Gas Interconnector North Macedonia - Greece

CBA, Feasibility Study update, Environmental and Social Impact Assessment, Basic (detailed) Design and Tender Dossier

Social Impact Assessment Report

February, 2021

Technical Assistance to connectivity in the Western Balkans

EuropeAid/137850/IH/SER/MULTI

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MOTT MACDONALD CONNECTA CONSORTIUM

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Contents

List of Abbreviations

Abbreviation	Meaning
AoI	Area of Influence
CBA	Cost Benefit Analysis
CSR	Corporate Social Responsibility
CONNECTA	Technical Assistance to Connectivity in the Western Balkans
DG NEAR	Directorate-General for Neighbourhood and Enlargement Negotiations
EHS	Environmental, Health, and Safety
EIA	Environmental Impact Assessment
ESIA	Environmental and Social Impact Assessment
SIA	Social Impact Assessment
EBRD	European Bank for Reconstruction and Development
EBRD PR	European Bank for Reconstruction and Development Performance Requirement
EEC	European Economic Community
EC	European Commission
EIB	European Investment Bank
EU	European Union
GR	Greece
ha	Hectare
IFC	International Finance Corporation
IPA	Important bird area
LARF	Land Acquisition Resettlement Framework
LAP	Land Acquisition Plan
LRP	Livelihood Restoration Plan
km	Kilometre
NER	National Energy Resources JSC
MKD	Republic of North Macedonia
m	Meter
MoEPP	Ministry of Environment and Physical Planning
Mott MacDonald-CONNECTA Consortium	The Consortium carrying out the present project
NGOs	Non-Governmental Organizations
OH&S	Occupational health and safety
PR	Performance Requirements

Abbreviation	Meaning
MKD	Republic of North Macedonia
ROW	Right of Way
SEE	South Eastern Europe
SEP	Stakeholder Engagement Plan
TA	Technical Assistance
UNECE	United Nations Economic Commission for Europe
UNESCO	United Nations Educational, Scientific and Cultural Organization

Synopsis

Project Title:	TA to Connectivity in the Western Balkans (CONNECTA)
Project Number:	Europe Aid/137850/IH/SER/MULTI
Sub-project Title	Gas interconnector North Macedonia – Greece CBA, Feasibility Study update, Environmental and Social Impact Assessment, Basic (detailed) Design and Tender Dossier
Sub-project Number:	CONNECTA-ENE-INFR-MKD-CBA+FS+ESIA+BD+TD-03
Contract number:	2016/382-382 plus 2018/402-907 – Addendum No 1
Contracting Authority:	European Commission, DG NEAR
Beneficiaries:	Albania, Bosnia and Herzegovina, North Macedonia, Montenegro, Serbia and Kosovo*
Region:	South Eastern Europe (SEE)
Contractor:	Mott MacDonald Romania Srl in Consortium with WYG SAVJETOVANJE d.o.o., COWI A/S, CeS COWI d.o.o. (renamed CESTRA d.o.o.), TRENECON Consulting & Planning Ltd and SYSTEMA Consulting SMLTD
Contract signed:	19 December 2016
Full Mobilisation of 3 KE:	20 January 2017 (date of Kick-off Meeting in Brussels)
Project Duration:	72 months and 13 days (following Addendum No 1)
Anticipated completion:	31 December 2022 (following Addendum No 1)
Contractor's Project Director:	Andrei Penescu is the Project Director Dusan Savkovic is the Consortium's Project Manager Report
Project office:	Kneginje Zorke 2, 1st floor, 11000 Belgrade, Serbia
Telephone:	+381 (0) 11 308 22 97

* This designation is without prejudice to positions on status, and is in line with UNHCR 1244 and the ICJ Opinion on Kosovo declaration of independence

1 Introduction

1.1 The Project

North Macedonia is planning the development of a natural gas interconnection with Greece as part of its national gasification system. The development of "North Macedonia – Greece Interconnection Natural Gas Pipeline" is in line with the strategic commitment of the country, highlighting the importance of natural gas and its presence in the domestic energy sector.

The overall goals of the implementation of the "North Macedonia – Greece Interconnection Natural Gas Pipeline" are:

- Increase the availability of natural gas to a larger number of users in the Republic of North Macedonia and in regions where it has not been available so far;
- Satisfy the consumption of natural gas that will increase in future;
- Lead towards the further integration of the national natural gas transmission system with international gas flows;
- Improve security of gas supply and market integration.

In 2019, a feasibility study was developed by NER and DESFA in order to assess the technical, environmental and economic viability of the project aiming to support the investment decisions, which should be made by both sides and their consecutive approval by the appropriate National regulatory energy and governmental bodies.

To realize the Project of the gas interconnector between North Macedonia and Greece, NER requested technical assistance from CONNECTA, approved in January 2019. The TA includes a complete Environmental and Social Impact Assessment, Cost-Benefit Analysis / Feasibility Study update, Basic (detailed) Design and Tender Dossier for the section located in North Macedonia (hereafter the "Project").

The SIA which is complementary part of EIA procedure for the Project will be carried out in compliance with national regulations and in line with requirements of the EU EIA Directive 2011/92/EU as amended by Directive 2014/52/EU, EIB's Principles and Standards on Environmental and Social Protection, EBRD Environmental and Social Policy 2014 and the Equator Principles.

1.2 The Social Impact Assessment Report

The Social Impact Assessment report assesses how people and communities may be affected as a result of the Project in terms of the way they live, work and interact. The broad objectives of this SIA are to ensure that potential socio-economic and community impacts have been identified, assessed, mitigated, and managed in a constructive manner. Social, economic and biophysical impacts of the Project are interrelated, and this interrelationship is considered in the SIA. The human environment will be impacted by environmental impacts such as noise, dust, waste and traffic. These impacts are identified and taken into account in this SIA but are addressed in detail in the EIA.

1.3 Structure of the Report

The structure of the Social Impact Assessment Report is as follows:

Chapter 1: Introduction

Chapter 2: Overview of Relevant Legislation and Policy Framework for Social Aspects

Chapter 3: Impact Assessment Methodology

Chapter 4 Social and Economic Baseline

Chapter 5: Public Consultation and Stakeholder Engagement Plan

Chapter 6: Impact Assessment

Chapter 7: Mitigation, Monitoring and Residual Impacts

Chapter 8: References

2 Overview of Relevant Legislation and Policy Framework for Social Aspects

The purpose of this section is to set out the requirements that specifically apply to SIA for the Project. It is important that the Project meets local and internationally accepted environmental and social safeguard standards to ensure that community benefits are maximized and that potential adverse environmental and social impacts are minimized.

2.1 National Legal Framework

According to the national environmental permitting procedures, the Project is categorized in the group of projects for which Environmental Impact Assessment is compulsory: Annex I – Point 13 "Pipelines for transport of gas, oil or chemicals with diameter larger than 700mm and/or with length larger than 40km", and a full-scale EIA process must be carried out.

Consultations with the public and other stakeholders during an SIA and EIA are a key feature of social and environmental assessment procedures. These requirements are incorporated into the national environmental legislation:

- Law on Environment (Chapters X and XI), and the bylaws;
- Rulebook on the Contents of the Notice of Intent to Implement the Project, the Decision on the Need for Environmental Impact Assessment, the Environmental Impact Assessment Study, and the Assessment Study Compliance Report the environmental impact of the project and the decision to approve or reject the implementation of the project, as well as a way of consultations with the public ("Official Gazette of MKD" No. 33/06)

The social aspects are encircled with the Laws on health care, health and work safety, working relations, working conditions, employment, wages, social care, protection of children and equal possibilities. Key legislation relevant to the Project includes:

- Labour Law ("Official Gazette MKD" No. 62/05, 106/08, 161/08, 114/09,130/09, 50/10, 52/10, 124/10, 47/11, 11/12, 39/12, 13/13, 25/13, 170/13, 187/13, 113/14, 20/15, 33/15, 72/15, 129/15, 27/16);
- Law on Occupational Health and Safety ("Official Gazette MKD" No. 92/07, 136/11, 23/13, 25/13, 137/13, 164/13, 158/14, 15/15, 129/15, 30/16);
- Law on Social Protection ("Official Gazette MKD" No. 79/09, 36/11, 51/11, 166/12, 15/13, 79/13, 164/13, 187/13, 38/14 and 44/14, 116/14, 180/14, 33/15, 72/15, 104/15 and 150/15);
- Law on Expropriation ("Official Gazette of MKD" no. 95/12, 131/12, 24/13, 27/14, 104/15, 192/15, 23/16, 178/16);
- Rulebook on minimal requirements for occupational health and safety on working place ("Official Gazette MKD" No. 154/2008);
- Rulebook for personal protective equipment employees uses at work ("Official Gazette MKD" No.92/07);

- Rulebook for occupational health and safety for workers exposed on risk of noise at work ("Official Gazette MKD" No. 21/2008);
- Rulebook on preparation of the safety statement, content and data ("Official Gazette MKD" No.07/08);
- Rulebook for personal protective equipment ("Official Gazette MKD" No. 116/07);
- Rulebook for using work equipment ("Official Gazette MKD" No. 116/07) with ANNEX 1 and ANNEX 2;
- Rulebook on minimum OH&S requirements on the working place ("Official Gazette MKD" No.154/08);
- Regulation on health and safety for minimum requirements of the temporary mobile sites ("Official Gazette MKD" No. 105/08);
- Rulebook about the form and content of template for reporting of starting work activity ("Official Gazette MKD" No. 136/07) and Annex 1, Annex 2 and Annex 3;
- Rulebook on health and safety for staff exposed on mechanical vibrations ("Official Gazette MKD" No. 26/08);
- Rulebook for signs for safety and health at work ("Official Gazette of MKD" No. 127/07);
- Rulebook for safety and health at work for manual handling of loads ("Official Gazette of MKD" No. 135/07).

The Government of the Republic of North Macedonia has ratified several Conventions of the International Labour Organization and a large number of international agreements and conventions on environment and social aspects, including:

- Aarhus Convention on access to information, public participation in decision-making and access to justice in environmental issues: UNECE (Aarhus, Denmark 1998);
- The UNECE ESPOO Convention on environmental impact assessment in a transboundary context (Espoo, Finland 1991);
- Convention on biological diversity (United Nations, 1992);
- Bonn Convention on the Conservation of Migratory Species of Wild Animals (Bonn, 1979);
- Bern Convention on the Conservation of European Wildlife and Natural Habitats (Bern, 1972);
- UNESCO World heritage convention (November 1972);
- Ramsar Convention (February 1971)
- The protection of nature is also regulated with the special provisions of the Constitution of the Republic of North Macedonia.

Health and safety laws that are of particular interest relating to this Project are:

- Law on Social Protection ("Official Gazette MKD" No. 79/09, 148/13,164/13, 187/13, 38/14, 44/14, 116/14, 180/14, 33/15, 72/15, 104/15, 150/15, 173/15, 192/18, 30/16, 163/17, 51/18).

Social welfare and protection in North Macedonia comprises of services and benefits from the tax-financed social welfare system (social prevention – which according to the Law on Social Protection includes - educational and advisory work, development of self-assistance forms, volunteering work etc., institutional care, non-institutional care and monetary assistance) and contributory- based social insurance system (pensions and disability, health and unemployment insurance).

- Law for Health Protection ("Official Gazette MKD" No. 43/12, 145/12, 87/13, 164/13, 39/14, 43/14,132/14, 188/14, 10/15, 61/15, 154/15, 132/15, 154/15, 192/15, 37/16).

  The Law on Health Protection regulates the matters related to the system and organization of health protection and the performance of healthcare activity, the guaranteed rights and the established needs and interests of the country in the provision of health protection, the healthcare institutions, the employment, rights and duties, responsibility, assessment, termination of employment, protection of healthcare workers and healthcare co-workers, the quality and safety of healthcare activity, the chambers and professional associations, the marketing and advertising of healthcare activity, the performance of healthcare activity in case of emergencies, and the supervision of the performance of healthcare activity.

- Law on Public Health ("Official Gazette MKD" No. 22/10, 136/11, 144/14, 149/15, 37/16).

  The Law on Public Health regulates the implementation of the basic functions and tasks of public health, the public health system, public health emergencies and public health financing. The purpose of this law is:

  - to preserve and promote the health of the population;
  - to enable implementation of the basic functions and tasks of public health through organized measures and activities undertaken by the state bodies, institutions, units of the local self-government and other legal and natural persons in cooperation with the healthcare institutions;
  - to promote and strengthen cross- sectoral cooperation in the implementation of the basic public health functions;
  - to promote and strengthen cooperation between the competent ministries and the units of local self-government and the public and private sector and citizens in the preservation and promotion of the health of the population; and
  - to provide an appropriate response in case of public health need and urgency and occurrence of a public health emergency.

Other laws that cover Health and Safety domain are:

- Law on Sanitary and Health Inspection ("Official Gazette MKD" No 71/06, 139/08, 88/10, 18/11, 53/11,164/13, 43/14, 144/14, 51/15, 150/15, 37/16);
- Law on Traffic Safety ("Official Gazette MKD" No. 169/15, 55/16);
- Law on Safety and Rescue ("Official Gazette MKD" No 93/12, 41/14, 71/16, 106/16);
- Law on Public Works (95/212, 163/13, 42/14, 44/15, 147/15, 31/16) and other bylaws.

The main legislation that covers labour and working conditions issues are following:

- Labour Law of Republic of Macedonia ("Official Gazette MKD" No. 62/05; 106/08; 161/08; 114/09; 130/09; 149/09; 50/10; 52/10; 124/10; 47/2011; 11/12; 39/12; 13/13; 25/2013; 170/2013; 187/13; 113/14; 20/15; 33/15; 72/15; 129/15, 27/16)

  This law manages relationship between parties involved in the process of employment. It protects and applies to any natural person that has concluded an employment contract with an employer.

- Law on Pensions and Disability Insurance ("Official Gazette MKD" No. 53/13, 170/13, 43/14, 44/14, 97/14, 113/14, 160/14, 188/14, 20/15, 61/15, 97/15, 129/15, 147/15, 154/15, 173/15, 217/15, 27/16, 120/16, 132/16)

  This law defines the obligatory pension insurance of workers under working contract and the natural persons performing activity, the bases of the capital funded pension insurance, as well as the special conditions how certain categories of insured persons receive the right to pension and enjoy disability insurance.

Other labour and workforce related laws are:

- Law on employment and insurance against unemployment Law on labour inspection;
- Law on records in the field of labour;
- Law on employment of disabled persons;
- Law on holidays of the Republic of Macedonia;
- Law on temporary employment agencies;
- Law on volunteering;
- Law on peaceful settlement of labour disputes Law on employment and work of foreigners;
- Law on minimum wage;
- Law on protection from harassment in the workplace and other bylaws.

National legislation for land and acquisition deals with involuntary resettlement and livelihood restoration under its legal framework for expropriation, with the basic notion that owners of properties are to be compensated for their losses, most often in monetary terms. The legislative acts given below regulate the issues of obtaining State ownership rights to privately owned land parcels based on the necessary public needs caused due to strictly defined development projects of public interests:

- Law on expropriation ("Official Gazette MKD" No. 95/12, 131/12, 24/13, 27/14, 104/15, 192/15, 23/16,178/16) regulates the procedure for the expropriation of property for projects that are of public interest and the connected rights for real estates (immovable properties).
- Law on ownership and other real rights ("Official Gazette MKD" No 18/01, 92/08, 139/09, 35/10) regulates the rights and obligations of the owners of the property. The right to ownership can be acquired by all domestic and foreign natural persons and legal entities, including the state and the units of the local self-government, under conditions and in a manner stipulated by this and other laws.

- Law on Housing ("Official Gazette MKD" No. 99/09, 57/10, 36/11, 54/11, 13/12, 55/13, 163/13, 42/14,199/14, 146/15, 31/16). Law on Housing envisages the possibility for renting state-owned apartments to socially endangered and homeless persons in accordance with the Law on Social Protection. This Law deals, among other things, with the issue of social housing and the housing of the vulnerable groups (children without parents or without parental care, users of social and permanent financial assistance, persons affected by natural disasters, disabled persons and persons who need assistance and care by other persons, the socially endangered persons belonging to the Roma community, single parents with minor children).

Other laws defining the relationship among affected parties in the process of land acquisition / expropriation are:

- Law on Construction ("Official Gazette MKD" No. 130/09, 124/10, 18/11, 36/11, 54/11, 13/12, 144/12, 25/13, 79/13, 137/13, 163/13, 27/14,28/14, 42/14, 115/14, 149/14, 187/14, 44/15, 129/15, 217/15, 226/15, 30/16,31/16, 39/16, 71/16, 132/16);
- Law on Assessment ("Official Gazette MKD" No. 115/10,158/11, 185/11, 64/12, 188/14, 104/15, 153/15, 192/15, 30/16);
- The Law on Access to Public Information ("Official Gazette MKD" No. 13/06, 86/08, 06/10,42/14, 148/15, 55/16);
- Methodology for assessment of the market value of the real estate ("Official Gazette MKD" No. 54/12);
- Rulebook on the method of cadastral classification and determination and registration of the change of cadastral culture and land class ("Official Gazette MKD" No. 144/13, 95/15);
- Law on acting upon illegally constructed buildings ("Official Gazette MKD" No. 23/11, 54/11, 155/12, 53/13, 72/13, 44/14, 115/14, 199/14,124/15, 129/15, 217/15, 31/16);
- Law on acting upon complaints and proposals (("Official Gazette MKD" No 82/2008, 13/13, 156/15, 193/15);
- Law on Real Estate Cadaster (("Official Gazette MKD" No.55/13, 41/14, 115/14, 116/15, 153/15, 192/15, 61/16).

