchange of information on electricity supply and monitoring results	Contractor Supervision Engineer	SEP ESMP Emergency response Plan	Minor

14.7 Labour and working conditions

As presented in the relevant section covering impact on employment and economy development of the Project will create a demand for new employment, it will, depending on the available local pool of experts capacity, as assessed in relevant chapters induce minor influx of worker from other regions in Serbia, but potentially foreigners as well which is subject to the outcome of the evaluation of bid and award of contract for construction works. The employment, although project dependent, has been assessed as moderately positive. The Project is required to comply, at a minimum, with national labour, social security and occupational health and safety laws, and the fundamental principles and standards embodied in the ILO conventions¹⁵⁹.

The management of human resources and application of these paramount standards will be at several levels and shall equally apply to any contractor, subcontractor, and supplier of material and provider of services. In the absence of appropriate mitigation, this impact can seriously deteriorate the overall wellbeing of workers. The most important element of the wellbeing wheel is by far health care. Without formal registration of the employment workers will be deprived of health care in government supported health facilities and would have to rely on more expensive less accessible, for economic reasons, private sector health care providers. This is brought up since the informal employment is largely present in Serbia, especially with small companies and in the receptor community consumes 20% of the overall employment (compared to the 25% on State level). The informal labour was mentioned as a concern on all levels of consultations.

To mitigate any negative impact a Project specific Human Resources Management System (HRMS) will have to be developed and maintained.

As stated the local pool of workforce was broadly assessed and could not be assessed in depth since not all information were available (including skills and likely numbers of workers needed over the project cycle to assess the capacity of the local population to meet those workforce requirements either from its current base or as a result of training). Availability of absorption capacity in terms of accommodation and housing, in the initial broad assessment provided satisfactory outcomes and it is not anticipated that the workers will be accommodated in workers camps since the anticipated person year engagement needed will not be high. However, if camps would be required after all, the requirements for labour conditions and accommodation facilities compliant with the EBRD PR 2 and ILO Conventions shall apply. The contractor shall develop and submit for review and acceptance a Workers accommodation option plan which shall be part of the obligations under the Contract.

¹⁵⁹ International labour standards are legal instruments drawn up by the ILO's constituents (governments, employers and workers) and setting out basic principles and rights at work. There are Eight fundamental conventions

The requirements for workers camps shall include consideration of a safe and healthy location, application of appropriate construction standards, provision of adequate and sanitary living conditions and provision of appropriate leisure and health facilities.

If the accommodation should include workers with families (housing) then the following requirements will have to be met:

- minimum space allocated per person or per family,
- supply of safe water in the workers' dwelling in such quantities as to provide for all personal and household uses,
- adequate sewage and garbage disposal systems,
- appropriate protection against heat, cold, damp, noise, fire, and disease-carrying animals, and, in particular, insects,
- adequate sanitary and washing facilities, ventilation, cooking and storage facilities and natural and artificial lighting,
- a minimum degree of privacy both between individual persons within the household and for the members of the household against undue disturbance by external factors the suitable separation of rooms devoted to living purposes from quarters for animals.

Where accommodations are provided for single workers or workers separated from their

Families, additional housing standards should be considered:

- a separate bed for each worker
- separate gender accommodation
- adequate sanitary conveniences
- common dining rooms, canteens, rest and recreation rooms and health facilities, if not otherwise available in the community.

In terms of labour conditions and to allow equal opportunities for employment the Contractor shall adopt an Employment Plan to:

- prevent employment at gate,
- set minimum requirements of labour standards and conditions, and
- set clear and transparent employment requirements.

The EP as an umbrella document shall at minimum cover but no be limited to working conditions, Terms of employment; prevention of Child Labour, Forced Labour Workers organizations and right to organize;

The Employment Plan shall be disclosed and available to receptor communities in accordance to the Stakeholder engagement Plan.

Grievance mechanism for all workers (employees and non-employees) on Project sites should be made available to complement the nationally available panel to raise grievance and seek protection of rights. This mechanism should be commensurate to the number of workers. The contractor will inform the workers of

the grievance mechanism at the time of hiring, and make it easily accessible to them.

For non-employee workers engaged by the Contractor through sub-contractors or other intermediaries to work on project sites or perform work directly related to the core functions of the project, the reasonable efforts will be used to ascertain that these contractors or intermediaries are

reputable and legitimate enterprises; and require that they apply the requirements of human resource management, prevention of child labour, non-discrimination and equal opportunity, prevention of forced labour, wages, benefits and working conditions, workers organization in line with the national legislation and EBRD PR 2 and ILO conventions.

14.7.1 Summary of impacts - Labour and working conditions

Construction Phase impacts
Worker's rights, rules and obligations; Employment standards. Accommodation for workers.

Table 58 Summary of Impact and Mitigation/ Enhancement measures - Labour and working conditions

Impact	Receptor	Receptor Sensitivity	Impact Categorization	Magnitude of Impact	Spatial, Temporal dimension and likelihood	Mitigation/Enhancement Measures	Responsibility	Management Plans, Policies and Procedures	Residual Effect Significance
Worker's rights, rules and obligations	Workers	High	Negative	Major	Local Short to long-term Likely	comply, at a minimum, with national labour, social security and occupational health and safety laws, and (the fundamental principles and standards embodied in the ILO conventions	Contractor	Human Resources Management System Employment contracts National laws ILO conventions	Moderate
Employment standards	Workers	High	Negative	Major	Local Short to long-term Likely	comply, at a minimum, with national labour, social security and occupational health and safety laws, and (the fundamental principles and standards embodied in the ILO conventions	Contractor Supervision consultant	Human Resources Management System Employment Plan National laws ILO conventions	Moderate
Accommodation for workers	Workers	High	Negative	Major	Local Short to long-term Likely	On and off site adequate accommodation in line with requirements of EBRD PR 2, ILO Conventions	Contractor	Human resource management plan Employment Plan National laws ILO conventions	Moderate
Occupational health and safety	Workers	High	Negative	Major	Local Short to long-term Likely	Aadequate, timely and regularly updated training and briefings for workers on safety precautions and their	Contractor	Human resource management plan H&S Plan	

Impact	Receptor	Receptor Sensitivity	Impact Categorization	Magnitude of Impact	Spatial, Temporal dimension and likelihood	Mitigation/Enhancement Measures	Responsibility	Management Plans, Policies and Procedures	Residual Effect Significance
						responsibility for their safety and the safety of others; require the workers to use the provided safety equipment; report and record any accidents, incidents and/or breach of relevant legislation arising from the project;		Employment Plan National laws ILO conventions	

14.8 Community health and safety risk

The potential impacts on Community Health & Safety related to project activities, equipment, and infrastructure results in increase of community exposure to risks and adverse impacts. In this chapter Noise, water, emissions, hazardous material have not been assessed, as they are assessed under the relevant environmental impact chapters.