The Government of North Macedonia has adopted two Laws that in general cover all the issues of gender equality and fight against discrimination on any ground. They are as follows:

- Law on Prevention and Protection against Discrimination ("Official Gazette MKD" No. 101/19);
- Law on equal opportunities for men and women ("Official Gazette MKD" No. 06/12, 166/14);
- Law on Protection against Harassment at Work ("Official Gazette MKD" No 79/2013 and 147/2015).

The governmental institutions in the Republic of North Macedonia have adopted a number of environmental and social policy documents for the protection, maintenance, and enhancement of the environment and social protection as well. The main plans and strategic documents on national level are following:

- Sustainable Development
  - National Strategy for regional development of the Republic of Macedonia 2009 – 2019;
  - National Strategy for Sustainable Development in North Macedonia 2010- 2030, adopted in 2010 by the Government of Republic of North Macedonia;
  - Plan for Institutional Development of the National and Local Environmental Management Capacity 2009 – 2014 approved by GRM in February 2009.
- Communication and Public Awareness
  - Environmental Communication Strategy, adopted in 2004 by the MoEPP;
  - Public Awareness Strategy for Environment, adopted in 2004 by the MoEPP;
  - Strategy for Environmental Data Management, adopted in 2004 by the MoEPP.
- Climate Change
  - National Environment and Climate Change Strategy (2014-2020);
  - Third National Plan on Climate Change (2013).
- Social Policy
  - ESRP 2020 – Employment and social reform Program Strategy for occupational safety and health;
  - 2020 National strategy for reduction of poverty and social exclusion in the Republic of North Macedonia (revised 2010-2020);
  - National action plan for the implementation of the Law on the prevention and protection against discrimination 2015 – 2020;
  - National strategy for equality and non-discrimination 2016-2020;
  - Strategy for gender equality 2013-2020;
  - Istanbul Convention on action against violence against women and domestic violence.

Social, economic and cultural baseline conditions for the gas pipeline route are based on primary and secondary data. Primary data was gathered from August 2019 to October 2019 through a social survey and process of consultation was conducted with key stakeholders from project area.in four Municipalities. In January to February 2020 further primary data from villages along the gas pipeline route was gathered.

2.2 The EIB Environmental and Social Principles and Standards

The EIB policy objectives and principles are in line with the European Commission standards, ensuring that environmental and social considerations are taken into account during the early stages of project development. It seeks to promote sustainable growth while protecting the natural and social environment,

thereby ensuring that requirements relating to the protection of the environment and human well-being are integrated in the definition, preparation and implementation of all operations financed by the EIB.

The EIB Statement on Environmental and Social Principles and Standards sets the policy context for the protection of the environment and human well-being. EIB's Principles and Standards on environmental and social protection are based on the EU approach on environmental sustainability defined in the EU's EIA Directive. DIRECTIVE 2011/92 /EU has codified EIA Directive on EIA 85/337/EEC and its three amendments.

Directive 2011/92/EU has been amended in 2014 by DIRECTIVE 2014/52/EU. The EIA directive defines the requirements for assessment of potential effects on the environment by some public and private projects that are expected to have significant impact on the environment. EIA is conducted prior to the issuance of construction permit and approval for project implementation. The environmental impact may refer to impact on human beings and biological diversity, soil, water, air and other natural resources and climate, historical and cultural heritage, as well as the interaction among these elements. The EIA process intends to anticipate the potential risks to avoid or mitigate possible damages, while at the same time to balance the social and economic goals with the goals for environmental protection.

Complementary EU Directives in line with the given EIA framework are:

- Directive 2009/147/EC on the conservation of wild birds;
- Council Directive 92 /43 /EEC on the conservation of natural habitats and of wild fauna and flora;
- Directive 2003/4/EC on public access to environmental information;
- Directive 97/11/EC Espoo Convention on EIA in a Transboundary Context;
- Directive 2003/35/EC on public participation in decision-making and access to justice in environmental matters.

The EIB's Environmental and Social Principles and Standards are required for all projects, regardless of the location, and must comply with national environmental permitting procedures and good international practices. For all projects supported by the EIB, the bank requires criteria to be meet trough processing of:

1. Assessment and management of environmental and social impacts and risks;
2. Pollution prevention and abatement;
3. Biodiversity and ecosystems;
4. EIB climate-related standards;
5. Cultural heritage;
6. Involuntary resettlement;
7. Rights and interests of vulnerable groups;
8. Labour standards;
9. Occupational and public health, safety and security;
10. Stakeholder engagement;

According the Bank's Standards, projects might be categorized in four categories (Cat. A, B, C and D).

The Project belongs to Cat. B for which the competent authority (in this case MoEPP) determines the need for EIA according to the specified criteria (Annex II of the Directive, with direction to Annex III) and as described above, according the national legislation, the environmental impact assessment is compulsory for which the competent authority determines the need for EIA according to the specified criteria (Annex II of the Directive, with direction to Annex III) and as described above, according the national legislation, the environmental impact assessment is compulsory.

2.3 EBRD's Environmental and Social Policy and Performance Requirements

Through its environmental and social appraisal and monitoring processes, the EBRD seeks to ensure that the projects being financed:

- Are socially and environmentally sustainable;
- Respect the rights of affected workers and communities; and
- Are designed and operated in compliance with applicable regulatory requirements and good international practice.

In order to translate this objective into successful practical outcomes, the EBRD has adopted a comprehensive set of specific Performance Requirements (PR) that clients are expected to meet, covering key areas of environmental and social impacts and issues. EBRD's document "Environment and Social Policy" (the Policy) and related PRs detail the commitments of the Bank to promote in the full range of its activities, environmentally sound and sustainable development.

EBRD categorizes proposed projects as A, B or C based on environmental and social criteria. These criteria:

- reflect the level of potential environmental and social impacts and issues associated with the proposed project;
- determine the nature and level of environmental and social investigations, information disclosure and stakeholder engagement required for each project, taking into account the nature, location, sensitivity and scale of the project, and the nature and magnitude of its possible environmental and social impacts and issues

Projects categorized by EBRD as "A" require special formalized and participatory assessment processes. The categorization of each project depends on the nature and extent of any actual or potential adverse environmental or social impacts, as determined by the specifics of its design, operation, and location.

The Project belongs in Cat. A, according the EBRD environmental and social criteria.

In general, a project funded by the EBRD has to meet following EBRD's PRs:

- PR 1: Assessment and Management of Environmental and Social Impacts and Issues
- PR 2: Labour and Working Conditions

- PR 3: Resource Efficiency and Pollution Prevention and Control
- PR 4: Health, Safety and Security
- PR 5: Land Acquisition, Restriction on Land Use and Involuntary Resettlement
- PR 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources
- PR 7: Indigenous Peoples
- PR 8: Cultural Heritage
- PR 9: Financial Intermediaries
- PR 10: Information Disclosure and Stakeholder Engagement

For the Project, PR 7 and PR 9 are not considered relevant as there are no indigenous peoples in North Macedonia according to the definition in PR7, and PR9 refers to Financial Intermediaries and does not apply to this Project.

2.4 Equator Principles – EP4, 2019

The equator principles present the financial industry benchmark for determining, assessing and managing social and environmental risk in project financing. Projects need to conform to the Principles:

- Principle 1: Review and Categorisation
- Principle 2: Social and Environmental Assessment
- Principle 3: Applicable Social and Environmental Standards
- Principle 4: Action Plan and Management System
- Principle 5: Consultation and Disclosure
- Principle 6: Grievance Mechanism
- Principle 7: Independent Review
- Principle 8: Covenants
- Principle 9: Independent Monitoring and Reporting
- Principle 10: EPFI Reporting

2.5 IFC Performance Standards

IFC's Performance Standards on Environmental and Social Sustainability (IFC 2012, define the client's roles and responsibilities for managing their projects. They are also relevant to other institutions applying the Equator Principles when making project financing decisions. Following Table outlines the IFC Performance Standards that have been considered in relation to this SIA.

Table 2-1: IFC Performance Standards

Performance Standard	Objectives
Assessment and Management of Environmental and Social Risks and Impacts	• To identify and evaluate environmental and social risks and impacts of the project; • To adopt a mitigation hierarchy to anticipate and avoid, or where avoidance is not possible, minimize, and where residual impacts remain, compensate/ offset for risks and impacts to workers, Affected Communities, and the environment; • To promote improved environmental and social performance of clients through the effective use of management systems; • To ensure that grievances from Affected Communities and external communications from other stakeholders are responded to and managed appropriately; • To promote and provide means for adequate engagement with Affected Communities throughout the project cycle on issues that could potentially affect them and to ensure that relevant environmental and social information is disclosed and disseminated.
Labour and Working Conditions	• To promote the fair treatment, non-discrimination, and equal opportunity of workers; • To establish, maintain, and improve the worker-management relationship; • To promote compliance with national employment and labour laws; • To protect workers, including vulnerable categories of workers such as children, migrant workers, workers engaged by third parties, and workers in the client's supply chain; • To promote safe and healthy working conditions, and the health of workers; • To avoid the use of forced labor.
Resource Efficiency and Pollution Abatement	• To avoid or minimize adverse impacts on human health and the environment by avoiding or minimizing; • Pollution from project activities; • To promote more sustainable use of resources, including energy and water; • To reduce project-related GHG emissions.
Community Health, Safety and Security	• To anticipate and avoid adverse impacts on the health and safety of the Affected Community during the project life from both routine and non-routine circumstances; • To ensure that the safeguarding of personnel and property is carried out in accordance with relevant human rights.
Land Acquisition and Involuntary Resettlement	• To avoid, and when avoidance is not possible, minimize displacement by exploring alternative project designs; • To avoid forced eviction; • To anticipate and avoid, or where avoidance is not possible, minimize adverse social and economic impacts from land acquisition or restrictions on land use by (i) providing compensation for loss of assets at replacement cost and (ii) ensuring that resettlement activities are implemented with appropriate disclosure of information, consultation, and the informed participation of those affected; • To improve, or restore, the livelihoods and standards of living of displaced persons; • To improve living conditions among physically displaced persons through the provision of adequate housing with security of tenure at resettlement sites.
Biodiversity Conservation and Sustainable	• To protect and conserve biodiversity; • To maintain the benefits from ecosystem services;

Performance Standard	Objectives
Management of Living Natural Resources	• To promote the sustainable management of living natural resources through the adoption of practices that integrates conservation needs and development priorities.
Indigenous Peoples	• To ensure that the development process fosters full respect for the human rights, dignity, aspirations, culture, and natural resource-based livelihoods of Indigenous Peoples; • To anticipate and avoid adverse impacts of projects on communities of Indigenous Peoples, or when avoidance is not possible, to minimize and/or compensate for such impacts; • To promote sustainable development benefits and opportunities for Indigenous Peoples in a culturally appropriate manner; • To establish and maintain an ongoing relationship based on Informed Consultation and Participation (ICP) with Indigenous people affected by the project throughout the project's life-cycle; • To ensure the Free, Prior, and Informed Consent (FPIC) of the Affected Communities of Indigenous Peoples when the circumstances described in this Performance Standard are present; • To respect and preserve the culture, knowledge, and practices of Indigenous People.
Cultural Heritage	• To protect cultural heritage from the adverse impacts of project activities and support its preservation; • To promote the equitable sharing of benefits from the use of cultural heritage.

3 Impact Assessment Methodology

3.1 Introduction

The objective of the SIA is to determine the potential impacts of the Project on social and economic factors that influence the socio-economic well-being of the communities where the Project is proposed. To measure the influence of the Project on these factors, a socio-economic baseline is undertaken to establish existing characteristics of the community. This is followed by a description of the potential positive and negative impacts that could result from implementation of the Project including proposed measures to mitigate any potential negative impacts. The SIA has been completed in accordance with both national and international requirements.

3.2 Baseline Conditions

Baseline data collection refers to the collection of background data in support of the social assessment. Baseline information used for the SIA has utilised primary data collected through on-site surveys between September to November 2019 and January to February 2020. Where applicable secondary data sources collected from desk-based studies and literature reviews have also been used and are referenced within the report.

Data will be collected also throughout the life of the Project as part of ongoing monitoring of environmental and social conditions.

3.3 Impact Identification and Evaluation

The impact assessment predicts and assesses the Project's likely positive and negative impacts, in quantitative terms to the extent possible. For each of the socioeconomic aspects of the project, the assessment identifies impacts.

3.3.1 Impact identification and assessment method

The impact identification and assessment process operated with the following premises: (i) Baseline conditions and value/sensitivity of resources/ receptors, and (ii) Project activities as a source of impacts. As a result of this process, appropriate significance level to each impact was assigned.

The potential impacts on the baseline conditions were evaluated according the following criteria:

Table 3-1: Criteria for evaluation of potential impacts

Criteria	Further Description of criteria	Indicative Assessment Thresholds used for each Rating Criteria	
		Threshold	**Typical Description**
Characterization of Impact	Direction of the impact	Positive	Impact is an improvement on the current situation or is desirable.
		Negative	Impact is a worsening over the current situation or is not desirable.
Type of Impact	The way how Project effect upon aspect/receptor/resource	Direct	Project results in a direct impact upon aspect/receptor/resource (i.e. generally within the Project footprint with a relevant buffer).
		Indirect	Indirect effect upon aspect/receptor/resource.
		Cumulative	Cumulative effect upon aspect/receptor/resource.
Reversibility	Reversibility is the ability for a physical parameter, biological or social community to return to the conditions that existed prior to the impact.	Reversible	The effect is reversible.
		Irreversible	The effect is potentially permanent and not reversible.
Geographic Extent	Describes the area over which the particular impact will occur and is related to the spatial boundaries of the assessment.	Local	Impact is limited to specific individuals or population groups/communities or environmental receptors at or close to the Project area (Municipalities).
		Regional	Impact extends across municipalities.
		National or Transboundary	Impact extends through much or all of Republic of North Macedonia or in transboundary context.
		Global	Effect extends globally.
Time when the impact occurs	Associated with when the impact will occur.	Immediate	Effect occurs immediately following project activity/action.
		Delayed	Effect delayed and occurs sometime after project activity/action.
Duration	Refers to how long an impact will occur and is closely related to the project	Short-term	Impact is expected to last in the short-term (e.g. less than two years).

Criteria	Further Description of criteria	Indicative Assessment Thresholds used for each Rating Criteria	
		Threshold	**Typical Description**
	phase or activity that could cause the impact.	Medium-term	Impact is expected to last in the medium-term (e.g. between two and ten years).
		Long-term	Impact extends throughout operation of highway and/or beyond 10 years.
Likelihood of appearance	The likelihood that the impact will occur.	Unlikely	The impact can be considered to be unlikely to occur.
		Probable	The impact can be considered to have a medium likelihood of occurring.
		Certain	The impact can be considered to have a high likelihood of occurring.

The attributed impact significance was based on available information which, for certain environmental and social resources, was not sufficient for objective judgement.

Notwithstanding, the significance of each impact was considered a function of the assessed Sensitivity of the resources/receptors and the impact`s Magnitude or more specifically:

- The **value of the resource** or the sensitivity of the receiving environment / community / receptor and numbers affected (where relevant);
- **magnitude** of the impact (low / medium / high), and whether it be adverse or beneficial is assessed based on:
    - Type (direct / indirect / cumulative);
    - Geographic extent (local / regional / national);
    - Reversibility (reversible / irreversible impact);

Value (sensitivity) of the receptors and resources: analysed environmental and social resources likely to be impacted include soil, water, landscape quality, habitats, cultural heritage, public health and livelihoods. Applied descriptors and criteria for assessing value (sensitivity) of resources / receptors are listed in Table 3-2.

Table 3-2: Generic Environmental / Social Value (or Sensitivity) Criteria

Value (sensitivity)	Typical descriptors
Very High	Very high importance and rarity, international scale and very limited potential for substitution.
High	High importance and rarity, national scale, and limited potential for substitution
Medium	High or medium importance and rarity, regional scale, limited potential for substitution.
Low (or Lower)	Low or medium importance and rarity, local scale.
Negligible	Very low importance and rarity, local scale.

Magnitude of the impacts: Used descriptors and criteria to define magnitude of an impact due to the Project are listed in Table 3-3.

Table 3-3: Magnitude of Impact and Typical Descriptors

Magnitude of impact	Typical criteria descriptors
Major	• *Adverse:* Loss of resource and/or quality and integrity of resource; severe damage to key characteristics, features or elements • *Beneficial:* Large scale or major improvement of resource quality; extensive restoration or enhancement; major improvement of attribute quality
Moderate	• *Adverse:* Loss of resource, but not adversely affecting the integrity; partial loss of/damage to key characteristics, features or elements • *Beneficial*: Benefit to, or addition of, key characteristics, features or elements; improvement of attribute quality.

Magnitude of impact	Typical criteria descriptors
Minor	• *Adverse:* Some measurable change in attributes, quality or vulnerability; minor loss of, or alteration to, one (maybe more) key characteristics, features or elements. • *Beneficial:* Minor benefit to, or addition of, one (maybe more) key characteristics, features or elements; some beneficial impact on attribute or a reduced risk of negative impact occurring (Beneficial).
Negligible	• *Adverse:* Very minor loss or detrimental alteration to one or more characteristics, features or elements. • *Beneficial:* Very minor benefit to or positive addition of one or more characteristics, features or elements.
No change	• No loss or alteration of characteristics, features or elements; no observable impact in either direction.