The transformation of the area itself into a construction site is a risk to the community's health and safety.

Construction works will induce increased traffic on the Road and associated risks, create presence of heavy machinery in number commensurate to the scope of works and require moving of goods and materials. It further bears a risk of potential impacts from unplanned events and unauthorized access to work areas.

Specifically, the Emergency Preparedness and Response Plan for the project will ensure many risks relating to the projects construction and operation are covered in regard to community safety and security, whilst outlining what response will be taken for certain situations. The Emergency Preparedness and Response Plan is the obligation of the Contractor

The methodology of the preliminary design for construction of some section requires a more refined health and safety approach and closer attention. As assessed this will in particular be the case at Section I and III of the planned Highway alignment as depicted on Figure 33 below.

Figure 37. One of the most challenging sections of the alignment



The most challenging element of the project from a technical perspective is the construction of Section to construct by absorbing the existing road and transferring it into one, the right hand Highway carriageway in the length of 5, 5 km. In construction terms and associated risks this implies executing works, organizing the construction site, movement of material and machinery in parallel to daily traffic. On the other hand, at Section III a major bridge is constructed, going through the peripheral but still urban area of Prokuplje, with high density of population and houses. The environment is depicted in figure below.

Figure 38 Location with higher risks during construction works



These two specific spots shall have increased mitigation measures and shall have high level monitoring systems in place as well as emergency response plans or at least such well established procedures to react and remedy any immediate danger to health and safety.

The assessment has considered the following types of impacts:

- impacts on community safety and vulnerable road users in particular road traffic accidents due to increased project related traffic movements
- impacts to community security, particularly covering interaction between security forces retained security to safeguard the operations,
- impacts from interaction with construction site and site boundaries from unauthorized access,

- impacts from self-created communication routes by community in case of disturbed communication routes,
- Impacts from traffic Routes and non-segregation of vehicles and pedestrians,
- Impacts, other than transmission of disease, from interaction with influx workforce,
- transmission of communicable diseases,
- HIV/AIDS and Sexually Transmitted Diseases (STDs) due to changes in demographics, presence of a workforce and changes to socio-economic factors;
- health impacts associated with hazardous materials and the handling of these materials appropriately to avoid non-routine events (such as fires and spillages)
- increased pressure on health care services due to in-migration, worker health care needs and changes to community safety;
- impacts from blasting during excavation of tunnel tubes,
- Impacts from unexploded ordnances (UXO).

During the Stakeholder engagement meetings safety was extensively discussed and even actions agreed and committed to. The education sector and the Roma associations have already agreed to support the awareness campaigns on road safety and STD, HIV/AIDS prevention respectively.

As a first step it is necessary that the Contractor conducts awareness campaigns clearly explaining the risks to which the community might be exposed, to introduce rules and policies and explain how behaviour against the procedures might increase the risk and amplify the consequences. The community should become aware of the presence of contractor, personnel, machinery and equipment and become accustomed to the changes attributable to the works.

Therefore the community and shall be aware and knowledgeable about the physical footprint of the Project and more importantly in terms of safety about the construction site boundaries. Clear boundaries to the construction site should be set by fencing the construction site to prevent trespassing and injuries form access of unauthorized personnel. The boundaries should be clear with adequate signs erected, in Serbian language, with easily understandable symbols. If some signalization should require more complex and less common symbols they shall be accompanied by an explanatory text. During the awareness campaign presentation of signs and the meaning attributed shall be explained. It is important to educate workers not to allow even incidental or on-off trespasses.

It is also recommended to prepare and distribute an information leaflet with explanations and meanings of the construction signs.

Children as a vulnerable group can per virtue of age are more exposed to safety risks from increased heavy traffic. During consultation meetings and stakeholder engagement with the school and pre-school facilities agreement was reached to conduct awareness campaigns targeting children especially. Information leaflets shall be prepared to be used as a tool complementing the awareness campaign for children through presentations and short movies. The best practice teaches us that

such awareness campaigns should be conducted in several cycles and especially after school breaks when children return to their daily chorus and travel patterns.

The presence of a workforce could potentially lead to the increased transmission of communicable diseases within the communities but this impact is negligible since the prevalence is currently low in the communities. The profile of these diseases will be influenced by the existing health profile of communities in the area and that of the workers, however, risks associated with these impacts will be controlled by monitoring of the health trends in the community. Diseases that may be of further concern include sexually transmitted diseases, including HIV/AIDS although the current prevalence is low in the communities. Even though the influx of workers will be low the risk still is present and has to be addressed. The issue has already been discussed with the health care providers and Roma community leaders on how to mainstream the most vulnerable groups and engage them in awareness raising campaigns. The prevention and awareness training for the Roma Communities has already been agreed as part of the Stakeholder engagement. The Roma community will engage a certified trainer to promote and educate prevention of HIV/AIDS

The Health service providers in the primary health care have enough absorption capacity and will not be impacted by the influx of workers. Merošina has no official Emergency Center but provide curative treatment for traumas before transporting them to Prokuplje or Niš depending on the severity of condition.

Potential risks for community health will be addressed through the implementation of appropriate mitigation in consultation with the relevant authorities and local administrations, associations and others as relevant.