Significance of effect: Five significance categories (very large, large, moderate, slight and neutral) have been used to assess significance of each impact in Table 3-4.

Table 3-4: Descriptors of the Significance of Effect Categories

Significance category	Typical descriptors of effect
Very Large	• Only adverse effects are normally assigned this level of significance. They represent key factors in the decision-making process. These effects are generally, but not exclusively, associated with sites or features of international, national or regional importance that are likely to suffer a most damaging impact and loss of resource integrity. However, a major change in a site or feature of local importance may also enter this category.
Large	• These beneficial or adverse effects are considered to be very important considerations and are likely to be material in the decision-making process.
Moderate	• These beneficial or adverse effects may be important, but are not likely to be key decision-making factors. The cumulative effects of such factors may influence decision-making if they lead to an increase in the overall adverse effect on a particular resource or receptor.
Slight	• These beneficial or adverse effects may be raised as local factors. hey are unlikely to be critical in the decision-making process, but are important inenhancing the subsequent design of the project.
Neutral	• No effects or those that are beneath levels of perception, within normal bounds of variation or within the margin of forecasting error.

Lastly, appropriate **significance category** has been attributed to each impact against aforementioned criteria: sensitivity (value) of the resources (receptors) and the magnitude of impacts in Table 3-5.

Table 3-5: Significance of Effect Categories

		MAGNITUDE OF IMPACT (DEGREE OF CHANGE)				
		No Change	**Negligible**	**Minor**	**Moderate**	**Major**
ENVIRONMENTAL VALUE (SENSITIVITY)	**Very High**	Neutral	Slight	Moderate or Large	Large or Very Large	Very Large
	High	Neutral	Slight	Slight or Moderate	Moderate or Large	Large or Very Large
	Medium	Neutral	Neutral or Slight	Slight or Moderate	Moderate	Moderate or Large
	Low	Neutral	Neutral or Slight	Neutral or Slight	Slight	Moderate
	Negligible	Neutral	Neutral	Neutral or Slight	Neutral or Slight	Slight

For each resource / receptor, impacts have been distinguished based on the period of occurrence: Project Construction and Operational phases.

The assessment is made without considering the application of preventive and corrective measures that could attenuate the magnitude of the impact.

3.4 Mitigation

Mitigation measures are actions taken to avoid or minimise negative environmental or social impacts. Mitigation includes those embedded within design (as already considered as part of the impact evaluation) and any additional mitigation required thereafter. Additional mitigation will be implemented to reduce significance impacts to an acceptable level, this is referred to as the residual impact. The mitigation hierarchy should be followed: prevent or avoid, minimise, restore or remedy, offset, compensate. Mitigation measures should be clearly identified and linked to environmental and social management plans.

4 Social and Economic Baseline

Social, economic and cultural baseline conditions for the gas pipeline route with block stations are based on primary and secondary data. Primary data was initially gathered in August 2019 to October 2019 undertaken in the four municipalities where the Project passes (Negotino, Demir Kapija, Gevgelija and Bogdanci) and later between January and February 2020. Primary data was gathered during several site visits and interviews which aimed to collect socio-economic data from the impacted area, in order to create a solid base for analysis of the baseline condition of the project area and covered:

- Current condition of infrastructure (local roads, water supply, electricity, waste water and waste management);
- Housing quality and density of population;
- Living conditions in the affected settlement (way of life);
- Identify other life habits and cultural values;
- Identify economic habits and conditions.

The interview survey addressed the occupation, physical assets, education, income, access to financial resources, type of energy source for heating and access to public services such as water-electricity and sanitation facilities.

Secondary data was collected from the Municipality centres, Negotino, Demir Kapija, Gevgelija and Bogdanci, and State Statistical Office using figures available within last 5-10 years. Reports from local government, as well as scientific sociological, ethnological, cultural, archaeological and other studies for this region available in various forms are analysed. Health data was collected from health sector publication data. Educational data was collected from the sector publication data and also the State Statistical Office.

4.1 General Setting

The alignment of the gas pipeline passes in south east part toward central part of North Macedonia, through four Municipalities of: Negotino, Demir Kapija, Gevgelija, and Bogdanci. The surface area of the Project covers 168, 53 ha.

The starting point of the alignment is on the border with Greece between the village Idomeni (GR) and the city of Gevgelija (MKD), where the Greek section of the gas pipeline will end. The ending point of the gas pipeline in North Macedonia is the already built valve station (block station BS 7) on the newly built gas pipeline Shtip-Negotino, near the town of Negotino.

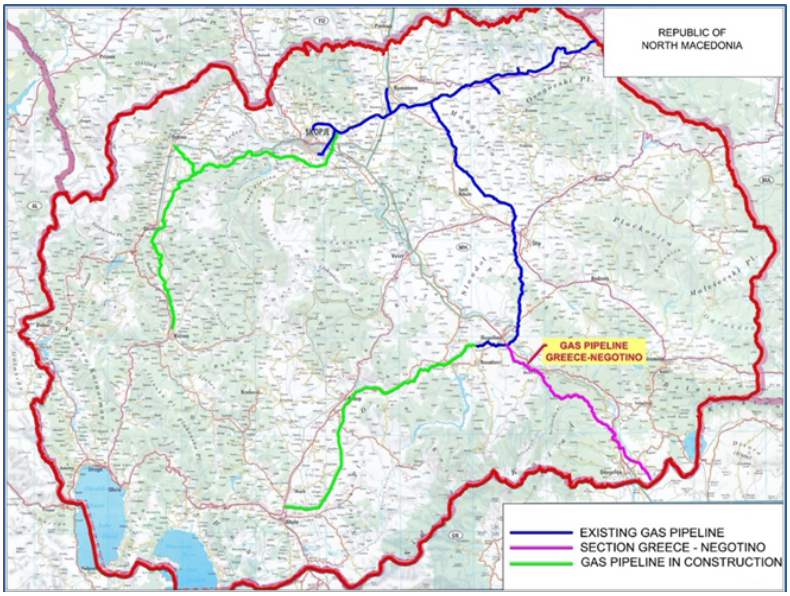


Figure 4-1 General setting of Gas pipeline Interconnection North Macedonia – Greece

4.2 Project Corridor

The proposed pipeline route is as follows:

- The route starts 4 km east of the Bogorodica border crossing near the village Kirjanica bypassing village Stojakovo. Further gas pipeline is crossing the local road Stojakovo – Bogorodica and on 4+500 km, it is approaching the Thessaloniki-Skopje oil pipeline. At 7 + 000 km, the gas pipeline crosses the regional road Gevgelija-Bogdanci and the river Vardar at 8 + 500 km;
- At the section 12 + 500 km to 15 + 000 km the route passes by the village of Prdejci on its south side, crossing the Skopje – Gevgelija international railway and highway, the oil pipeline and the local road Negorci – Prdejci. Further, the gas pipeline crosses river Kovanska and another intersection on the right side with the oil pipeline;
- Starting from the km 16+000 gas pipeline enters in the hilly and mountainous area moving away from the oil pipeline and bypassing the quarry in the Dolamare locality. The gas pipeline intersects with the river Zuica, passing the local hills (Bilo, Goli Rid, Maslinski Rid) approaching the oil pipeline and crossing the river Stara Reka (Petrushka Reka) at 30+000 km;
- Starting from km 30 + 000 to km 51 + 000 the route is generally passing mountainous terrain near by the oil pipeline crossings at several places (km 31 + 500; km 32 + 000; km 36 + 000; km 37 + 500; 38 + 500 km; 47 + 300 km; 48 + 800 km and 50 + 500 km). On this part of the route, gas pipeline is at the highest elevation of 877 m above sea level;
- Further, the route on km 53 + 000 crosses the river Bosava at elevation of 120 asl. and continues west of the town of Demir Kapija after which on a hilly terrain passing through the area of Golemo brdo and the Bugdeshna Glava. The gas pipeline bypasses the village Przdevo on the east side,

crosses the river Przdevska and the local road to the village Przdevo at 59 + 500 km, continuing to the west side of the village Tremnik where it crossing the river Shulev and through the locality Ajupka and Sokolce passing under the river Disanska at 64 + 500 km;

- The ending point of the gas pipeline is at 67 + 194 km in the area of Solena Voda where the route is connecting with the existing gas pipeline Klechovce – Negotino.

The following figures provide an overview of the Project.

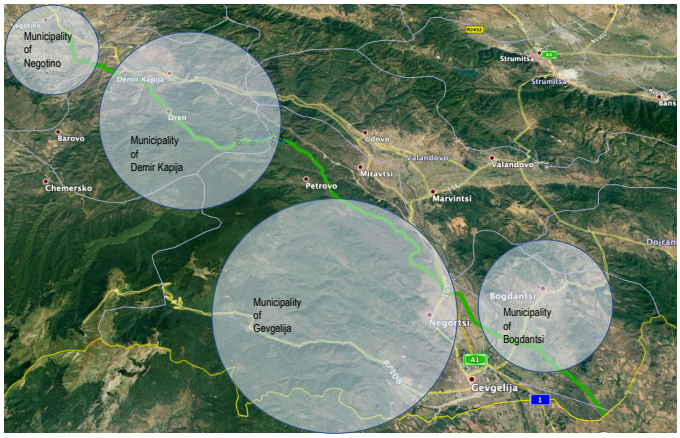


Figure 4-2: Municipalities through which the Gas Pipeline Interconnector passes in MKD

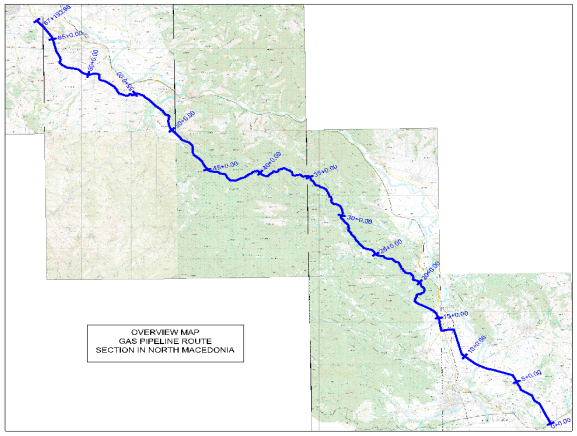


Figure 4-3: Alignment of the Gas Pipeline Interconnector in MKD

4.3 Project Area of Influence

The Project Area of Influence (AoI) includes all communities potentially affected by the Project as well as the region surrounding the project where social interaction will take place and where local communities are likely to be impacted by the Project, either indirectly or directly.

The Project location for the Project Interconnector gas pipeline is spread across for Municipalities Gevgelija, Bogdanci, Demir Kapija, and Negotino . The villagers and people in cities and administrative centers affected by the Project live predominantly in these four Municipalities.

Figure 4-4 outlines the cities and villages which the SIA will refer to. The interconnector gas pipeline is located near the following settlements:

- The cities: Negotino, Demir Kapija, Gevgelija and Bogdanci;
- The villages: Bogoroditsa, Stojakovo, Selemli, Mrzentsi, Gjavato, Negortsi, Prdejtsi, Smokvitsa, Miletkovo, Miravtsi, Gabrovo, Petrovo, Dren, Chiflik, Przhdevo, Tremnik, Timjanik, Dubrovo and Dolni Disan.

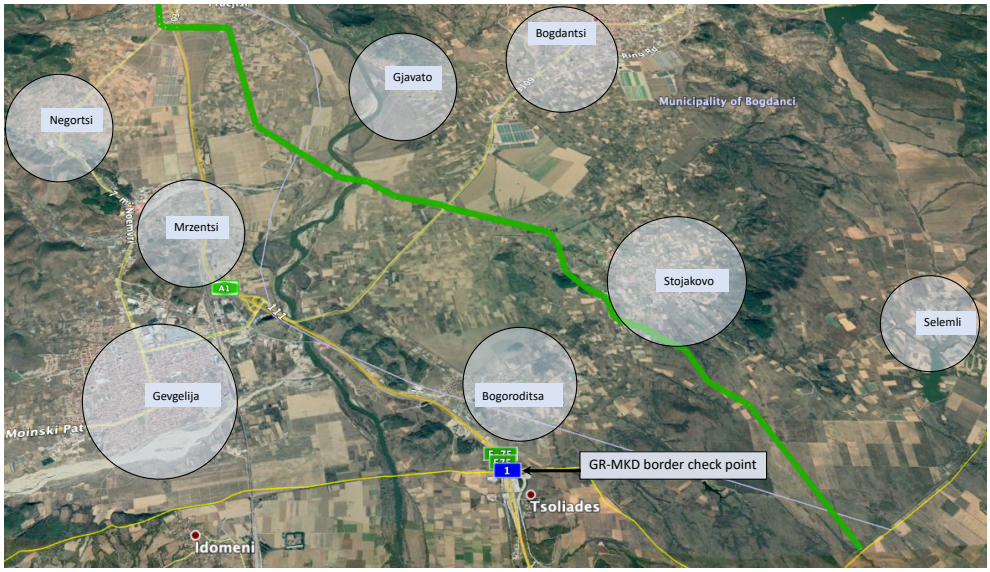


Figure 4-4: Affected settlements from Km 0+0.00 to Km 12+0.00

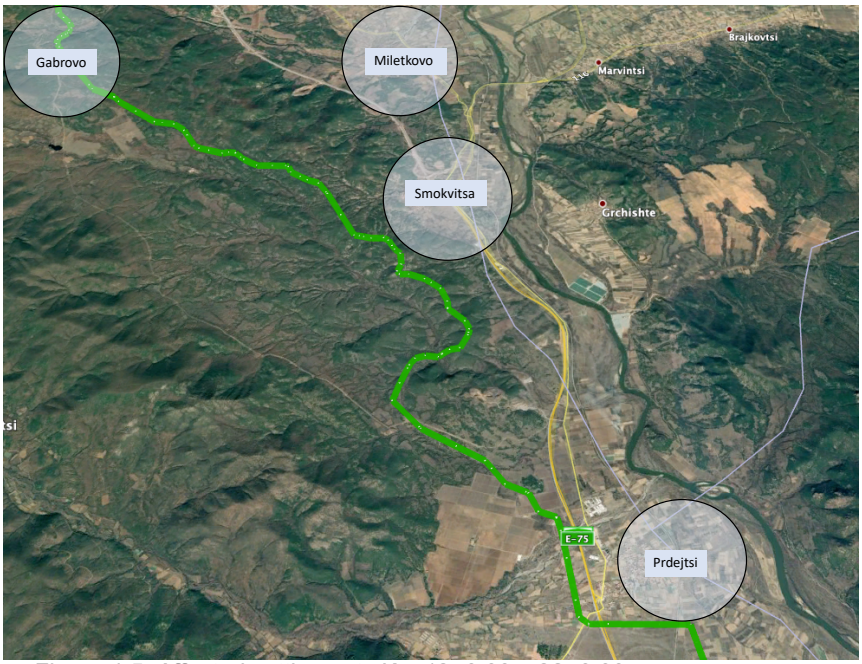


Figure 4-5: Affected settlements Km 12+0.00 – 28+0.00

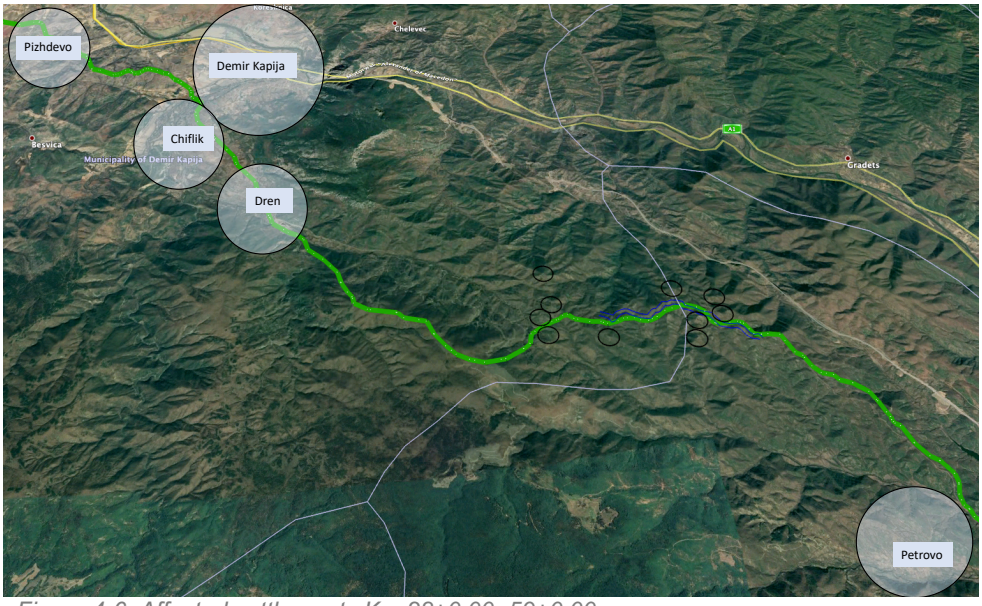


Figure 4-6: Affected settlements Km 28+0.00 -59+0.00

Figure 4-7: Affected settlements Km 59+0.00-67+2.00

4.4 Demographic Characteristics

In the Republic of North Macedonia, eight (8) planning regions have been established as functional territorial units for the purposes of planning development and implementation of measures and instruments to stimulate development. Apart from the regions, the first-tier administrative divisions of North Macedonia are the municipalities.