14.8.1 Summary of impacts - Community health and safety risk

Construction Phase impacts
Potential traffic safety risks from increased traffic and the presence of heavy vehicles on roads, degraded roads by increased heavy vehicles traffic Site trespass and injury. Potential increased transmission risks of communicable diseases and temporary pressure on local sanitation and health infrastructure. Potential disturbance to environmental health, quality of life and wellbeing. Potential increase of disease due to interaction with influx workforce. Potential increase of STD transmitted diseases including HIV,

Table 59 Summary of Impact and Mitigation/ Enhancement measures - Community health and safety risk

Impact	Receptor	Receptor Sensitivity	Impact Categorization	Magnitude of Impact	Spatial, Temporal dimension and likelihood	Mitigation/Enhancement Measures	Responsibility	Management Plans, Policies and Procedures	Residual Effect Significance
Potential traffic safety risks from increased traffic and the presence of heavy vehicles on roads, degraded roads by increased heavy vehicles traffic.	Local Community	Moderate	Negative	Moderate	Local Long-term Unlikely	Prepare a traffic management plan. Awareness campaigns for the community with emphasis to most vulnerable road users (children, elderly, pedestrian and cyclists) . Reduce speed limit. Programme of stakeholder engagement and consultation to educate local communities of the risks of trespassing onto sites, the meaning of signs, the dangers of playing on or near equipment or entering fenced areas. Adequate signs to be put up around work fronts and construction sites advising people of the risks associated with trespassing. All signs should be in Serbian or in diagram form to ensure those with low levels of literacy understand the signs.	Contractor Supervising Engineer	Stakeholder Engagement Plan ESMP Traffic Management Plan Site Specific Implementation Plan	Negligible
Site trespass and injury	Local communities Children	High	Negative	Moderate	Local Long-term Unlikely	Fence construction site with visible not easily removable fence. Clear demarcation of the construction site. Place visible and understandable signs to site limits.	Contractor Supervision Engineer	Stakeholder Engagement Plan Information leaflets Awareness presentations	Negligible

Impact	Receptor	Receptor Sensitivity	Impact Categorization	Magnitude of Impact	Spatial, Temporal dimension and likelihood	Mitigation/Enhancement Measures	Responsibility	Management Plans, Policies and Procedures	Residual Effect Significance
						Raise awareness of community and workers. Educate workers not to allow even incidental or on-off trespasses Place warning signs of prohibited trespassing and legal remedies in opposite conduct . Awareness campaigns for the Community			
Potential increased transmission risks of communicable diseases and temporary pressure on local health and sanitation infrastructure	Local Community Women Roma women	High	Negative	Moderate	Local Long-term Unlikely	Implementation of CD and HIV/AIDS education program; Information campaigns on STDs among the workers and local community; Special education program for the Roma population and women. Education about the transmission of diseases; Provision of condoms. designated as contractor responsibility); Monitoring of local population health data, in particular for Transmissible diseases.	Contractor Supervising Engineer Health Facilities Roma association's	Stakeholder Engagement Plan Education programs and learning material	Negligible
impacts from self-created communication routes by community in case of	Local communities	Moderate	Negative	Moderate	Local Short to long-term Unlikely	Keep alternative routes at all times. Fence site boundaries and present route of alternatives,	Contractor	Traffic Management Plan ESMP	Minor

Impact	Receptor	Receptor Sensitivity	Impact Categorization	Magnitude of Impact	Spatial, Temporal dimension and likelihood	Mitigation/Enhancement Measures	Responsibility	Management Plans, Policies and Procedures	Residual Effect Significance
temporary disturbed communication routes								Stakeholder Engagement Plan	
Impacts from blasting during excavation of tunnel tubes	Local communities living adjacent to the construction site	High	Negative	Moderate	Local Long-term Unlikely	Disclose the method statement to community. Explain how each of the method will influence and impact the surrounding. Disclose and timely announce the commencement of blasting works and make the community understand how to act on those occasions. Familiarize the community with any audio alert activated prior to blasting like sirens	Contractor Supervision Engineer	ESPM Health and Safety Blasting design	Negligible
Impacts to community security, particularly covering interaction between security forces retained security to safeguard the operations	Local communities	Moderate	Negative	Minor	Local Long-term Unlikely	Inform community about the presence of security forces safeguarding the equipment and construction site of Contractor. Let the community understand their role and responsibility. Liaison with the Local law enforcement to agree on regular meetings, communication channels and to agree on emergency response in case needed. Train the employees of the Security personnel to adhere	Contractor	Security personnel code of Conduct Health and safety Plan ESMP	Negligible

Impact	Receptor	Receptor Sensitivity	Impact Categorization	Magnitude of Impact	Spatial, Temporal dimension and likelihood	Mitigation/Enhancement Measures	Responsibility	Management Plans, Policies and Procedures	Residual Effect Significance
						to protocols and code of conduct at all times with emphasis to carrying and use of weapon if any			

14.9 Health Services

Influx of workers by itself could induce potential impact in increased demand for health services. The influx, as explained will be minor, and will not impose pressure to the health services. The capacity of existing health facilities are able to absorb without major disruption any potential demand for care and attendance to acute conditions of the influx workers (in case of curative or emergency cases). The Clinical Centre in Nis, 30 km away, as the second largest medical centre in Serbia, is complementing the capacity of the two receptor communities.

14.9.1 Summary of impacts - Health Services

Construction Phase impacts
Pressure to health services due to influx. Increased number of road accidents

Table 60 Summary of Impact and Mitigation/ Enhancement measures - Health Services

Impact	Receptor	Receptor Sensitivity	Impact Categorization	Magnitude of Impact	Spatial, Temporal dimension and likelihood	Mitigation/Enhancement Measures	Responsibility	Management Plans, Policies and Procedures	Residual Effect Significance
Increased number of vehicles in the area and traffic might lead to a higher number of road accidents and injuries.	Local Health services	Low	Negative	Moderate	Local Long-term Unlikely	Maintain current capacity of medical staff	Health care centres	Emergency response plan	Negligible
Pressure due to influx of workers	Local health services	Low	Negative	Minor	Local Short term Unlikely	Maintain current capacity of medical staff and equipment	Health care centres	Medical centre policy	Negligible

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14.10 Access to Education

The Baseline has shown that the educational network comprises not only of mainstream facilities in the heart of the administrative centres of the two main impact receptors community. Focus group discussions and key informant interviews has provided evidence that unless effectively mitigated the impact the construction works might have on access to education and undisturbed school curriculum and attendance in general might be major. The education network in Prokuplje is composed of several elementary and high schools in the heart of the settlement and 10 schools in remote settlements and villages around. The situation is alike in Merošina where one elementary school is in the settlement centre, while 10 remote school facilities are scattered from 0,5 to 7 or even 8 km away. Given that the impacted municipalities consist of remote villages the school system is organized through external small group in educational facilities. There are no exclusive transportation agencies through which the transportation of children by school busses to and from the schools is organized. However, schools are providing transportation under contract agreements with the local Public transport operator “Niš Express” and for more remote facilities outside the main network through minivan transportation provided by private transport entrepreneurs. Not all routes could be impacted but the construction works will have to harmonize or at least synchronize with the timetable of those individual lines adversely impacted by closure of roads and diversion of existing traffic especially during the peak hours and school year. The network and timetable is rather complex in spatial terms but is more or less uniformed when it comes to the time element. All the schools operate in two shifts the between 8 am and 2 pm and 2 pm and 7 pm. Special attention will be given to the routes of children attending school outside their place of residence and colliding with the planned alignment. These refer to Villages Devča, Dešilovo, Aleksandrovo, Arbanasce and Kostadinovac since children will during their daily education migration cross the construction site twice a day during the school year. The Figure X below depicts the maps of school network in Merosina. Yellow arrows present the daily migration routes of children and the Figure X after the networks in Prokuplje.