The gas pipeline interconnection route passes through four municipalities and two planning regions, Gevgelija and Bogdanci Municipalities as part of the South-East Planning Region and Negotino and Demir Kapija Municipalities as part of the Vardar Planning Region.

The Southeast region covers an area of 2,835 km^2, or 10.9% of the total area of the country. It comprises ten (10) municipalities with 171,416 inhabitants and a population density of 63.2 inhabitants/km^2. The Vardar planning region covers an area of 4,042 km^2 or 16% of the total area of the country. It consists of nine (9) municipalities. According to the 2002 census, the Vardar Planning Region had 154,535 inhabitants. The region is characterized with extremely low population density of 38 inhabitants/km^2 and a high concentration of population in urban areas.

Municipality of Gevgelija

The municipality of Gevgelija has an area of 485 km^2. City of Gevgelija is an urban and community center, and the municipality comprises 17 villages. Villages that belong to AoI are Bogoroditsa, Gabrovo, Miletkovo, Miravtsi, Mrzentsi, Negortsi, Petrovo, Prdejtsi, Smokvitsa.

According to the Census and State Statistical office database (Makstat), the average population density is 47 inhabitants/km^2, which is significantly less than the population density in the Republic of North Macedonia. The number of inhabitants in municipality is 22,988 and in Table 4-1 below is outlined a demographic overview of Gevgelija city and villages in AoI, and Table 4-2 Age structure.

Table 4-1: Demographic overview of the municipality of Gevgelija

Place	Population	Women	Men
Gevgelija	15 685	8 150	7 535
Bogoroditsa	1 001	483	518
Gabrovo	20	10	10
Miletkovo	117	57	60
Miravtsi	1 647	810	837
Mrzentsi	461	230	231
Negortsi	2 047	997	1 050
Petrovo	206	89	117
Prdejtsi	514	257	257
Smokvitsa	263	126	137

Table 4-2: Age structure in the municipality of Gevgelija

Age group	Total	Women	Men
0 – 14	3 835	1 923	1 912
15 – 64	16 498	8 218	8 280
65 +	2 648	1 421	8 218
Unknown	7	6	1
Total	**22 988**	**11 568**	**11 420**

Municipality of Bogdanci

The municipality of Bogdanci has an area of 115 km^2 and the centre of the municipality is the town of Bogdanci. The municipality of Bogdanci comprises only four settlements, where city of Bogdanci is a central urban area and headquarters of the municipality, while settlements of Stojakovo, Selemli and Gjavato are rural areas.

According to the last Census and the State Statistical Office, the municipality population is 8,707 and represents 5.1% of the Southeast region, i.e. an average of 76 inhabitants /km^2. In Table 4-3 below is outlined a demographic overview of Bogdanci city and villages in AoI, and in Table 4-4 the age structure.

Table 4-3: Demographic overview of the municipality of Bogdanci

Place	Population
Bogdanci	6 011
Stojakovo	1 931
Selemli	327
Gjavato	438

Table 4-4: Age structure in municipality in the municipality of Bogdanci

Age group	Total	Women	Men
7 – 14	1 486	726	760
14 – 18	728	348	380
18 – 25	664	312	352
25 – 40	1 913	918	995
40 – 65	2 839	1 429	1 410
65 +	1 077	597	480
Total	**8 707**	**4 330**	**4 377**

Municipality of Demir Kapija

The municipality of Demir Kapija has an area of 309 km^2 consist of city of Demir Kapija and 14 villages. Village in AoI are Dren, Przdevo, and Chiflik.

According to the estimation in 2016 from State Statistical office, in municipality of Demir Kapija the number of inhabitants is 4,545 and population density is 15 inhabitants/km^2. Table 4-5 below is outlined a demographic overview of Demir Kapija city and villages in AoI and in Table 4-6 Age structure.

Table 4-5: Demographic Overview of the municipality of Demir Kapija

Place	Population
Demir Kapija	3 275
Dren	94
Przdevo	235
Chiflik	90

Table 4-6: Age structure in the municipality of Demir Kapija

Age group	Total	Women	Men
0-19	1 137	539	598
20-59	2 576	1 200	1 375
60 +	823	459	372
Total	**4 545**	**2 198**	**2 347**

Municipality of Negotino

The municipality of Negotino covers an area of 414 km^2 and according to the last Census and the State Statistical Office, the population density in the municipality is 46.5 inhabitants/km^2.

The City of Negotino is the urban center of the municipality that consist of 21 settlements. The following settlements belong to AoI: Timjanik, Tremnik, Dubrovo and Dolni Disan.In Table 4-7 is outlined the demographic overview of Negotino city and villages in AoI and in Table 4-8 Age structure.

Table 4-7: Demographic Overview of municipality of Negotino

Place	Population
Negotino	13 104
Timjanik	1 155
Tremnik	829
Dubrovo	49
Dolni Disan	931

Table 4-8: Age structure in the municipality of Negotino

Age group	Total	Women	Men
0-15	3 737	1 845	1.902
15-59	12 689	6 230	6 459
60+	2 536	1 245	1 291
Total	**19 212**	**9 434**	**9 778**

4.5 Natural Movement of the Population

The basic components of the natural movement of the population are birth and mortality rates. The following table presents the natural movement of the population in the municipalities where the Interconnector gas pipeline is placed.

Table 4-9: Birth rates 2008 – 2018 year, in urban settlements where the gas pipeline is placed

City	Total born in 2008			Total born in 2018		
	Total	Male	Female	Total	Male	Female
Gevgelija	265	146	119	232	121	111
Bogdanci	67	32	35	79	40	39
Demir Kapija	49	28	21	33	21	12
Negotino	197	100	97	183	103	80

Table 4-10: Mortality rates for 2018, in urban settlements, where gas pipeline is placed

City	Total	0-4	5 - 14	15 - 24	25 - 44	45 - 64	65 and more
Gevgelija	276	2	-	1	8	47	218
Bogdanci	90	1	-	1	4	20	64
Demir Kapija	53	-	-	-	-	15	38
Negotino	184	1	-	-	4	38	141

Another component of the natural movement of the population is migration. In the municipalities where the project is developing, there has been a significant increase in migration from rural to urban areas during the period of industrialization, which continued during the last years of the last century, as well as in this century. In the last ten years, there has been a process of reverse migration, especially of the older population. In the same period, there was a significant increase in migration of active working population from the municipalities outside the borders of the Republic of North Macedonia. The following tables shows the basic statistics for migration in the Municipalities and cities in AoI in 2017 (SSO Report Migration).

Table 4-11: Emigrated and immigrated citizens in municipalities of AoI and reason in 2017

Municipality	Emigrated/ Immigrated	Total	Employment	Marriage	Family reason	Education	Other
Gevgelija	Emigrated	42	9	38	17	/	22
	Immigrated	42	4	33	19	/	10
Bogdanci	Emigrated	24	3	27	8	1	8
	Immigrated	12	1	18	4	/	4
Demir Kapija	Emigrated	14	/	22	11	/	/
	Immigrated	22	1	13	15	/	6
Negotino	/	/	/	/	/	/	/

Table 4-12: Total immigration and emigration of citizens and migration balance by cities

City	Total population	Total immigration	Total emigration	Migration balance
Gevgelija	22 988	75	77	- 2
Bogdanci	8 707	21	30	- 9
Demir Kapija	4 545	28	35	- 7
Negotino	19 212	138	142	- 4

4.6 Community Utilities and Infrastructure

The disposal of municipal solid waste in the Project area is done on local municipal landfills, which do not meet the basic sanitary-technical standards for safe waste disposal. None of the landfills have an underground layer to protect the soil and groundwater. Also, a threat to the environment and the population are the illegal landfills in the area of the municipalities of AoI. Waste issues and waste disposal are in more details addressed in EIA.

In the city of Gevgelija, water supply is managed from with 6 pumping stations (wells), two near the river Vardar and four near the village of Moin. According to the strategic plan of the municipality construction of the Dam Konsko will be the most important facility for Gevgelija area. The dam is located on Konska River, 17 km west of city of Gevgelija. The main purpose of the reservoir is water supply of the city of Gevgelija, and also for irrigation of arable land.

The municipality of Bogdanci is supplied with water from the Paljurci reservoir, also used for irrigation of arable land.

Public Utility Company “Komunalec” - Negotino provides the drinking water to the city of Negotino, from the spring "Lukar". The city's water supply network provides water to the citizens and industry, located in the city. The irrigation of the green areas in the city and the irrigation of the agricultural areas uses water from hydro system “Tikveshko Pole”, “Negotino 1 and 2”.

In the municipality of Demir Kapija the water supply in the city is provided by the public utility company Bosava. The city receives water from a local reservoir with a volume of 380 m^3 water and the rural areas from local wells. There is no wastewater treatment in the municipality, and there is also no organized wastewater treatment or wastewater treatment plant. Some of the wastewater from households in settlements and industry is discharged directly into rivers, and some are discharged into individual septic tanks.

In the city of Negotino, municipal wastewater from households and other consumers is discharged together with storm water through the existing sewer network. Industrial wastewater from most facilities is discharged directly into the Negotinska River without prior treatment. The city of Negotino and the settlements Timjanik are 100% covered with sewage system for wastewater collection and disposal. Construction work on a sewage system in the village Tremnik is ongoing.

General overview is that households in AoI are supplied with drinking water in urban and rural areas although some settlements face the problem of shortage of drinking water due to high average consumption per capita, as well as high water losses in old supply systems. The situation in the in terms of wastewater treatment is quite poor. In AoI of the Project, wastewater from urban settlements is collected and discharged without any treatment directly to the recipient surface watercourses. In some of the rural areas where septic tanks are used, they are not of sufficient capacity and there is a direct discharge of wastewater into different surface waters or agricultural land. Exception is a treatment plant in Gevgelija with a capacity of 30,000 inhabitants.

The highways and national road (A1, 42 km long and A4, 90 km long) are passing through AoI and are in relatively good condition. The section of the A1 highway Demir Kapija - Smokvica is 28 km long (link with A2). The A1 is the main state artery (North-South corridor) through which a large number of people and goods transit and their numbers and quantities are constantly increasing. The length of the local road network in the region is lower than in other regions.

In the AoI passes railway line Skopje-Veles-Gevgelija-Greece border.

In terms of energy potential, the region is not rich in hydro-energy and is fully dependent on electricity. Thermal power plant Negotino is of particular importance, and Dubrovo substation having a central location for electricity transmission within the country towards/from Greece, and the Project crosses OHL Dubrovo 400kV.

What is important for this region is that trough it passes a section of the Thessaloniki-Skopje oil pipeline along the length on Corridor 10.

The intersection of the Project interconnector natural gas pipeline in AoI with communal and utility infrastructure is addressed in EIA, and in SIA is included in Annex 1.

4.7 Land Use

Along the alignment of the Project Interconnector gas pipeline the land usage is presented on Annex 2 (Land Use). The fields and vegetable gardens are typical for the Bogdanci -Gevgelija Valley and are spread in the lowland area between the villages Stojakovo and Prdejci (between Km 3+500 and Km 15+500), then between the village Dren and city Demir Kapija (Km 48+500 to Km 53+500), while in the

final part of the route, in the vicinity of the village Tremnik (between Km 59 +500 and Km 67+000), they are presented with cereal fields.

Perennial vegetables that dominate the corridor region are crops such as tomatoes, peppers, watermelon, alfalfa, tobacco, eggplant, cabbage, potatoes, wheat, corn and others. In the part between Demir Kapija and Negotino, the agricultural areas are used for growing cereals.

Orchards in the corridor area is not a typical type of agricultural activity. Fruit trees are usually planted in the villages or in their immediate vicinity. The most common fruit trees in the region are almonds, peaches, pears, plums, and apricots. Peach plantations are present in the area of the city of Negotino.

In the final part of the pipeline route (between Km 60 + 000 and Km 62 + 000) there is a plantation cultivation of peaches, while in the initial part (Km 1 + 000) apple plantations are present.

Vineyards are common and are one of the most common crops in the area of the pipeline corridor.

The vineyards are presented mainly with plantations on large areas, but also with smaller individual plantations. They are most present in the final part of the corridor route, between Km 59 + 500 and Km 66 + 000, then in the central part in the vicinity of the village Chiflik, between Km 50 + 000 and Km 53 + 300, as well as in the initial part near the border with Greece (Km 0 + 500 and Km 2 + 000) and in the vicinity of the village Prdejci (between Km12 + 000 and Km16 + 000).

Villages Stojakovo and Przhdevo are nearest located to the route of the gas pipeline and the area around is characterized by a mosaic structure of vegetation.

4.8 Agriculture

From the baseline survey results and interviews in the villages and urban settlements within the study area is found that the population is engaged in agriculture as an additional activity, ie most often people are employed in the state or private sector and agriculture is not the main activity for income. Typically, a family cultivates lands between 1ha and 4 ha in size. The survey also shows that a certain part of the arable land in the rural areas is abandoned and not cultivated, and the reason is the unprofitability as well as the emigration of the population, ie reduced number of inhabitants.

A wide range of fruits and vegetables grows in the municipality of Gevgelija, including products typical for the Mediterranean/Aegean climate, such as figs, olives, pomegranates, lemons, grapes, kiwi and others. Under greenhouses, in addition to various vegetable products, different types of flowers grow too. The agricultural land covers an area of 7,800 ha out of which 3,260 ha are orchards, 1,000 ha are vineyards, 100 ha fruit trees, 300 ha meadows, 2,652ha are pastures, 28,350 ha are under forest, and the rest are barren land. About 4/5 of arable land is for individual farmers, 1/5 for legal entities. On the following Figure 4-8, the vineyards are presented in the Gevgelija region area.

Figure 4-8: Vineyards in Gevgelija region

Agriculture in the Municipality of Bogdanci is still one of the most prevalent activities either as basic or additional activity to the population. In the past, agriculture was more prevalent, but over the time, the population gradually abandoned this branch and concentrated on other economic branches. The Municipality of Bogdanci owns a total of 3,402 ha of agricultural land, out of which 3,305 ha belong to arable land and 97 ha to pastures. On the following figure 4-9 are presented agriculture activity in Bogdanci region.

Figure 4-9: Greenhouses in Bogdanci region

In the municipality of Demir Kapija, there are excellent conditions for development of vineyard culture, as in this area, grapes grow at the earliest. Table grape varieties grown in the municipality are muskat, queen and cardinal. Also, good quality types are zilavka, smederevka, bela, teran, kratoshia, vranec, game, aligote, risling and others.

As for the potential for the development of cattle and related industries, the region has very modest opportunities for livestock food production, however sheep, goat, pig and poultry livestock are represented. On the figure 4-10 is presented overview of Demir Kapija.

Figure 4-10: Overview of Demir Kapija

The municipality of Negotino has 22,303 ha of agricultural land and 1,966 ha of forest. Of the agricultural land, 10,000 ha are pastures, 12,000 ha are arable land out of which 7,000 ha are plows and orchards, 4,000 ha are vineyards and the rest meadows and orchards. In the structure of arable land under plows are 55% while under vineyard 33.3%. Soil-climatic conditions are suitable for growing different crops, cereals, forage, industrial and gardening, and are suitable for fruits and vineyards. Vineyards dominate near all settlements. On the following figure 4- 11 is presented Negotino region near the pipeline route.

Figure 4-11: Negotino region near the Interconnector gas pipeline alignment

4.9 Economic Development

Agriculture is the primary source of income in the municipality of Gevgelija. In the secondary sector in the municipality are manufacturing, energy supply and construction. Also in the municipality economy is supported as tertiary part with trade, tourism and services related to tourism. Due to the favourable climate, the richness of thermal waters, the proximity of Mount Kozuf and the proximity of the border with Greece, in the Municipality of Gevgelija there are favourable conditions for the development of tourism and hospitality.

Main economic areas in Bogdanci municipality are manufacturing, agriculture, trade, financial services, public services, education, health and administration. There are textile factories that fall into the category of light textile industry, capacity for milk processing and production of products and also a plant for processing and canning of agricultural products. There are no facilities and infrastructure for tourism development.

Viticulture and winemaking are the most important business branch in the municipality of Demir Kapija,. Apart from viticulture, individual livestock farming has been developed on a small scale, which is mainly done by the local population. The largest poultry farm in the municipality has about 120,000 poultry. The relief features of this area are outstanding elements for tourist activity. Eco-cultural tourism can play a significant role in the development of the municipality.

Agriculture (agribusiness, forestry), and especially viticulture, is greatly developed on the territory of Negotino municipality and agricultural production is the main economic activity. The municipality of Negotino has an annual production of 20-25 million kilograms of grape. The industrial crops include tobacco, poppy, horticultural crops and cereals. The second largest winery in Macedonia, Povardarie, is located in Negotino.

In the following Table the number of entities in different sector in the Municipalities are presented.

Table 4-13: Number of economic entities in different sectors in the Municipalities (State Statistical Office-Makstat)

Sector of activity	Gevgelija	Bogdanci	Demir Kapija	Negotino
Agriculture, forestry and fishing	62	12	7	31
Mining and quarrying	-	1	-	2
Manufacturing	149	28	9	114
Electricity, gas, steam and air conditioning supply	3	-	1	1
Water supply, sewerage, waste management and remediation activities	2	1	1	4
Construction	71	11	6	48
Wholesale and retail trade; repair of motor vehicles and motorcycles	354	107	34	240
Transportation and storage	166	51	16	149
Accommodation and food service activities	92	25	6	49
Information and communication	23	4	1	8
Financial and insurance activities	5	-	-	2
Real estate activities	16	1	-	-

Sector of activity	Gevgelija	Bogdanci	Demir Kapija	Negotino
Professional, scientific and technical activities	131	10	4	57
Administrative and support service activities	20	-	-	7
Public administration and defence; compulsory social security	4	1	1	2
Education	14	6	1	10
Human health and social work activities	53	10	5	35
Arts, entertainment and recreation	30	5	2	12
Other service activities	82	21	7	31
Total	**1,277**	**294**	**101**	**802**

4.10 Livelihood in villages in AoI

In general, the livelihood of the villagers varies from one village to another, depending from environment and available resources and each family tends to have a primary and secondary job. Based on data obtained during the socio-economic survey from respondents from the villages along the gas pipeline route, the average income in the household varies between 300 Euro to 700 Euro per month.

The villages near Gevgelija and Bogdanci are located in a valley area (Stojakovo, Selemli, Bogoroditsa, Mrzentsi, Negortsi, Gjavato). The villages have a farming and livestock function. On the following figures are presented village Bogoroditsa and Selemlii.

Figure 4-12: Overview of village Bogoroditsa

Figure 4-13: Overview of village Selemli

The population is mainly engaged in the cultivation of agricultural products (mostly early vegetable), primarily due to the suitable warm climate and the strong Mediterranean influences that penetrate this region. Also there is the cultivation of vines from which quality wine and brandy are produced. In recent years, the area has become particularly attractive for the construction of casino hotels where the population is employed. Villages near Gevgelija City are very developed, and people are working in Gevgelija, and tourism field.

The villages near the middle part of the pipeline route, Dren, Przhdevo and Chiflik, Miletkovo, Petrovo, Gabrovo, Smokvitsa are hilly villages. The population is affected by emigration and the villages are small, the population is mainly engaged in viticulture and livestock, i.e. breeding of goats and sheep. In Przhdevo there is a factory for processing, drying and production of red pepper.

Figure 4-14: Overview of village Przdevo

The villages near the end of the route (Tremnik, Temjanik, and Dolni Disan) have a agricultural function. The most common branches of agriculture cultivated in the area are cereals, viticulture and horticulture. Village of Dolni Disan is known for the viticulture and production of the best and highest quality wines and brandies. In Dolni Disan there is an agricultural factory "Venec". The population is mostly engaged in wheat cultivation, vineyard cultivation, on a much smaller scale, barley and corn are grown, and many mostly younger residents work in automotive electronics factories in the region.

Around the villages there are greenhouses under vegetable gardens where peppers, tomatoes, cucumbers, onions, garlic, lettuce, carrots, spinach, leeks are grown, as well as a lot of cabbage and watermelon - pumpkins, watermelons and melons. From animal husbandry, most of the population is engaged in raising chickens. The small population in Dubrovo is engaged in viticulture and agriculture and in the winter the village sheep are brought for wintering.

Due to the close proximity to the city of Negotino, a significant part of the residents are engaged in activities in the city, such as crafts and service activities in construction, transportation, education, catering etc.

4.11 Healthcare of the Population

Health facilities are important for the Project for the following reasons:

- If there are any major health accidents and illnesses with construction workers, these health facilities can be the first option for medication;
- Health facilities can assist the Project to deal with first aid actions in and around the Project;

- Health resources can assist the Project to inform employees about major illnesses in the area and how to prevent them. They can also provide awareness for villages in and around the Project area on the potential major health issues arising from the type of industry NER are looking to develop; and
- The Project can collaborate with health facilities as part of Corporate Social Responsibility (CSR) strengthen awareness among villagers on how to mitigate major illnesses.

The healthcare system consists of three segments: primary, secondary and tertiary healthcare:

- The primary healthcare in North Macedonia is based on a network of private and public health facilities: clinics and health centers. The system of primary protection includes preventative, promotional and curative services through different profiles of health workers and affiliate professionals: doctors, general medicine specialist, dentists, pediatricians, school medicine specialists, gynecologists and labour medicine specialists.
- The secondary health care is practiced throughout a system of specialist advice services, general and special hospitals and institutes.
- The tertiary health care is practiced in clinical hospitals and the University clinical center in Skopje. These two levels are responsible for providing preventative, curative and rehabilitative health services through different specialists and subspecialists. North Macedonia has a working health care system, geographic and financial approach, disease control and almost full coverage of the population with vaccination.

In the Republic of Northern Macedonia, the health system has a geographical and financial access, controls disease and almost complete coverage of the population with vaccination.

The health care system is mostly financed through a mandatory healthcare insurance, which gives an option for all citizens to be healthcare insured. The mandatory healthcare insurance is financed by salary allocated amounts, intended for healthcare insurance. Furthermore, country's state budget of delivers funds for covering the health insurance expenses for citizens who do not fall under health insurance by any basis, including groups such as: underage children under 18 years of age (26 if they are students), pregnant women, nursing mothers, people above 65 years etc.

The public health is constantly monitored by the Institute of Public Health, and the latest data and healthcare analyses are included in the Health report for the population of the country for 2017. An excerpt from the coverage of medical staff by health regions is presented in the following table. Gevgelija health region covers the area of Demir Kapija, while Negotino health region covers Bogdanci. Based on data obtained during the social survey from respondents from the villages along the gas pipeline route, is obtain data that in certain villages (especially those situated in the middle part of the gas interconnector pipeline route) neither health facilities are available nor doctor visits, so villagers need to travel to visit doctor and perform medical checks or treatments.

Table 4-14: Overview of medical staff coverage by health regions (Year 2017)

	Negotino	Gevgelija	MKD
The Health Regions of MKD through numbers			
Number of residents per doctor	496	392	333
Total number of doctors	47	87	6 219
General Practice	18	19	1.77
General practice (% of total number of doctors)	38	21	28
The specialization	7	19	699
Specialization (% of total number of doctors)	14	21	11
Specialists	22	49	3.75
Specialists (% of total number of doctors)	46	56	60
Number of dentists	15	30	1 811
Number of inhabitants per 1 dentist	1 555	1 138	1 145
Number of Pharmacists	8	11	1.07
Number of inhabitants per 1 pharmacist	2 915	3 104	1 938
Number of health workers in medical institutions in rural areas, in Health Regions, in MKD			
Permanent doctors	2	11	321
Interim doctors	4	/	5
High school and vocational health workers	3	11	354

4.12 Education

The education process in the Municipalities in the region is conducted through state educational institutions, which are under the competence of the Municipalities.

In the municipality of Gevgelija regular education is covered through five (5) primary schools and two (2) secondary schools. There are three (3) primary schools in the town of Gevgelija, and other two (2) are situated in the villages of Miravci and Negorci. High school center has three directions - general gymnasium, mechanical vocation and hotel-tourist direction.

In the Municipality of Bogdanci regular education is covered trough four (4) primary schools and one (1) high school. Pre-school care for the upbringing and education of young children is organized in a municipal kindergarten with a location in city of Bogdanci and a regional kindergarten in the village Stojakovo. In the Municipality of Bogdanci the educational process takes place in the one (1) primary school in Bogdanci, with district school in the village of Gjavato, and primary school in the village of Stojakovo with a district school in the village of Selemli.

On the territory of the Municipality of Bogdanci there is a one (1) high school located in the city of Bogdanci. In addition to gymnasium education, there are also textile, traffic and health profession.

In the Municipality of Demir Kapija education is covered by one (1) primary school in the city, and four (4) district schools in the villages Koreshnica, Bistrenci, Przdevo and Celevec.

In the municipality of Negotino, there are two (2) primary schools and one high (1) school in the city of Negotino. The two (2) primary schools also have district schools in the villages of Dolni Disan, Timjanik, Tremnik.

4.13 Quality of Life

The Human Development Index (HDI) is used as a standard to measure the quality of life. The measurement includes indicators for a long and healthy life, knowledge attainment and decent standard of living. The 2019 Human Development Report presents the 2018 HDI (values and ranks) for 189 countries and UN-recognized territories.

- North Macedonia's HDI value for 2018 is 0.759, which put the country in the high human development category, positioning it at 82 out of 189 countries and territories. Between 2000 and 2018, North Macedonia's HDI value increased from 0.669 to 0.759, an increase of 13.6 percent. In the regions where Project will develop the HDI is:
    - Vardar Statistical Planning Region 0.763
    - South-Eastern Statistical Planning Region 0.734

4.14 Vulnerability

IFC defines vulnerability as "people who by virtue of gender, ethnicity, age, physical or mental disability, economic disadvantage or social status may be more adversely affected than others."

Groups that are vulnerable in the villages and cities within the Project AoI are generally the elderly, widows, single parent family with minor children, and the disabled. There is no distinct ethnic group that is vulnerable and there is no occurrence of Indigenous people.

Some of the vulnerable group, single parents and family with sick or disable person are obtaining assistance from Social Centre with some services and money. According the State Statistical Office the number of vulnerable families obtaining assistance from Social Centres are 1,821 in Vardar region and 1,623 in South East region.

Through the performed social survey, the obtained data are following in the table below.

Table 4-15: Number of vulnerable in the municipalities in AoI

Municipality	Single parent families	Families with social help	Disabled people	Other vulnerable (homeless people, children with no parents, disabled children)
Gevgelija	N/A	122	133	25
Bogdanci	12	35	32	13
Demir Kapija	16	89	27	0
Negotino	33	180	180	27

4.15 Cultural and Historical Heritage

The country is rich in immovable cultural heritage of exceptional cultural, historical and artistic value, confirming the existence, continuity and identity of the Macedonian people, as well as nations living within its borders that are part of the Albanian, Turkish, Vlach, Serbian, Roma, Bosnian communities and other nations over the centuries.

The National Institute for the Protection of Cultural Monuments for development of the Spatial Plan of the country has prepared an expert report on the protection of the immovable cultural heritage in which the Inventory of immovable cultural heritage is of special importance. It contains of a list of registered immovable cultural property with a designated monument status: archaeological sites, churches, monasteries, mosques, spas, baths, towers, clock towers, turbines, mausoleums, lodgings, bridges, buildings, buildings old bazaars, old city cores and other monuments with their names, locations, nearby settlements, period of occurrence and the municipalities where the monuments are located. According to the Law on Protection of Cultural Heritage, types of immovable cultural heritage are monuments, monuments parts and cultural landscapes.

Due to its geographical location, at the central Southern Balkans, Republic of North Macedonia is a treasure trove of almost all the major cultural, historical epochs that mark European civilization.

National Conservation Centre of Cultural Heritage-Skopje and Institute for Protection of Cultural Monuments and Museum - Strumica conducted an initial survey to determine registered archaeological and cultural sites and submitted information on the archaeological and cultural heritage located along the North Macedonia-Greece Interconnection pipeline route.

These sites have archaeological and cultural significance and archaeological-professional research should be conducted in order to determine a further way of protection and measures to reduce the impact.

In the following table are listed registered archaeological and cultural sites along the North Macedonia-Greece Interconnection pipeline route. Maps with the archaeological heritage sites with visualization of their location and distance from the pipeline route can be seen in Annex 3.

Table 4-16: Recorded archeological sites

Gevgelija	Bogdanci	Demir Kapija	Negotino
✓ Goli Rid ✓ Keramidarnica ✓ Glavica ✓ Golasec ✓ Konjari	✓ Rudina (Sipkov Dol) Gradiste	✓ “Ilimov Rid” settlement Roman-era; ✓ “Orizarski Grobista” Roman-era necropolis;	✓ “Bugdaska Glava” Iron Age settlement

5 Public Consultation and Stakeholder Engagement Plan

The EIB/EBRD considers public consultation and stakeholder engagement as an ongoing process that should start at the earliest stage of Project planning and continue throughout the entire life of the project.

The process is involving:

- public disclosure of appropriate information, in order to enable meaningful consultation with stakeholders;
- meaningful consultation with potentially affected parties;
- a procedure or policy and grievance mechanism for stakeholders and people to raise their concerns and send comments about the Project.

A process of identifying relevant stakeholders that may be directly or indirectly affected by the project has been completed. A Stakeholder Engagement Plan (SEP) has been prepared for the Project to guide engagement activities for the Project.

The objectives of this SEP are to:

- Identify the local legal framework of consultation activities and disclosure requirements, particularly in respect of those public consultation activities that are directly required under the local permitting process;
- Identify potential stakeholders in the area of influence, as well as relevant interested parties such as government agencies and other key stakeholders;
- Record all consultation activities, including those prior to the commencement of the ESIA process;
- Describe how concerns or grievances will be handled via a Grievance Mechanism;
- Provide an action plan for further consultation affected area during preparation, construction and operational phases of the Project, including details on appropriate formats for effective and culturally meaningful interaction with the community and relevant stakeholders; and
- Provide a disclosure plan, including the identification of any locations where relevant project documentation will be available locally and elsewhere as well as languages to be used.

The SEP will be revised and updated periodically including upon completion of the EIA and SIA to assist with ongoing engagement throughout the Project.

5.1 Public Engagement to date

The meetings and consultation with Governmental institutions, other organizations and community were held in order to present project details, environmental and social issues, and the Project time plan. The results of the consultations will be used for the Project Development, the Infrastructure and Basic Design, EIA and this SIA Report.

5.1.1 Governmental institutions, public and state organizations

On 25.10.2019 in the premises of the MoEPP, a consultative meeting was held between the representatives of the MoEPP – Sector for EIA (competent authority for permitting procedures). The following issues were discussed:

- ✓ Consideration of analysed alternatives;
- ✓ Avoiding protected areas, opportunities and ways of avoiding protected areas;
- ✓ Landscape and visual impact on near protected areas important for promoting ecotourism as well as biodiversity;
- ✓ Biodiversity and appropriate impact mitigation;
- ✓ Areas of conservation or biodiversity significance, challenges and avoidance with necessary alternatives;
- ✓ Harmonization with the findings of the Strategic Environmental Assessment in the energy sector;
- ✓ The importance of obtaining information on other existing infrastructure, access roads, agricultural roads and protected areas;
- ✓ The database of natural heritage is currently being reviewed and updated – additional consultation and outreach by field experts is needed.

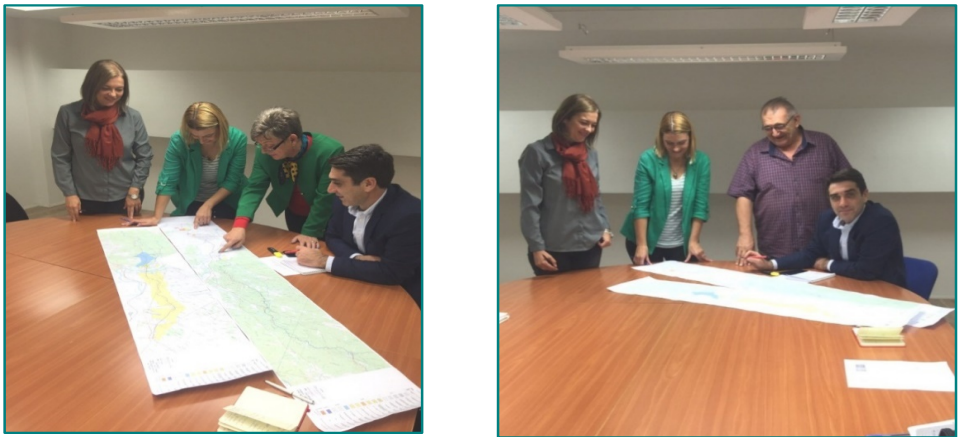


Figure 5-1: Meeting with representatives of the MoEPP

Additionally, official written communication was conducted with the following institutions:

- Regional department for protection and rescue – Negotino;
- Power Distribution dooel, Skopje;
- Public Enterprise for State Roads (PESR);
- Ministry of Culture of Republic of North Macedonia;
- Civil Aviation Agency;
- Municipality of Gevgelija, Department of Urban Planning, Communal Affairs and Environment;
- Makedonski Telekom – AD Skopje;
- Directorate for Technological Industrial Development Zones;
- Institute for Protection of Cultural Heritage and Strumica Museum;

5.1.2 Local Government units

Meetings and consultations with representatives of the municipalities, where the gas pipeline route is situated, AoI, were held in October 2019 and February 2020:

- Municipality of Negotino;
- Municipality of Demir Kapija;
- Municipality of Gevgelija;
- Municipality of Bogdanci.

On the meetings, the Project details were presented as well as the permitting process and the scope of environmental and social impact assessment. Further, the meetings were used to inform municipal representatives about the gas pipeline alignment, the technical features and Project components. The following issues were discussed:

- Need and purpose of the project;
- Details of the pipeline route and block stations location;
- Community and municipal benefits;
- Access and land acquisition.

Representatives of the Department for Local Economic Development (LED), Department of Energy, Department of Urban Planning and Environment, Department of Social Protection and Primary Health Care, as well as Municipal Mayors attended the separate meetings in each Municipality.

The key questions asked or requests during these meetings were:

- More details on the pipeline route and location of pipeline facilities;
- Impacts on the environment, health and safety of the population ensuring a safe distance from housing;
- Interest in the land compensation process, especially project timing and procedure;
- If there will be opportunities for development and assistance for a secondary gas distribution network related to connection and cost issues and Community Benefits for potential future users;
- Request for the link between the gas pipeline and other projects in the municipality as well as cumulative impacts;
- Determining the width of the pipeline protection area (corridor);
- Recommendation to the Investor to consider underground cables and other infrastructure at sites close to settlements;
- Requests from the municipality to be informed and to know in advance the alignment of the pipeline route so they can plan the development of the area and discuss and inform the landowners;
- Access to land and possible adverse social and economic impacts and prevention.