Figure 39 Daily Elementary School routes in collision with planned alignment

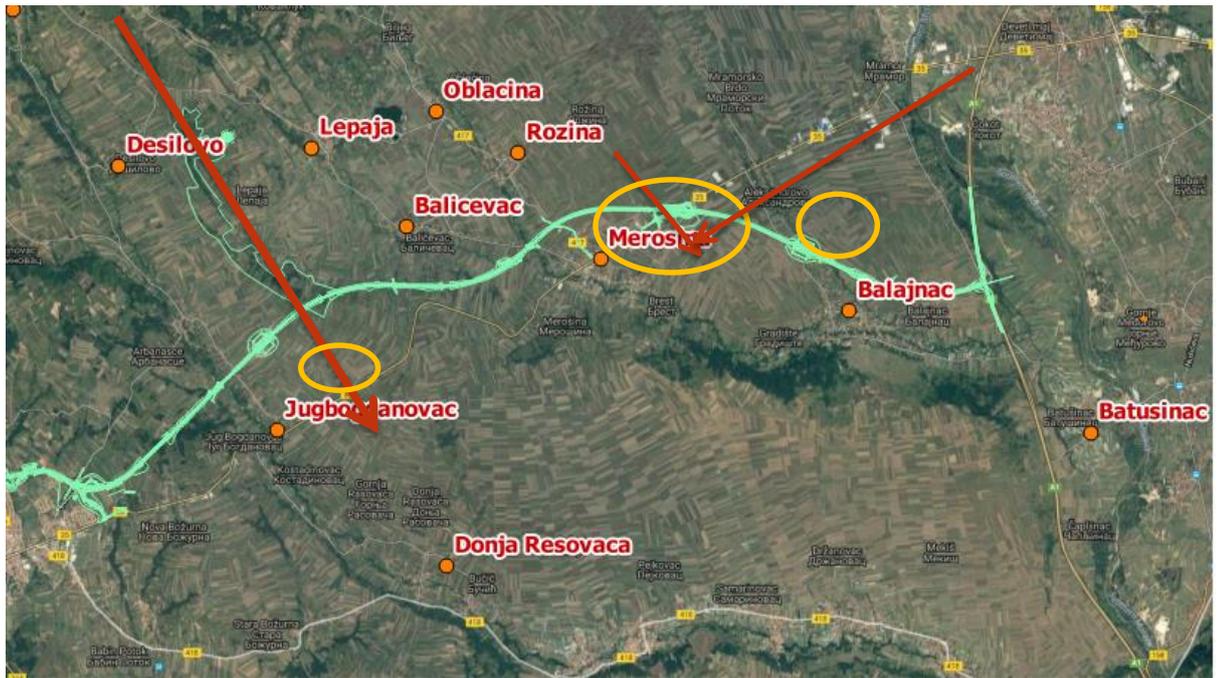
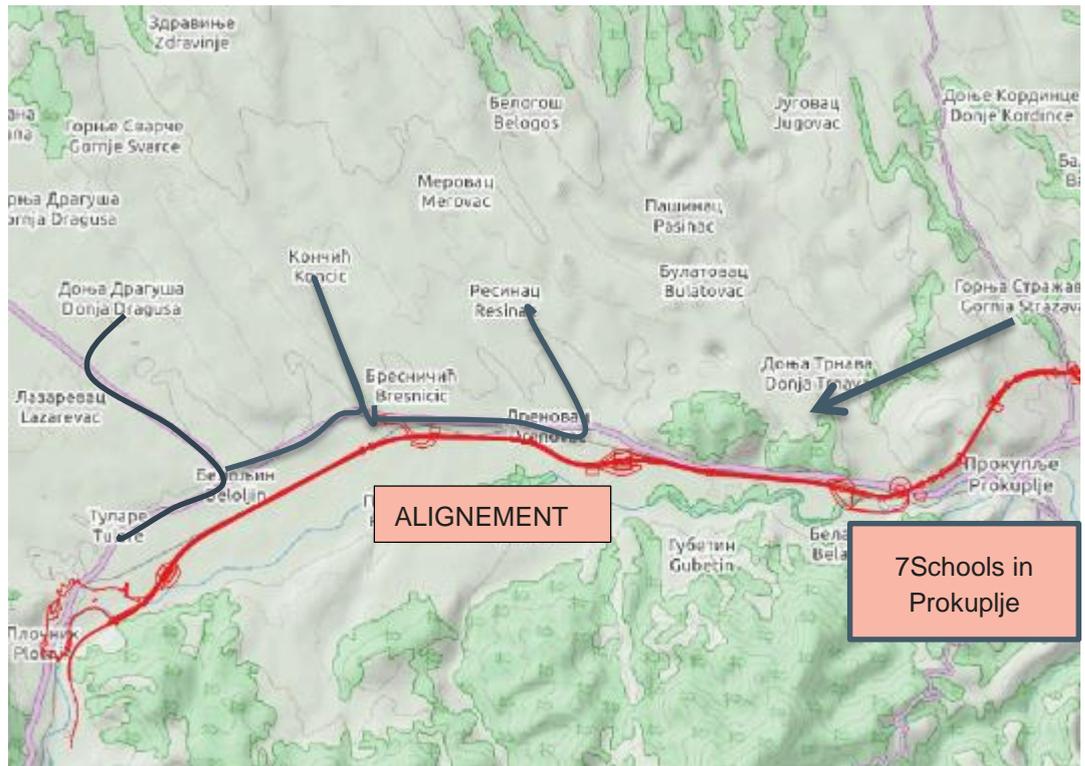


Figure 40 Daily Elementary School routes in Prokuplje with possible interruptions



14.10.1 Summary of impacts - Access to Education

Construction Phase impacts
Possible disruption of transportation routes of school and pre-school children from and to remote school facilities in both receptor communities with emphasis on Villages Devča, Dešilovo, Aleksandrovo, Arbanasce and Kostadinovac Possible disruption of transportation routes of school children from Tulare to Donja Draguša, Končić to Bresnić and Gornja Stražava to Donja Stražava.