During the meetings, the municipal officials expressed their interest and support for the development of the Project. Communication and sharing the necessary data including coordination between the

municipalities and the project development team was identified assuring proper and efficient development of the EIA and other supporting documentation. Below are photos from the meetings for project presentation in the municipalities as part of the EIA Scoping process:

Figure 5-2: Meetings and consultations with representatives of the municipalities through which the gas pipeline passes

5.1.3 Non-Governmental organizations

The Non-Governmental Organizations were informed, via email correspondence, that development of the project documentation (Basic Project Design) and the Environmental Impact Assessment Study for "North Macedonia – Greece Interconnection Natural Gas Pipeline" are underway and the responsible organization for its development is JSC NER. The list of contacted Non-Governmental Organizations is the following:

- Citizens Association "EKOVITA" – the municipality of Negotino;
- Ecologists Association "ZRAK" – the municipality of Bogdanci;
- Association for development, education and ecological ethics "POLIMAT 13" – the municipality of Bogdanci;
- Association "EKO-KOCKA" – the municipality of Demir Kapija;
- Citizens Association "EKOLOSHKO DRUSHTVO EKO CHIFLIK" – the municipality of Demir Kapija;
- Citizens Association "CENTAR ZA KLIMATSKI PROMENI" – the municipality of Gevgelija.

The information further emphasized the Project's public interest and as supporting material maps were distributed, where the gas pipeline's route could be seen, and the Project could be overviewed in details.

Finally, the contacted Non-Governmental Organizations were required to provide a contact person for further communication as well as opinion and suggestions in order to achieve adequate development of the Basic Project Design and the Environmental and Social Impact Assessment.

5.1.4 Trans-boundary Communication

Environmental permitting process for a certain Project in the country by the default includes trans-boundary issues to extend applicable for the Project itself. By the Law for Environment, the facilitator of the trans-boundary issues (shear of info for upcoming Project, participation of interested cross border parties, collection of feedbacks, etc) is the Ministry for Environment and Physical Planning (MoEPP). It is open and ongoing process, starting with submission of Letter of Intent from the developer of the Project, until issuing the environmental permit.

For development of the Project “North Macedonia – Greece Interconnection Natural Gas Pipeline”, in the trans-boundary context, the following has been conducted:

- NER, the developer of the Project, has submitted to the national authority (MoEPP), the Letter of Intent including appropriate supporting documents on 16.07.2019;
- MoEPP has published in local media, the Intent for development of the Project on 22.08.2019;
- MoEPP has requested Ministry of Foreign Affairs to deliver, through diplomatic post, the Letter of Intent of the Project to the Greek national environmental authorities on 04.09.2019;
- MoEPP officially submitted the request to Ministry of environment and energy (MoEE) of Republic of Greece for Letter of Intent for development of the Project on 05.09.2019;

The MoEE officially reply to the request on 17.10.2019 stating the following:

“*After reviewing the environmental information of your notification, we conclude that no significant environmental impacts are expected on Greek territory by the construction and operation of this project in your country, thus, there is no need for the Greek environmental authorities and the public to participate in the environmental impact assessment of the project*”.

5.2 Project Disclosure and Consultation

The next phase of the stakeholder engagement process focuses on disclosing and consulting on the draft results of the EIA and SIA process. This is known as “public disclosure”.

The specific objectives for the public disclosure are to:

- Provide stakeholders with the draft impact assessment and associated management/mitigation measures;
- Gather stakeholder input and feedback on the draft impact assessment and associated management/mitigation measures.

During this engagement phase, disclosure and consultation activities will be designed along the following general principles:

- Consultation events and opportunities will be widely and proactively publicised, especially among project affected parties, at least 2-3 weeks prior to any meeting;
- A non-technical summary will be accessible prior to any event to ensure that people are informed of the assessment content and conclusions in advance of the meeting;
- The location and timing of any meeting will be designed to maximise accessibility to project affected stakeholders;
- Information presented will be in Macedonian and English language;
- Facilitation will be provided to ensure that stakeholders are able to raise their concerns; and
- Issues raised will be answered at the meeting or actively followed up.

5.3 Community Perception of the Project

From the social survey conducted in settlements (summer/autumn 2019 and winter 2020), along the gas pipeline route and also during the meetings in the municipality centres, all of respondents were not aware and did not know about the project development. However, when the goals of the project were explained, the majority of respondents seemed in favour of the Project as it would provide benefit to local communities and the region. The respondent's express interest about exact alignment of the Project and required clarity concerning benefits and possibility for development of secondary network for the gas supply in their settlement.

The socio-economic survey addressed the assets, education, income, access to financial resources and access to public services such as water-electricity and sanitation facilities. The respondents were selected using a purposive sampling method to get a cross section of representative groups from society. Questionnaire used for the survey is presented in the Annex 4.

The selection process included identification of appropriate respondents in each municipality,representing distinctive groups in society including village representatives, community leaders, commoners, female and male, the vulnerable.

All respondents along the gas pipeline route approved of the project. They expect improvement of the life quality, and lower cost for energy usage since most of them use wood, pellets and very few electricity for heating of the homes. Also, they are aware that with gas supply will environmental impact be lower than usage of wood for heating, especially on ambient air quality. They do not expect that the Project will have effect to emigration and to lower down the number of young people and families leaving the area. On the following figure are presented meetings with community representatives.

Figure 5-3: Meetings and consultations with representatives of the community through which the gas pipeline passes

Community concerns and suggestions in relation to the Project which were raised by respondents during social surveys are related to land acquisition and possible unavailable access and passage of roads used for the agricultural work.

5.4 Grievance Mechanism

A Grievance Mechanism (GM) will be implemented to address any grievances that arise from the affected communities and is part of the Stakeholder Engagement Plan (SEP). A separate mechanism will be utilised to address worker grievances. Grievance for the Project will include issues such as:

- land acquisition and economical displacement;
- Construction damages;
- Environmental impact; and
- Indirect social impacts.

The GM will be disclosed through the Project's developer NER webpage and will also be advertised on billboards at the entrance of the local administration building in the municipalities. Information material on the GM will also be made available at the Municipalities administration building.

6 Impact Assessment

In the following Section impacts on social environment from the Project Interconnector natural gas pipeline development are described.

6.1 Stakeholder Engagement

It is common for investors and contractors, after the commencement of construction activities, to redirect their resources to improve performance and construction efficiency and to ignore the need to maintain good relationships with all stakeholders, especially local communities. It must be taken in consideration that during the construction period, there may be changes in the structure of the stakeholders and their interests and concerns. If there is insufficient communication between the investor, contractor and stakeholders, especially where the local population is concerned, there may be misunderstandings and situations of conflict, and this is the reason for establishing communication.

Insufficient communication between the investor and stakeholders during operational phase, especially about the schedule of activities that will take place in the area of project for maintenance, defect servicing etc. could lead to disinformation and concerns of various groups of stakeholders. The magnitude of this project is moderate. The magnitude of the impact is as follows (Table 6-1).

Table 6-1: Magnitude of the Impact – Stakeholder engagement

Criteria	Assessment Thresholds	
	Threshold	**Descriptions**
Characterization of Impact	Negative	The impact creates negative opinion about the project.
Type of Impact	Direct	Impact is a result of direct interaction.
Reversibility	Reversible	The impact is reversible if mitigation measures are implemented.
Geographic Extent	On site	The impact will extent not far from its source.
Time when the impact occurs	Delayed	This project impact will occur after delayed period of time, but still in the construction phase.
Duration	Long-term	Short term, during construction activities.
Likelihood of appearance	Probable	It is probable this impact to occur.
Magnitude	Moderate	Possible to generate group of people supporting dissatisfied individual.

6.2 Land and Property Ownership and Use Impacts

6.2.1 Disruption of everyday life caused by limited access to settlements, land and property

During the construction phase there may be disruption of daily life caused by limited access to settlements, land and property. The implementation of the Project can have negative impacts on the access to existing road, water supply, sewage, electro distribution etc.

Some of the existing road network in the settlements will be very short time affected by the Project. Local community can be disturbed by difficult access to desired destinations and their property, but also even in the short term. Such distress can cause minor social tensions between local citizens and the contractor/ investor although the project does not pass through settlements and densely populated areas. On the figures following are presented intersection of local roads and access to land, assets and neighbouring settlements of villages:

- Intersection with local road and access to agricultural land between villages Stojakovo and Bogoroditsa;
- Intersection of road infrastructure near villages Prdejtsi;
- Intersection with regional road 1109 that connects city Gevgelija city with Bogdantsi and village Gjavato;
- Intersection with local road network and land access between village Chiflik and city Demir Kapija;
- Intersection with infrastructure in vicinity of village Przdevo;
- Intersection with local road network and land access in the area of villages Tremnik and Przdevo.

No impact and severance or barrier effect are expected during the operational period.

Figure 6-1 & Figure 6-2: Intersection with local road and access to agricultural land between villages Stojakovo and Bogoroditsa and Intersection with roads and land access near villages Prdejtsi and Negortsi

Figure 6-3 & Figure 6-4: Intersection with regional road 1109 that connects city Gevgelija city with Bogdantsi and village Gjavato and Intersection with local road and access to agricultural land near village Chiflik

Figure 6-5: Intersection with local road and access to agricultural land between villages Tremnik and Przdevo

The magnitude is expected to be negligible due to the existence of information on the existing infrastructure and roads which is inserted in the main design, and short time lasting impact. The magnitude of the impact is as follows (Table 6-2).

Table 6-2: Magnitude of the Impact – Impeded access to road infrastructure, land and property

Criteria	Assessment Thresholds	
	Threshold	Descriptions
Characterization of Impact	Negative	Impact is not desirable
Type of Impact	Direct	It is a direct result of construction activities
Reversibility	Reversible	Any changes to communal infrastructure will be returned to prior state
Geographic Extent	Local	The effect can go beyond the construction site, but not far from the extent of Municipality.
Time when the impact occurs	Immediate	Impact can occur during construction phase
Duration	Short-term	Any shortage should last very shortly
Likelihood of appearance	Unlikely	It is not expected occurrence of such event, but it is not excluded such impact to occur
Magnitude	Negligible	Temporary caused disruption is considered as negligible extent.

6.2.2 Land acquisition and livelihood

During the design of the Project land acquisition requirements were one of the key considerations. The project and the route of the chosen alternative have been selected to reduce the potential level of conflict that the land acquisition process can generate, and minimize the physical and economic displacement of local communities as far as possible, so physical displacement will not occur.

For the construction of the gas pipeline temporary and permanent land will be required. According the legislation a 25 -meter belt along the route of the pipeline is required for access and safe construction, 12.5 m left and right of the pipeline axis. As part of the 25-meter belt, the 7-meter-wide area of land (3.5 meters to the left and right of the pipeline axis) will be permanently acquired.

A total land area is 1,685,320 m^2, of which 1,079,595 m^2 are state-owned and 605,725 m^2 are privately owned. Number of affected parcels is 981 of which 445 are state-owned and 536 are privately owned. The following table shows the areas by land class and land ownership. This 7-meter belt, permanent land, will cover a total area of 470,358 m^2, of which 365,537 m^2 are state-owned and 104,821 m^2 are privately owned.

The permanent and temporary required land in details are addressed in the Geodetic Elaborate as part of the Basic Design. On the following tables are presented the data of temporary and permanent affected land area and ownership.

Table 6-3: Temporary land area by category and ownership (25 m width along the axis of the pipeline)

Construction area	State owned	Private	Total
Land category[1]	Area (m2)		
1	8 417.25	18 747.82	27 165.07
2	23 684.23	36 592.44	60 276.67
3	161 374.81	57 077.28	218 452.09
4	153 663.16	71 554.23	225 217.39
5	102 994.14	130 611.10	233 605.24
6	408 525.55	167 586.04	576 111.59
7	83 269.48	102 904.24	186 173.72
8	3 472.00	18 387.03	21 859.03
0	134 195.04	2 264.52	136 459.56
Total area (m^2)	**1 079 595.66**	**605 724.70**	**1 685 320.36**
Total area (%)	**64.06**	**35.94**	**100**

Table 6-4: Permanent land area by category and ownership (7m width along the axis of the pipeline)

Permanent land area	State owned	Private	Total
Land category	Area (m2)		
1	2 606.79	4 929.74	7 536.53
2	6 847.72	10 527.71	17 375.43
3	46 961.55	17 167.96	64 129.51
4	45 996.06	16 378.35	62 374.41
5	40 693.58	24 816.03	65 509.61
6	137 167.41	27 343.50	164 510.91
7	43 623.52	2 627.10	46 250.62

[1] *The land for each cadastral crop with the best fertility is distributed in the first class, the land that has immediate lower fertility is distributed in the second class and so on until the eighth cadastral class. Infertile land and groundwater are not classified as cadastral classes.*

Permanent land area	State owned	Private	Total
Land category	Area (m2)		
8	5 508.03	773.37	6 281.40
0	36 132.39	256.87	36 389.26
Total area (m2)	**365 537.05**	**104 820.63**	**470 357.68**
Total area (%)	**77.71**	**22.29**	**100.00**

Data shows that Project will affect more state land than private 77.71 % state owned land affected and 22.29% will be private own land acquired.

The Project will also require some temporary land take for temporary access roads, construction laydown areas, temporary storage of excavated materials/soil, cut trees etc. Details and all data regarding temporary land will be presented in the Basic Design which is currently under development.

Construction activities associated with this project will result with permanent loss of agricultural land at certain sites, as well as temporary disruption to routine economic activities and economic practices in local businesses or agricultural holdings. The area of land that will be permanently used as a protection line for the pipeline is 7m total width of 3.5m on both sides of the route axis, the total area for permanent acquisition of land is given above.

Some people will lose fertile land that supports their livelihoods and household income. Others will experience a temporary burden of delivering the products to the final destination which may slightly increase the cost of producing crops used for market and/or personal use.

The loss of agricultural land and associated subsistence use associated with it, along with impaired access to agricultural property and the transport of products will have a moderate negative impact as it will affect some landowners although route of the Project is situated in large part through non-agricultural land, in non-agricultural areas.

For temporary access to land for workers' camps and storage of equipment and materials, in most cases the selected plot will be on a public area (for example road) where there is sufficient space. However, should the temporary use of the land result in a change of previous use or agricultural production, the loss to the beneficiary should be fully and fairly compensated during the project use period (full lease price paid to the landlord).

Temporary land use can cause effects associated with poor sanitation and improperly applied solid and liquid waste disposal methods.

In operational phase since the pipeline is underground, the area through which the pipeline passes will be used for its intended purpose prior to the Project's performance. The area of land that will be permanently used as a protection line for the pipeline is 7m wide, 3.5m on both sides of the route axis, the total area for permanent acquisition of land is given above. Also, permanent land take will occur at the pumping stations.

Loss of land, agricultural land and associated livelihood provision that occurs with it, along with hindered access to the agricultural property and transport of its products will have great magnitude due to extended project footprint in length, thus affecting many landowners. The magnitude of the impact is as follows (Table 6-5).

Table 6-5: Magnitude of the Impact – Land acquisition and livelihood

Criteria	Assessment Thresholds	
	Threshold	Descriptions
Characterization of Impact	Negative	Impact is not desirable since people are losing fertile land.
Type of Impact	Direct	Project activities directly influence receptor.
Reversibility	Irreversible	Impact is irreversible.
Geographic Extent	On site	Impact is limited to specific number of individuals who own property in the area of project footprint.
Time when the impact occurs	Immediate	Impact will occur immediately with/prior commencement of construction works.
Duration	Short-term	People will permanently lose their land, and their livelihood will be affected.
Likelihood of appearance	Certain	It is highly likely this impact to occur.
Magnitude	Great	Agricultural land affected.

6.3 Community Health, Safety and Security Impacts

Community safety impacts with respect to the construction and operation of the gas pipeline is discussed and can be found in Environmental Impact Assessment, (Analysis of Impact of Potential Risks and Unpredicted Accidents) with Plan for Risk assessment and Plan of mitigation measures for unforeseen accidents during construction and during the operation of the pipeline.

The health and safety in relation to those working on the Project is discussed further in the Occupational Health and Safety and Working Conditions assessment report which can be found in Technical Documentation as part of the Basic Design.

6.3.1 Increased threat to the population and livestock - presence on the construction site

Part of the pipeline route is located in areas remotely populated and non-urbanized and partly near populated areas, thus making the population's access during construction period to the construction site low. However, due to the long length of the line structure, it is impossible to enclose an entire construction site and occurrence of incidents is possible related to the unlawful presence of persons or accidentally stray cattle. The safety of the local population, especially the inhabitants of settlements positioned near the construction site will be decreased due to the proximity of the construction.

Experience with incidents at construction sites suggests that some are related to the illegal presence of persons or livestock at the construction site. When it comes to infrastructure projects such as this, where

the construction site extends over a relatively long territory and intersects established directions of movement of people, goods and materials, occurrence of incidents is possible.

The magnitude of this impact is considered minor because all construction sites have procedures and signs how to inform or to keep people and livestock out of the area of the construction site. Additionally, most of the sites create artificial barrier with materials and vehicles that is hard to overcome. The magnitude of the impact is as follows (Table 6-6).