Table 61 Summary of Impact and Mitigation/ Enhancement measures - Access to Education

Impact	Receptor	Receptor Sensitivity	Impact Categorization	Magnitude of Impact	Spatial, Temporal dimension and likelihood	Mitigation/Enhancement Measures	Responsibility	Management Plans, Policies and Procedures	Residual Effect Significance
Disruption of weekdays communication routes for school and pre-school attendance in remote school facilities	Children	High	Negative	Major	Local Long-term Unlikely	Prepare a traffic management plan. Exchange with school representatives timetable of all transportation routes for both Municipalities. To the extent feasible harmonize disruption compete stand still of traffic with school timetable	Contractor	Stakeholder Engagement Plan Traffic Management Plan	Moderate

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14.11 Agriculture, beekeeping and farming

The baseline study has shown that the single most important economic sector in both municipalities is agriculture and provides a significant input into the livelihoods of household within the study area. In Merošina municipality 30, 12% of all economically active population is reported to live from activities related to agriculture, compared to 9,3% in Prokuplje. These percentages are largely attributable to production of cherry's and plums, followed by small family farms and subsistence vegetable production. There are little animal grazing activities outside the farms, and no grazing area as a collectively used area was identified. The main impact will be on sections one and three where the fruit bearing plantations are located. During the preparation of the site specific resettlement tools namely the ARAP or RAP as appropriate, detailed asset surveys will be conducted. The asset survey and inventory of losses will allow in depth identification of losses regarding the productivity, age of trees, time needed to reproduced etc. And all other details allowing compensation at replacement cost for all losses including income, and restoration of livelihood. The impact on land per category is presented in chapter Land acquisition and resettlement.

During the baseline study beekeeping was not reported as a main livelihood activity, but an important source of additional income to individual households and used to pollinate agricultural crops. Some honey is kept for personal consumption, but respondents from both Municipalities reported selling between 20 % and 70% of the overall production. There are three Beekeepers association, two in Prokuplje and one in Merosina.

During the field visits, focus group discussions and key informant interviews a mapping exercise was conducted and all known beehives were identified. Bees are sensitive to vibrations and dust therefore it was important to identify those located close to the working strip. Bees can forage for nectar up to 8 km from their hives, although they normally stay within 3-4 km. Bees collect pollen whilst drinking nectar from plants, crops (wheat) and nectar producing tree. During the last winter season adverse weather conditions were experienced with an average temperature in the study area between -1.9 C and -6.9 C. The figure below depicts spatial distribution of average monthly temperature(°C) in December 2016 and January 2017.

Figure 41 Average monthly temperature in the study area

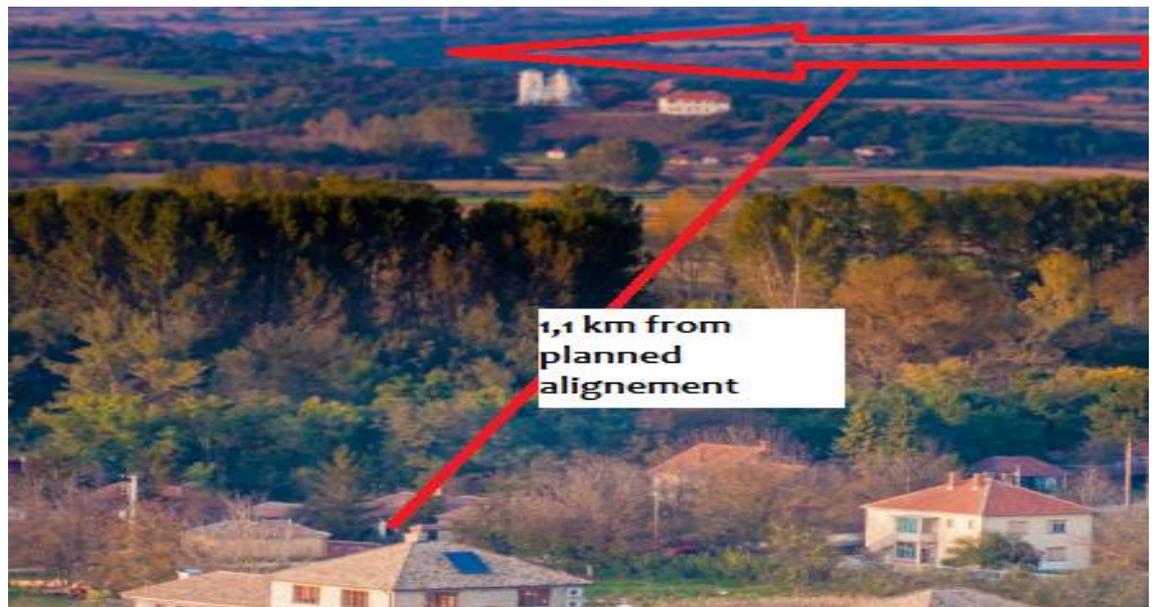


Bees are sensitive to environmental and climate changes and it is therefore not possible to predict the impact related to the construction works, since impact from the winter season will only be known once the vegetation season begins late march early April.

The location of beehives is not adjacent to construction works area, and impacts will be more experience from loss of foraging vegetation. During the preparation of the site specific Resettlement Action Plans, if households under the impact of involuntary resettlement should have livelihoods dependent in total or as part of beekeeping any loss shall be assesses and compensated. Prior to that mitigation measures shall be implemented and beekeepers informed about the construction activities and schedule to allow timely move of beehives in order to avoid death of bee colonies and deterioration in quantity or quality of honey.

The vineries and large complex vineyards in Prokuplje are, located in the radius of 1, 1 km away from the planned construction route as depicted on figure below. Smaller vineyards along the route located in the Municipality Merosina and Prokuplje are in some cases adjacent to the planned alignment. However, at section I in the length of 5 km they are already situated on both sides of the existing highway. In cases were construction will result in direct impact by land acquisition, general mitigation measures shall be complemented by the implementation of the site specific ARAP/RAP as appropriate and direct losses shall be compensated according to the Entitlement Matrix as defined in the Resettlement Policy Framework , in line with IFI requirements applicable to this Project.

Figure 42 Location of one of the large Vineries



14.11.1 Summary of impacts - Agriculture, beekeeping and farming

Construction Phase impacts
Disturbance to beekeeping. Disturbance to animal grazing Disturbance to agricultural production due to dust. Disturbance to fruit production and decrease of quality due to dust and water pollution. Loss of income due to loss of fruit bearing trees. Loss of income due to loss of vineyards. Loss of agricultural land.

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Table 62 Summary of Impact and Mitigation/ Enhancement measures - Agriculture, beekeeping and farming

Impact	Receptor	Receptor Sensitivity	Impact Categorization	Magnitude of Impact	Spatial, Temporal dimension and likelihood	Mitigation/Enhancement Measures	Management Plans, Policies and Procedures	Residual Effect Significance
Disturbance to beekeeping	Local beekeepers	Moderate	Negative	Moderate	Local Short – term Unlikely	Agreements with beekeepers on where to relocate beehives if necessary. Assistance with the transportation and relocation of beehives if needed. Implement RPF and ARAP/RAP and compensate any loss	Stakeholder Engagement Plan RPF RAP/ARAP Socio-economic survey and individual household assessment	Negligible
Disturbance to animal grazing	Local farmers	High	Negative	Negligible	Local Short-term Unlikely	Contractual clauses to ensure that contractors consult with local farmers to establish the appropriate number and location of animal Crossings.	SEP	Negligible
Impact on quality of fruit production	Local fruit producers	Moderate	Negative	Minor	Local Long – term Likely	Implement RPF and ARAP/RAP and compensate any loss socio-economic baseline assessment on people affected by the project, including impacts related to land acquisition and restrictions on land use Detailed inventory of assets Valuation and compensation at replacement cost.	RPF ARAP/RAP Socio-economic survey and individual household assessment	Negligible
Loss of agricultural land	Landowners Project affected Persons in Merošina and Prokuplje	Moderate	Negative	Major	Local Permanent Certain	Implement RPF and ARAP/RAP and compensate any loss Detailed inventory of assets Valuation and compensation at replacement cost socio-economic baseline assessment on people affected by the project, including impacts related to land acquisition and restrictions on land use during preparation of ARAP/RAP	RPF ARAP/RAP Socio-economic survey and individual household assessment	Negligible

Impact	Receptor	Receptor Sensitivity	Impact Categorization	Magnitude of Impact	Spatial, Temporal dimension and likelihood	Mitigation/Enhancement Measures	Management Plans, Policies and Procedures	Residual Effect Significance
Loss of fruit bearing trees and vineyards	Landowners Project affected Persons in Merošina and Prokuplje	Moderate	Negative	Moderate		Implement RPF and ARAP/RAP and compensate any loss Detailed inventory of assets Valuation and compensation at replacement cost Socio-economic baseline assessment on people affected by the project, including impacts related to land acquisition and restrictions on land use during preparation of ARAP/RAP	RPF ARAP/RAP Socio-economic survey and individual household assessment	Negligible
Loss of income due to loss of land, fruit bearing trees and vineyards	Landowners Project affected Persons in Merošina and Prokuplje	Moderate	Negative	Moderate		Implement RPF and ARAP/RAP and compensate any loss Detailed inventory of assets Valuation and compensation at replacement cost socio-economic baseline assessment on people affected by the project, including impacts related to land acquisition and restrictions on land use during preparation of ARAP/RAP	RPF ARAP/RAP Socio economic survey and individual household assessment	Negligible

14.12 Land Acquisition and involuntary resettlement

It is a condition for the works to commence that land has been acquired, compensation and resettlement related assistance extended and additional support given to all persons affected by the project due to land acquisition and resettlement. The Land acquisition process shall have been completed at least at the contract signing stage. Contracts for construction works usually allow 28 days after commencement of works for the Employer to give access to and possession of site. It is therefore assessed that the majority of impact from land acquisition will be experienced during the pre-construction phase as presented in detail in the respective section.

However, as mentioned earlier, variations to the design due to unforeseen or unforeseeable conditions and circumstances, such as unforeseeable physical conditions, requiring changes in method statements for certain items of works, hence changes in the physical footprint of the project might require additional land for the project. If such need should occur timely notice shall be given, and the stakeholder engagement plan consulted to inform owners of affected property timely and consult on the impact and compensation packages. The process to be followed in case of additional land acquisition shall be consistent and in line with the process set forth in the RPF. The works may not commence on land plots additionally acquired until the compensation has been paid or adequate funds put aside into an escrow account

14.12.1 Summary of impacts -Land Acquisition and involuntary resettlement

Construction Phase impacts
Unforeseeable circumstances resulting in additional loss of land and assets attached to it and resettlement.

Table 63 Summary of impact and mitigation measures - Land Acquisition and involuntary resettlement

Impact	Receptor	Receptor Sensitivity	Impact Categorization	Magnitude of Impact	Spatial, Temporal dimension and likelihood	Mitigation/Enhancement Measures	Responsibility	Management Plans, Policies and Procedures	Residual Effect Significance
Unforeseeable circumstances resulting in additional loss of land and assets attached to it and resettlement.	Local communities	High	Negative	Minor	Local Permanent Unlikely	Implement RPF and ARAP/RAP and compensate any loss socio-economic baseline assessment on people affected by the project, including impacts related to land acquisition and restrictions on land use Detailed inventory of assets Valuation and compensation at replacement cost.	Promoter	PRF ARAP/RAP Socio-economic survey and individual household assessment	Negligible

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14.13 Vulnerability

The baseline has identified a wider vulnerability in the two municipalities. When using this term the document refers to people who, by virtue of gender identity, sexual orientation, religion, ethnicity, indigenous status, age, disability, economic disadvantage or social status may be more adversely affected by project impacts than others and who may be limited in their ability to claim or take advantage of project benefits. Under direct impact are only some of the groups.