Table 6-6: Magnitude of the Impact – Increased threat to the population and livestock due to the presence on the construction site

Criteria	Assessment Thresholds	
	Threshold	Descriptions
Characterization of Impact	Negative	Temporary negative changes.
Type of Impact	Direct	Impact is directly caused by the Project activities.
Reversibility	Reversible	Impact will end with completion of the project.
Geographic Extent	On site	The threat refers only to the locations where construction activities are conducted.
Time when the impact occurs	Delayed	The impact doesn't have to occur immediately.
Duration	Mid-term	Duration is defined by the length of the construction activities.
Likelihood of appearance	Certain	Occurs always, and on each construction site.
Magnitude	Minor	Usually construction sites have implemented some health and safety procedures.

6.3.2 Fear for personal health and safety -increased volume of traffic across settlements

During construction increased traffic and transport intensity are likely, and will disrupt normal traffic patterns in the Project area. The increased presence of heavy goods vehicles and construction mechanization and the increase in the volume of traffic on the main and secondary roads can cause an increase in the local road traffic accidents. These particularly can affect settlements situated near the gas pipeline route villages Stojakovo, Bogoroditsa, Chiflik, Prdejtsi, Dren, Tremnik, Temjanik and Przdevo.

The overall magnitude of this impact is moderate due to the level of changes that project generated traffic will cause. Various settlements will experience different level of traffic depending on the plan of Contractor how to organize transport from/to construction sites. The magnitude of the impact is as follows (Table 6-7).

Table 6-7: Magnitude of the Impact – Fear for personal health and safety due to the increased volume of traffic across settlements

Criteria	Assessment Thresholds	
	Threshold	Descriptions
Characterization of Impact	Negative	Not desirable.
Type of Impact	Direct	Impacts are the result of direct (immediate) interaction between project activity and resources/receivers.
Reversibility	Reversible	Potential impact is occasionally and reversible.
Geographic Extent	Local	Effects of impact will be experienced in width up to 20 km from the footprint.
Time when the impact occurs	Immediate	Effect occurs immediately following project activity/action.
Duration	Mid-term	The impact will last as long as construction activities.
Likelihood of appearance	Certain	This impact must occur due to the need of transport of materials and people from/to construction sites.
Magnitude	Moderate	There will be moderate increase of project generated traffic on the local roads.

6.3.3 Disturbance from noise and vibration due to construction activities

Noise and vibration during construction are likely to be major issues in the construction phase. In addition to carrying out construction activities at the designated sites, the increased volume of vehicle traffic and the transport of people and materials on local roads in the project area and the proximity of populated settlements will contribute significantly to the distress of the population in these settlements.

Local population will be aware that existence of such project will cause noise and vibration. But since it will be in a small scale due to limited contact between the project footprint and populated areas. Project does not pass in densely populated areas. Initial magnitude is foreseen to be minor. The magnitude of the impact is as follows (Table 6-8).

Table 6-8: Magnitude of the Impact – Disturbance from noise and vibration due to construction activities

Criteria	Assessment Thresholds	
	Threshold	Descriptions
Characterization of Impact	Negative	Impact will cause negative attitude toward the project.
Type of Impact	Direct	Local population will be directly affected.
Reversibility	Reversible	The impact is reversible.
Geographic Extent	On site	It will exist only on site.
Time when the impact occurs	Immediate	Impact will occur with commencement of construction works nearby each settlement.
Duration	Short-term	The impact will last shortly, while constructions works are conducted nearby settlement.
Likelihood of appearance	Certain	Noise and vibrations are unavoidable effect during construction activities.
Magnitude	Minor	Almost no contact between settlements and project.

6.3.4 Hindered access by social and health services to vulnerable groups

Construction activities may hinder access roads to remote settlements for a short period of time. During this period, there may be a delay in the delivery of social or health care. Social and health institutions must be able to provide the care and assistance to recipients of needed assistance although access is interrupted.

Magnitude is assessed to be minor, due to the limited occurrence of events requiring assistance of social and health services, in populated areas like those surrounding project footprint. But, the existence of increased traffic on the local streets, supported by moments of temporary closure of certain roads can initiate this impact, thus preventing appropriate actions by these services when/if needed. The magnitude of the impact is as follows (Table 6-9).

Table 6-9: Magnitude of the Impact – Hindered access by social and health services to vulnerable groups

Criteria	Assessment Thresholds	
	Threshold	Descriptions
Characterization of Impact	Negative	Not desirable.
Type of Impact	Indirect	Indirect effect of increased presence of traffic and construction works on access roads.
Reversibility	Reversible	After competition of construction works the routine shall be established again.
Geographic Extent	Local	The impact can influence settlements distant from the project footprint, up to 5km.
Time when the impact occurs	Immediate	Impact will occur with commencement of construction works nearby each settlement.
Duration	Short-term	During construction activities conducting on certain access road.
Likelihood of appearance	Probable	Can occur in the populated areas.
Magnitude	Minor	Barely, but noticeable change.

6.3.5 Problems related to workers' behaviour towards the local environment

Usually, the Contractor for construction is not part of the project's development process, and therefore there has no complete picture of the sensitivity of the project area. In case when Contractors' employees do not originate from the local population could have less understanding of the needs and values of the local population. Often, there are cases where workers are subject of conflict between the developer and the members of local population/community.

These conflicts arise due to anxiety over property loss, endangered home security, disruption of domestic peace of the local population and most often disrespect of the property of the residents in the Project area.

The magnitude for this impact is considered minor, because workers are trained to avoid contact with local population. Such events do not always occur during the construction period, nor are unknown to the project of such scale. Occurrence of such impact require immediate action by the management to control situation and reorganize the construction process to continue. The magnitude of the impact is as follows:

Table 6-10: Magnitude of the Impact – Problems related to workers' behaviour towards the local environment

Criteria	Assessment Thresholds	
	Threshold	Descriptions
Characterization of Impact	Negative	Not desirable.
Type of Impact	Direct	This Impact is the result of direct (immediate) interaction between project activity and resources / receivers.
Reversibility	Reversible	Potential impact is occasionally and reversible.
Geographic Extent	On site	Does occurs on/near the construction site.
Time when the impact occurs	Delayed	Impact doesn't occur with beginning of construction activities.
Duration	Short-term	Occurrence of such impact require immediate action by the management to calm situation and reorganize the construction process to flow continuously.
Likelihood of appearance	Probable	In large scale process like this it is hard to control all workers.
Magnitude	Minor	See above.

6.3.6 Uncontrolled gas leakage

During operational phase uncontrolled discharge may occur of large amount of natural gas from the pipeline, which may cause adverse effects on the health and safety of the local community. End-users may also be affected which may occur through improper handling of pipes and valves or may be due to a lack of awareness, illiteracy or defects in the pipeline or seals.

Different aspects will modify the intensity of this impact. These aspects relay on range of safety and emergency precautions provided and taken by the Operator and / or by the Gas Implementation Distributor. Priority should be given to the safety of end-users by specifying urgent household gas meter precautions and establishing emergency care centres. So, it is not expected local population to be affected therefore the magnitude is assessed as minor. The magnitude of the impact is as follows:

Table 6-11: Magnitude of the Impact – uncontrolled gas leakage

Criteria	Assessment Thresholds	
	Threshold	Descriptions
Characterization of Impact	Negative	Not desirable.
Type of Impact	Direct	The impact is generated by the project.
Reversibility	Irreversible	The impact is not reversible.
Geographic Extent	On site	Noise disturbance shall be experienced only by residents living nearby gas pipeline and block stations.
Time when the impact occurs	Immediate	Impact will occur the moment when pipeline becomes operational.
Duration	Permanent	The Impact is temporary.
Likelihood of appearance	Unlikely	It is not expected occurrence of such event, but it is not excluded such impact to occur.
Magnitude	Minor	Not occurring persistently.

6.3.7 Annoya-----=r22r6nce due to the interrupted process of education and learning

Noise and vibration accompanied by blasting may impair the educational process. This applies to all primary schools in Stojakovo, Przdevo, Dren, Smokvitsa, Prdejtsi, Tremnik,

Blasts can only cause a temporary interruption of the educational process, accompanied by annoyance, but such frequent events can cause dissatisfaction because of the successive breaks in the educational process. Affected settlements are close to the pipeline, but mainly blasting will be used on hilly -and rocky terrain where settlements are smaller and in some there is no school and education process. The magnitude of the impact is as follows:

Table 6-12: Magnitude of the Impact – Disturbance due to the interrupted process of education and learning

Criteria	Assessment Thresholds	
	Threshold	Descriptions
Characterization of Impact	Negative	Not desirable.
Type of Impact	Direct	Activities part of construction process.
Reversibility	Irreversible	Impact cannot be reversed, but the state.
Geographic Extent	Local	Impact can be experienced on a local scale in middle part of the project area.
Time when the impact occurs	Immediate	Impact will occur with commencement of construction works in relation to the terrain characteristics.
Duration	Short-term	Will last few moments.
Likelihood of appearance	Probably	It is expected to occur.
Magnitude	Minor	Very few schools in nearby villages.

6.4 Occupational Health, Safety and Security Impacts

6.4.1 Threat due to engagement of unskilled and unqualified workers by the contractor

Contractors for construction do not possess always the appropriate qualified workforce for the successful implementation of the project, and they create consortia, or engage other companies who use additional workforce. The additional workforce does not always have the necessary training and experience, and it is a potential threat to the project implementation process, as well as to people (colleagues, local population population) as well as to the human environment.

Magnitude of this impact will be minor. There are already workers in the area with appropriate experience who also can be engaged for work on this project. Consequently, it is not expected new unexperienced workforce to be engaged on medium or large scale. The magnitude of the impact is as follows:

Table 6-13: Magnitude of the Impact – Threat due to engagement of unskilled and unqualified workers by the Contractor

Criteria	Assessment Thresholds	
	Threshold	Descriptions
Characterization of Impact	Negative	Not desirable.
Type of Impact	Direct	
Reversibility	Reversible	Impact is reversible after period of workers adaptation to the project activities and learning/training.
Geographic Extent	On site	Impact is generated only on construction sites.
Time when the impact occurs	Immediate	Impact can occur with commencement of works.
Duration	Short-term	Impact can last until training received or gathering necessary experience.
Likelihood of appearance	Certain	Probable.
Magnitude	Minor	Experienced workforce shall be main pillar of construction activities.

6.4.2 Stress caused by noise related working environment

Engaged employees for construction can relatively continuously be exposed to noise from trucks, blasting, and machinery thus causing stress that can influence worker's satisfaction, concentration and efficiency. No employee should be exposed to a noise level greater than 85dBA for duration of more than 8 hours per day without hearing protection.

Magnitude is negligible because most of the workers are experienced in working under such conditions, and they know their limits of tolerance toward such environment including how to use PPE. Newcomers will be trained how to use PPE. The magnitude of the impact is as follows:

Table 6-14: Magnitude of the Impact – Stress caused by noise related working environment

Criteria	Assessment Thresholds	
	Threshold	Descriptions
Characterization of Impact	Negative	Not desirable.
Type of Impact	Indirect	Impact is induced indirectly to receptor.
Reversibility	Irreversible	Impact is irreversible.
Geographic Extent	On site	Impact effects limited to 1 km from the project area.
Time when the impact occurs	Delayed	Effect delayed and occurs sometime after project activity/action.
Duration	Long-term	The impact can have long durance.
Likelihood of appearance	Probable	Influence may appear in some time.
Magnitude	Negligible	There is no immediate noticeable change in the assessed situation.

6.4.3 Influx of workers

Construction phase: To effectively carry out the construction, there is possible need to bring workers with place of residence away from the project area. These workers will have to stay temporary, usually in the immediate vicinity of the construction site. To this end, the Contractor will have to provide appropriate premises that comply with all international and domestic standards and regulations. The workforce should not be numerous than the local population, but will use existing social infrastructure and its benefits, which can put some pressure on local resources, especially in rural areas.

Hence, in this phase of the Project it is still unknown whether the need for workers accommodation will occur.

Operational phase: By competition of the project some of the engaged workers on this project would not manage to find new job immediately. Hence, the professional training, skills and gathered experience will make these workers highly competitive workforce for the local market, therefore giving the local economy a strong nonfinancial input. These workers received professional capacity building while working on projects financed by IFI's. This kind of projects require professional approach to the task by fulfilling all existing highest international standards in OHS, workers' rights and aspects of relevant professional domain.

The magnitude of the impact is assessed to be minor due to the vicinity of the city where some of the workers can live, current existence of nearby road construction project with accommodation facilities, and the availability of space in the local environment (plains) where accommodation facilities can be located. The city is very close and workers can also be accommodated in the city and transported to the construction site on a daily basis. The magnitude of the impact is as follows:

Table 6-15: Magnitude of the Impact – Influx of workers

Criteria	Assessment Thresholds	
	Threshold	Descriptions
Characterization of Impact	Negative	Not desirable;
Type of Impact	Direct	Construction activities will have direct impact upon receptor.
Reversibility	Reversible	Situation can be returned into previous condition.
Geographic Extent	Local	Impact is limited to communities that are on the closest distance to the highway.
Time when the impact occurs	Immediate	Impact occurs immediate with setting of construction sites near steep areas.
Duration	Short-term	The impact can have short durance.
Likelihood of appearance	Probable	Influence may appear in some time.
Magnitude	Minor	Minor scale engagement of new workforce is foreseen.

6.4.4 Accidents caused by easily flammable, corrosive and explosive materials

Project activities envision is construction on hilly and rocky terrain, where blasting will be used. For that purpose, highly flammable materials, as well as explosives, will be used. Poor handling, as well as poor storage of these easily flammable, corrosive and explosive materials can cause material damage. And above all, it poses a threat to the safety of workers, the local population, and the environment.

The magnitude from impact of accidents caused by easily flammable, corrosive and explosive materials is expected to be Minor, due to expectance such materials to be handled by experienced workers on limited and separated locations. The magnitude of the impact is as follows:

Table 6-16: Magnitude of the Impact – Accidents caused by easily flammable, corrosive and explosive materials

Criteria	Assessment Thresholds	
	Threshold	Descriptions
Characterization of Impact	Negative	Impact could cause undesirable situation with negative consequences.
Type of Impact	Direct	The impact will have direct influence to the receptor.
Reversibility	Irreversible	If accident occur, it will be irreversible.
Geographic Extent	On site	Impact is expected to influence only limited territory.
Time when the impact occurs	Immediate	Sometime during construction period.
Duration	Long-term	Effects from impact, if occurs, can be experienced long time if human life is endangered.
Likelihood of appearance	Unlikely	Unlikely to occur.
Magnitude	Minor	Limited magnitude to the location of storage of such materials.

6.4.5 Skilled workers available to the local labour market during the operational phase

Operational phase: By competition of the project some of the engaged workers on this project would not manage to find new job immediately. Hence, the professional training, skills and gathered experience will make these workers highly competitive workforce for the local market, therefore giving the local economy a strong nonfinancial input. These workers received professional capacity building while working on projects financed by IFI's. This kind of projects require professional approach to the task by fulfilling all existing highest international standards in OHS, workers' rights and aspects of relevant professional domain.

It is expected this impact will create minor benefits on education and training and consequently the magnitude will be minor.

The magnitude of the impact is as follows:

Table 6-17: Magnitude of the Impact – Skilled workers available to the local labour market

Criteria	Assessment Thresholds	
	Threshold	Descriptions
Characterization of Impact	Positive	Impact will improve current situation.
Type of Impact	Indirect	Construction activities will have indirect impact upon receptor.
Reversibility	Irreversible	The effect caused by impact is irreversible. Situation cannot be returned into previous condition.
Geographic Extent	National	Impacts extends across the whole country.
Time when the impact occurs	Immediate	Effect will occur immediately following project activities.

Criteria	Assessment Thresholds	
	Threshold	Descriptions
Duration	Long -term	Based on estimation for construction activities duration it is estimated impact to last in medium-term (between two and ten years).
Likelihood of appearance	Probable	The impacts can be considered to have a medium likelihood of occurring.
agnitude	Minor	Minor improvement.

6.5 Creation of Employments and Local Economic Growth

6.5.1 Employment and local supply chain

People with a wide range of qualifications will be needed, from unskilled to highly qualified people during construction period. Jobs for unskilled workers will include activities that require mainly physical strength, while jobs which need semi-skilled workers will include work on various construction positions (reinforced concrete works, mounting works, installation works, etc.). Work positions that will require highly qualified persons will include management, supervision, control and maintenance. All this needed workforce is expected to be covered from local resources.

Local grocery stores will experience increase in product sales, while some of the local companies in the municipality can become temporary local supplier to the Contractor engaged on this project. Local supply chain that will support project including convenience and grocery stores, material and services supply companies, gas stations, etc. will sense increase in their income due to presence of this project and people working on it.

This, on a municipal and regional scale, will slightly stimulate the economic growth. It is expected the local economy, particularly those individuals that will be engaged from the local settlements to experience economic improvement in their households.

It is expected the local economy, particularly those individuals that will be engaged from the local settlements to experience economic improvement in their households. The magnitude is expected to be great. The magnitude of the impact is as follows:

Table 6-18: Magnitude of the Impact – Creation of employments and local economic growth

Criteria	Assessment Thresholds	
	Threshold	Descriptions
Characterization of Impact	Positive	Impact improves the current situation.
Type of Impact	Direct	Project activities directly creates positive impact.
Reversibility	Reversible	Situation can be returned into previous state.
Geographic Extent	Local	Impact will be experienced on a municipal level.
Time when the impact occurs	Immediate	Effect will occur immediately following project activities.