Public kitchen daily meal users provided by the Red Cross constitute around 5% of all population. Meals are usually distributed and delivered to the elderly, unemployed households and single parents households. Their vulnerability is extremely high since they are entirely dependent of the daily food supply which further relies on unobstructed access to their dwellings. The risk of intersecting the transportation routes is subject of this chapter. The Contractor will have to closely communicate with the Red Cross and reflect their daily distribution network in the respective Traffic management plan.

Merošina haemodialysis patients (going to Prokuplje) due to their medical conditions need regular daily hospital visits to Prokuplje or Niš. This group is heavily dependent of timely attendance to their needs. The Contractor will have to closely communicate with the hospitals and reflect their daily transportation schedule in the respective Traffic management plan.

14.13.1 Summary of impacts

Construction Phase impacts
Impacts to daily distribution of free meals.
Impacts to dialysis patients daily need to reach medical facilities.

Table 64 Summary of impacts and mitigation measures – Vulnerability

Impact	Receptor	Receptor Sensitivity	Impact Categorization	Magnitude of Impact	Spatial, Temporal dimension and likelihood	Mitigation/Enhancement Measures	Responsibility	Management Plans, Policies and Procedures	Residual Effect Significance
Disruption of free meal delivering routes	Vulnerable household	High	Negative	Major	Local Short-term Unlikely	Familiarize with the daily schedule of free meals in liaison with the Red Cross	Contractor	Traffic management plan SEP	Negligible
Disruption of transport of	Patients	High	Negative	Major	Local Short-term	Familiarize with the daily schedule of free meals in	Contractor	Traffic management plan	Negligible

Impact	Receptor	Receptor Sensitivity	Impact Categorization	Magnitude of Impact	Spatial, Temporal dimension and likelihood	Mitigation/Enhancement Measures	Responsibility	Management Plans, Policies and Procedures	Residual Effect Significance
haemodialysis patients					Unlikely	liaison with the medical facilities		SEP	

14.14 Livelihood

The land acquisition and involuntary resettlement is associated with loss of livelihoods to those households losing plantations and gardens. The loss is mainly present amongst the Fruit growers and bee keepers whether their production is subsistence or for a wider commercial purpose. These losses will have to be analysed during the next stage through the resettlement tools. Households impacted land acquisition shall be subject to individual household surveys and socio-economic assessment and adequate measures designed to restore their livelihood streams, and support them during any transitional period.

14.14.1 Summary of impact

Construction Phase impacts
Loss of livelihoods for fruit producers and bee keepers

Table 65 Summary of impact and mitigation measures – livelihood

Impact	Receptor	Receptor Sensitivity	Impact Categorization	Magnitude of Impact	Spatial, Temporal dimension and likelihood	Mitigation/Enhancement Measures	Responsibility	Management Plans, Policies and Procedures	Residual Effect Significance
Loss of livelihood	Fruit growers Bee keeper	High	Negative	Moderate	Local Long-term Unlikely	Ensure livelihood restoration	Promoter	RPF RAP/A RAP Individual socio-economic surveys and livelihood restoration	Negligible

Impact	Receptor	Receptor Sensitivity	Impact Categorization	Magnitude of Impact	Spatial, Temporal dimension and likelihood	Mitigation/Enhancement Measures	Responsibility	Management Plans, Policies and Procedures	Residual Effect Significance
								tion support	

15 Social Impacts During Operational Phase

15.1.1 Employment and Economy

It is likely although the exact impact cannot be assessed in details at this stage. National Highways in Serbia are under tolling. The National highways and this one as well is designed with a commercial purpose, and besides adding value to transport, should bring investment returns from the collection of toll. Based on the economic indicators on previous experience on similar Projects, and the preliminary design, during operations it is expected that 20-40 permanent employees will be required for the tolling station and toll collection. The exact staffing numbers and organizational needs will be made available following the completion Project. In addition the facilities will require maintenance and potential security subject to later planning by the National Highway operator.

The primary economic impact on a National level during the operation phase will be the income from toll collection. In addition it will be income generating for the National Highway Operator.

The investment is only half way to sustainability and the road shall be subject to regular maintenance as well as winter and summer maintenance which will give procurement opportunities to local and national contractors. This will further induce employment opportunities and increase of livelihood of families of employees.

The Spatial plan and Preliminary design have envisaged at least two large gas stations to be located alongside the Highway. On one hand this may decrease the number of occasional transit visitors on one hand and the impact to the economy. Each gas station will employ at least 20 employees under terms and conditions subject to the employment policy of the specific company.

Other induced impacts are assessed to be mostly in the service sector such as: vulcanize services (tire repair), on-the-road-assistance, auto mechanics, etc.

15.1.2 Summary of impacts - Employment and Economy

Operation Phase impacts
Employment opportunities at toll stations. Induced Employment from associated facilities. Income from toll

Table 66 Summary of impacts and mitigation measures - Employment and Economy

Impact	Receptor	Receptor Sensitivity	Impact Categorization	Magnitude of Impact	Spatial, Temporal dimension and likelihood	Mitigation/Enhancement Measures	Management Plans, Policies and Procedures	Residual Effect Significance
Changes in income from tolling	National Government and Highway operator	Low	Positive	Minor	Local to national Long-term to permanent Certain	Introduce tolling and e-tolling as soon as practicable	National laws and by-laws on tolling	Negligible
Changes in direct employment	Local in Municipalities Prokuplje and Merosina	Moderate	Positive	Minor	Local Long-term to permanent Likely	Maximize local employment, establish fair, transparent opportunities and Identify opportunities to increase women's employment	Recruitment Policy and Procedure of National Highway operator	Moderate
Income for taxes from development of new facilities along the Highway	Local Municipalities and National Government	Low	Positive	Minor	Local to regional Long-term to permanent Likely	Regular audit of tax payments	National laws	Moderate

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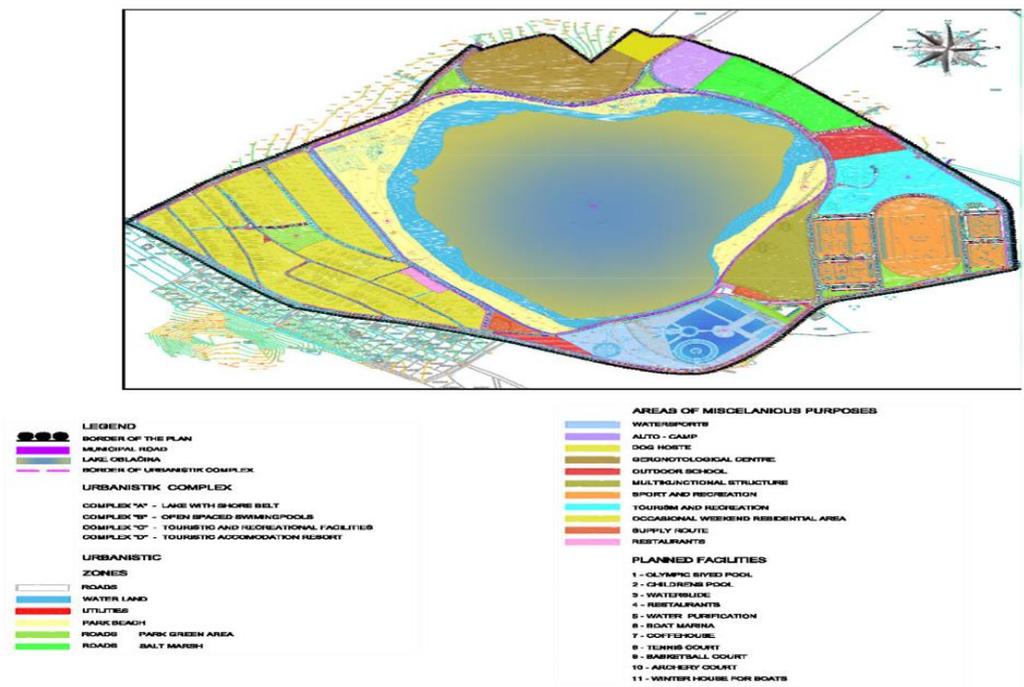
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15.1.3 Tourism

There is extensive scholastic evidence about the direct links between the state of road network and the development opportunities of the tourism sector. The link is very important for the development of tourism growth in the area. There are has certain localities with qualities to be further developed into tourist focus spots. This trend is rather slow and of moderate evidence, but the tourist sector has experienced growth of 10% during the last 3 years. No official new projects have yet been approved in this area but construction of this rout could induce new tourist opportunities. Potential impacts to local tourism businesses are likely to be in terms of increased income. However, the impacts are considered only positive since the tourist facilities are not within the line of construction works and there are no anticipated economic displacement impacts on these facilities.

It is expected that during operational phase of the Project tourist activities will experience a significance boost. This area is known for the Archeological site Plocnik, Lakes Oblacina and Krajkovac, Ethnic village Beli Kamen around Prokuplje and Merosina and other potentially attractive tourist location in details presented in the baseline chapter. The vision of enhancement of tourist activities is seen through the engagement of the local government in development of urbanistic plans for expanding the existing capacities of the lake Oblacina.¹⁶⁰ The plan includes development of recreational facilities, hotels, water sports etc. as depicted on picture below. The Archeological site Plocnik is depicted in Figure 43.

Figure 43 Planned development of Oblacina Lake



¹⁶⁰ This Project is developed with the financial assistance of the EU, Swiss Agency for development and Cooperation SDC and UNOPS.

Figure 44 Archaeological site Plocnik a known tourist destination



15.1.4 Summary of impacts - tourism

Operation Phase impacts
Increased accessibility of tourist locations.
Increased income from increased visits and overnight stays in the tourist locations.
New employment from potential increase of accommodation facilities.

Table 67 Summary of Impact and Mitigation/ Enhancement measure- tourism

Impact	Receptor	Receptor Sensitivity	Impact Categorization	Magnitude of Impact	Spatial temporal dimension and likelihood	Mitigation/Enhancement Measures	Management Plans, Policies and Procedures	Residual Effect Significance
Changes from income and economic benefits from tourism	National and Municipal Government	High	Positive	Moderate	Local Long-term Unlikely	Promote tourist destinations	Local tourist development strategy	Moderate
Improved Access to tourist sites in the area	Visitors	Moderate	Positive	Major	Regional Long-term Certain	Maintain new infrastructure	Maintenance pan of Highway operator	Negligible

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16 Cumulative Impacts

Cumulative impacts are those that result from the successive, incremental, and/or combined effects of an action, project, or activity when added to other existing, planned, and/or reasonably anticipated. Areas and communities potentially impacted by cumulative impacts from further planned development of the project or other sources of similar impacts in the geographical area, any existing project or condition, and other project-related developments that can realistically be expected.

Areas and communities potentially affected by impacts from unplanned but predictable developments caused by the project that may occur later or at a different location.

The area of influence does not include potential impacts that would occur without the project or independently of the project.

Based on available information, the project area has several small investment projects but no other large scale infrastructure projects have been formalized.

As explained the scope of the route, in this document the area of impact, is the first phase of development of the Highway E80 forming part of a wider axis (Route 7) linking Bulgaria with the Adriatic Sea via Serbia, Kosovo* and Albania. The entire route is planned to be constructed in the total length of 77 km from Niš to Merdare through the Municipalities of Merošina, Prokuplje, Pločnik, and Kuršumlja to Merdare. Sections are adjacent to each other and one presents continuance to the other and works will not overlap but will rather be considered as one Project and most likely to be procured as a single contract for construction works or possible two individual contracts. However, at this stage no cumulative social impact in the Project area is foreseeable at present. Notwithstanding the above, during the second phase of development and Impact assessment from Pločnik to Merdare, cumulative impacts shall be properly assessed taking into account key findings of impact from this SIA and the site and section specific assessment and the current implementation status and stage of this Project. As the implementation of this Project advances the assessment of cumulative impact will be more accurate and with such details not leave any of the possible combine effects unaddressed.

17 Conclusion

The implementation of the mitigation measures and implementation of impact specific plans will allow the negative impacts to be reduced to acceptable levels. This will make it possible to keep the local characteristics of the socio-economic environment. The SIA has demonstrated that Project will bring economic benefits locally and to a certain extent nationally, enhance connectivity, induce development opportunities and contribute and elevate to the business environment.

The tendering documents for the project must include the obligation to respect of the provisions of this SIA to achieve full effectiveness of designed mitigation and enhancement measures.

Annex 1 Stakeholder Engagement Plan

In separate file

Annex 2 Resettlement Policy Framework

In separate file

Annex 3 Environmental and Social Action Plan

In separate file