Criteria	Assessment Thresholds	
	Threshold	Descriptions
Duration	Long -term	Impact and its effects will continue some time throughout the operational phase of the project.
Likelihood of appearance	Certain	It is expected this impact to occur.
Magnitude	Great	Very positive improvement of quality of life in the households of engaged individuals.

6.5.2 Increased level of professional engagement for local companies

The construction of linear infrastructure will provide good opportunities for local companies to become suppliers of materials or services for the needs of the project during construction and this is a positive impact. Companies that will be engaged as suppliers of the project will acquire a professional reference and experience, and in future they can participate in domestic and international projects.

Companies engaged on the project will gain experience in international working environment in Republic of North Macedonia, under IFI requirements and standards, will increase professional capacity of the staff members, and will enable to participate on similar project locally and internationally. Magnitude is assessed as great. The magnitude of the impact is as follows (Table 6-19).

Table 6-19: Magnitude of the Impact – Increased level of professional engagement for local companies

Criteria	Assessment Thresholds	
	Threshold	Descriptions
Characterization of Impact	Positive	Impact improves the current situation
Type of Impact	Direct	Project activities directly creates positive impact
Reversibility	Reversible	Situation can be returned into previous state
Geographic Extent	National	Impact will be experienced on a national level
Time when the impact occurs	Immediate	Effect will occur immediately following project activities
Duration	Long -term	Impact and its effects will continue some time throughout the operational phase of the project
Likelihood of appearance	Certain	It is expected this impact to occur
Magnitude	Great	Very positive input for local economy and business environment.

6.6 Cultural Heritage

This area records human presence since ages and has some archaeological sites. Along the planned express road footprint there is no familiar archaeological site. The National Institution for the Preservation of Cultural and Historical Heritage has identified Registered (ENS) located near the Northern Macedonia-Greece Interconnection Pipeline Route. But since project area has been populated since ages, during the construction works on the projects that stretches many kilometres sometimes it is possible to discover unknown archaeological location. Uninformed employees cannot identify and alert on possible chance

find. Therefore, it is possible to lose or destroy important undiscovered archaeological locations, together with potentially valuable evidence.

Any new archaeological site will require additional time and money to be completely explored. Uncovering of such new site will initiate temporary stop with construction activities and causing delay in realization of planned project activities, along with unplanned expenses for the project developer. Magnitude of this impact is seen as moderate. The magnitude of the impact is as follows (Table 6-20).

Operational Phase: No impacts are expected during operational phase.

Table 6-20: Magnitude of the Impact – Potential destroy and loss of undiscovered archaeological site

Criteria	Assessment Thresholds	
	Threshold	Descriptions
Characterization of Impact	Negative	Negative changes can occur.
Type of Impact	Direct	Construction activities will direct influence receptor.
Reversibility	Irreversible	Situation cannot be returned into previous condition.
Geographic Extent	On site	Impact is limited to construction site.
Time when the impact occurs	Immediate	Impact occurs during performing construction activities.
Duration	Short-term	Impacts lasts until finalization of construction activities on site.
Likelihood of appearance	Unlikely	Unlikely this impact to occur.
Magnitude	Moderate	There are certain consequences for the project developer.

7 Mitigation, Monitoring, and Residual Impacts

7.1 Stakeholder Engagement

Mitigation actions undertaken for engagement with stakeholders and local communities in connection with the implementation of the Project have as follows:

- During the pre-construction phase, NER to update the Stakeholder Engagement Plan and identify all stakeholders and how to communicate with them. To inform public about the project and the planned stages of project development.
- NER to conduct a series of consultative activities with stakeholders, especially those who own land in the project footprint. A grievance mechanism be prepared and made available to the public, and comments and grievances recorded along with records of undertaken actions for its resolution.
- NER along with the main Contractor to continue to maintain communication with the Project Stakeholders during the project construction phase. NER and the main contractor openly to communicate with project stakeholders during the construction phase, as not all stakeholders are able or willing to file a complaint. Contractor, together with NER, to hold regularly semi-annual meetings with representatives of the local community and other interested parties. A strong emphasis must be placed on the presence of women and vulnerable at those meetings.
- Make the Grievance Mechanism publicly available at the NER headquarters and on the Contractor's site, as well as in the municipal and suburbs affected by the project in the AoI.
- Information bulletin board will be set by the contractor, at the entrance of all listed affected settlements, where information about the project activities on a monthly base, will be disclosed. Also, information disclosure relevant to the local communities be announced through the local radio/TV in order to manage movement and traffic flows throughout the construction sites.
- During operational phase NER to make the Grievance Mechanism publicly available in each municipality where the Project is located, at NER headquarters, so that stakeholders can be informed and communicated about specific issues or concerns.
- Moreover, the Project should maintain regular communication with the local population, regarding construction and later operation activities. Local communities along the AoI are very open, communicative, and supportive for the Project. Local communities must be regularly informed about the schedule of construction activities and later project maintenance or defect servicing to be carried out in the project area. It is especially important for the residents and legal entities for activities that concern their local neighbourhood and community especially those relating to their local settlement and community.

7.2 Land Acquisition, Livelihood, Economic Displacement

In order to mitigate the negative impacts of the process of land acquisition and other commodities and property of which the population has an economic impact, to implement an appropriate international good practice and national legislation in acquiring the affected ownership required for this project. As the Project involves land acquisition and economic displacement, separate document Land Acquisition Framework (LAF) and if required Resettlement Action Plan / Livelihood Resettlement Plan (RAP / LRP) will be prepared by NER so no involuntary economic displacement will occur.

The Land Acquisition Framework will present the displacement impacts associated with the Project and the compensation and resettlement principles and responsibilities to ensure no one affected by the Project's implementation is disadvantaged compared to current conditions. The LAF will include a grievance mechanism for people affected by land acquisition to raise their concerns.

This document will be developed in accordance with the North Macedonia legal framework and in compliance with Environmental & Social Policy of responsible IFI, and specifically standards for land acquisition, involuntary resettlement & economic displacement. In case of requirement a detailed Resettlement Action Plan (RAP) / Livelihood Restoration Plan (LRP) will be developed in accordance with the LAF. A LAF differs to a RAP / LRP because it sets out the Project's planned approach to land acquisition and resettlement, rather than providing the full details of actual land ownership and use and the nature of the displacement impacts, which will be provided in the RAP / LRP.

Land owners and land users will be compensated as appropriate and their needs addressed in line with IFI's standards. Land acquisition for the Project will be conducted on a willing-seller willing-buyer basis, should the negotiated approach be unsuccessful, legally defined expropriation processes established in the national Expropriation Law of Republic of North Macedonia and related legislation for public interest projects and appropriate international good practice to be applied. Land acquisition will be based on mutual agreement and costs identified by land/agriculture valuation experts and local government institutions. Compensation will be provided based on market value for land and if required for replacement value of affected assets. Based on this there will be no involuntary resettlement.

Description of the parcels, way of use and ownership through which the pipeline will pass will be detailed and appropriately presented in the Geodetic Report / Expropriation Report as part of Basic Design and further in LARF/LRP/RAP.

The same way will be applied for land users and the compensation process will take into account the recovery of subsistence needs, quality of life, and in particular compensation for vulnerable groups. It is possible to consider alternatives other than cash compensation, as cash compensation is not always the best alternative, given that money can be spent quickly. A better option for compensation may be to replace land with easy access and similar or better quality and with the same purpose of use.

The most important in this process is proper information, communication, and consultation with the owners / beneficiaries at an early stage of the project. It is necessary to remain in contact with these persons until their final resettlement and the disappearance of the negative consequences of that resettlement.

The use of these practices is in line with national legislation, but also with goal to create a situation in society (especially stakeholders) where the negative consequences of project implementation will be fully

overcome or marginalized. Take precautions in the vicinity of settlements and work diligently to minimize the impact of impacts to the extent possible; it is also expected that the duration of construction activities at each site will last a short period of time.

In case of need for a construction camp for workers the location should be chosen near the settlement or main roads. The location for the workers' camp will be decided prior to the commencement of construction activities.

7.3 Community Health, Safety and Security

Appropriate measure for mitigating the negative impacts during construction on the settlements will be applied with aim to reduce the impact as much as possible on the settlement. It is also expected that the duration of construction activities at each site will last a short period of time. In case of need for a construction camp for the workers the location will be selected near the settlement or main roads. The location for the workers' camp will be decided prior to the commencement of construction activities.

In early Construction phase, prior commencement of any construction activity, relevant documents and plans that address community's health, safety and security will be prepared by the Contractor and implemented into the overall project documentation. These documents and plans include:

- Community Health, Safety and Security Plan (CHSSP);
- Emergency Preparedness and Response Plan (EPRP).

The Contractor will develop and implement procedures for the protection of the health and safety of local communities, population and their livestock. Procedures should include familiarization with the safety rules for workers and the construction site, and to prevent unauthorized access to the construction site, work camps, transport vehicles, construction machinery and warehouses. The Contractor will prepare and implement a Construction Management Plan in order to respond to the accidents and urgent cases in a manner appropriate to the construction risks. This plan will rely on the prior identification of the risks of major incidents and will include the necessary measures to prevent major incidents, as well as mitigate their consequences for the local community.

The Contractor must create safe pedestrian and traffic corridors through the construction site, at the request of the local community and residents.

It is advisable for the Contractor to design and implement a Safety Campaign for the population living in areas close to construction sites that will include educational and information activities for the population. Most of this campaign must be carried out before the start of construction activities, while the other part in the construction phase. The campaign must be supported by media, local radio, with information, publication of manuals, leaflets and recommendations in printed form available for the local affected population, but also in electronic form on the website of the municipality, as well as other institutions of local character, as well as on the site of the Investor.

The Contractor is advised, in coordination with the NER and the local self-government, to hold several meetings with the local population explaining the impacts of the project, in particular, noise, frequency of vehicles and workers, as well as population safety during the forthcoming period of construction activities. It is desirable that these meetings take place before the start of construction activities.

7.4 Occupational Health, Safety and Security

The Contractor for construction must develop and implement an Occupational Health & Safety Management System. This management system will be compulsory for the contractor including subcontractors. It will include aspects such as: identifying and using PPE, regular training and monitoring as well as ongoing security checks, as well as other measures. Part of the management system must be the Occupational Health and Safety Plan with an implemented grievance mechanism, in accordance with national laws, as well as with the requirements of the IFIs. The grievance mechanism for workers obliges the contractor to receive and appropriately resolve employee complaints in a fair and reasonable manner.

The Occupational Health and Safety Plan will minimize, if not eliminate, all health and safety risks and the sources of those risks to workers. All contractors and subcontractors must comply with the requirements of the plan. The contractor will procure all resources, labour and materials from reliable sources of good reputation, where, along with the price, factors such as quality, reputation, performed projects and services are considered.

In terms of labour rights, all workers (including contractors and subcontractors) will have contracts with clearly expressed rights and conditions for their employment, and their legal rights. Contracts will be explicitly explained to all workers when necessary to ensure that workers understand their rights. Contracts must be concluded before the commencement of the working activities. All workers (including contractors and subcontractors) will be able to join trade unions of their choice and have the right to collective negotiations.

All employees, even those of subcontractors, must sign a Code of Conduct, which should be accessible and visible, and each worker must understand the weight of the document and the consequences it brings if it violates it. Additionally, the Contractor must conduct Training of workers on methods to avoiding conflicts with the local community members; workers will sign a labour code of conduct.

The Contractor must prepare and implement Local Workforce Employment Plan for the needs of the project, in cooperation with the local EA office, where special attention will be given to engaging available local workforce. The plan will cover all aspects, from the analysis of the existing situation on the labour market at the local, regional and national level, to the organization and systematization of the required jobs for the project. Engaging an appropriate % of the workforce for this project from the entire project area, with a special advantage given to the applicants from the rural populated areas of the project area.

It is preferable to include in the tender documentation a request to the contractors to submit a specification with a number of engaged workers by construction phase and their qualifications, and which are planned to be engaged if they participate in the construction of the project.

If such need occurs the Contractor will create a Worker Accommodation Plan that will be in line with the standards of good international practice translated through the experience and standards of IFIs. If there is a need to organize a worker's camp, it must not be near to any of the affected rural settlements.

Audits of the design and implementation of the worker's compound against the checklist in the EBRD & IFC guidance document will be implemented: prior to construction of the accommodation (i.e. an audit of the design), prior to opening of the workers` compounds and on an annual basis (each year after opening).

Contractor must meet the compliance with local labour legislation and EU directives on Occupational safety and health, as well as the use of personal protective equipment 89/654 / EEC, 89/656 / EEC, 89/686 / EEC and 2009/104 / EC. It is necessary all engaged workforce, by the Contractor and its subcontractors, to use personal protective equipment during performing activities on construction sites.

7.5 Employment and Community Development

NER and the Contractors will design employment and recruitment opportunities that supports the local community. These will be developed via consultations with local stakeholders, municipalities, and other local stakeholders, including woman and vulnerable groups.

- NER in conjunction with the Contractors will establish a method to make easier local employment and will publicise job vacancies in ways and during times that villagers will be able to participate. It is important that the employment process is well managed and that the local community is able to actively participate to the extent feasible;
- NER will encourage local employment prioritising the four municipalities: Negotino, Demir Kapija, Gevgelija and Bogdanci along with adjacent villages along the gas pipeline route location;
- Local villagers will be informed of job opportunities along with the required qualifications in a timely manner, ensuring the advertising process is culturally and administratively appropriate;
- Local businesses will be informed of contracting opportunities in a timely manner;
- NER will ensure that the hiring process is conducted as transparently as possible to help the community to understand strategic staffing decisions for the Project;
- NER will develop and implement a Workers Code of Conduct that addresses issues such as anti-social behaviour and drug and alcohol consumption and respect for women in accordance with the applicable regulation. The Contractors will be required to conform to the Code of Conduct;
- MRPR will ensure that any grievances raised by local businesses will be managed in an appropriate and timely manner. Where corrective actions are required; they will be implemented effectively and in a timely manner;
- NER will develop a Workforce Development Strategy - a commitment to maximise employment and skills opportunities for local people;
- NER will advise the Contractor to maximize the employment of locals and based on the requisites of qualifications and skills required;
- NER and their Contractors will design and develop a capacity building program including mentoring, coaching and apprenticeship opportunities for local villagers to maximise skills development for local people. The employment of local villagers for higher level positions should be maximised to facilitate good community relations;
- NER will develop Corporate Social Responsibility (CSR) programme that will be designed and implemented by also coordinating with Municipalities to create business opportunities for the local community. The CSR programme will be available to the local community, including the workforce that is no longer involved after the construction of the Project;
- CSR programmes will also seek to improve levels of education and skills for people affected by the Project.

7.6 Cultural Heritage

NER will develop and implement a Chance Find Procedure for the Project. This Procedure will be applied by the main Contractor and Subcontractors during Project construction works. The Worker's Code of Conduct will include a section on Cultural Heritage and respect of local beliefs and traditions in the local communities. All workers will be made aware of the Code of Conduct.

If any element of cultural heritage is discovered during the construction of the Project, mitigation measures to protect them and to ensure that the local population can access them will be defined and implemented. These measures to be defined in a participatory manner with the affected persons or communities.

7.7 Monitoring

The following monitoring strategies shall be implemented:

- During construction and operation, the number of people being employed by the Project from the Municipalities along the gas pipeline should be monitored;
- Monitoring of the recruitment process and implementation of employment, health, safety and security;
- Mitigation measures to be implemented;
- Participatory monitoring to be conducted by the local community members via representatives selected or appointed by the villagers;
- During construction and operation, surveys shall be conducted to determine the number of new businesses and increase or decreases in tourism businesses generated by the development and the level of indirect employment;
- NER will establish adequate numbers and training capacity of community liaison officer;
- A NER Community Liaison Officer will be responsible for updating and monitoring the implementation of the Grievance Mechanism defined in the SEP;
- The grievance mechanism resolution and grievance database shall be monitored with progress reported on a quarterly basis.

7.8 Residual Impacts

Residual impacts are those which remain once proposed mitigation measures have been put in place**. In consideration of the mitigation measures described above overall residual impacts from the construction and operation of the Project are anticipated to be Minor to Negligible significance.**

8 References

- Local Environmental Action Plan for Bogdanci Municipality 2019-2025;
- Third National Report to Framework Convention on UN Climate, September 2013;
- State Statistical Office, MAKSTAT;
- Local Environmental Action Plan for Demir Kapija Municipality, March 2011;
- Population estimates as of 30.06.2013 and 31.12.2013 by sex and age, by municipality and by statistical region (NUTS 3-2007), Source: State Statistical Office of the Republic of Macedonia "Regions of the Republic of Macedonia 2012 and 2014;
- "Strategy for Local Economic Development of Negotino Municipality, October, 2014;
- State Statistical Office, Publication for Migrations 2017;
- Program for Development of South-East Planning Region 2015-2019;
- Program for Development of Vardar Planning Region 2008-2012;
- Plan for Waste Management for Gevgelija Municipality 2017-2022;
- Regional Plan for Integrated System for Waste Management in South-East Planning Region, March 2017;
- Report for Health of the Population in Republic of Macedonia, 2017, Public Health Institute.

Annexes

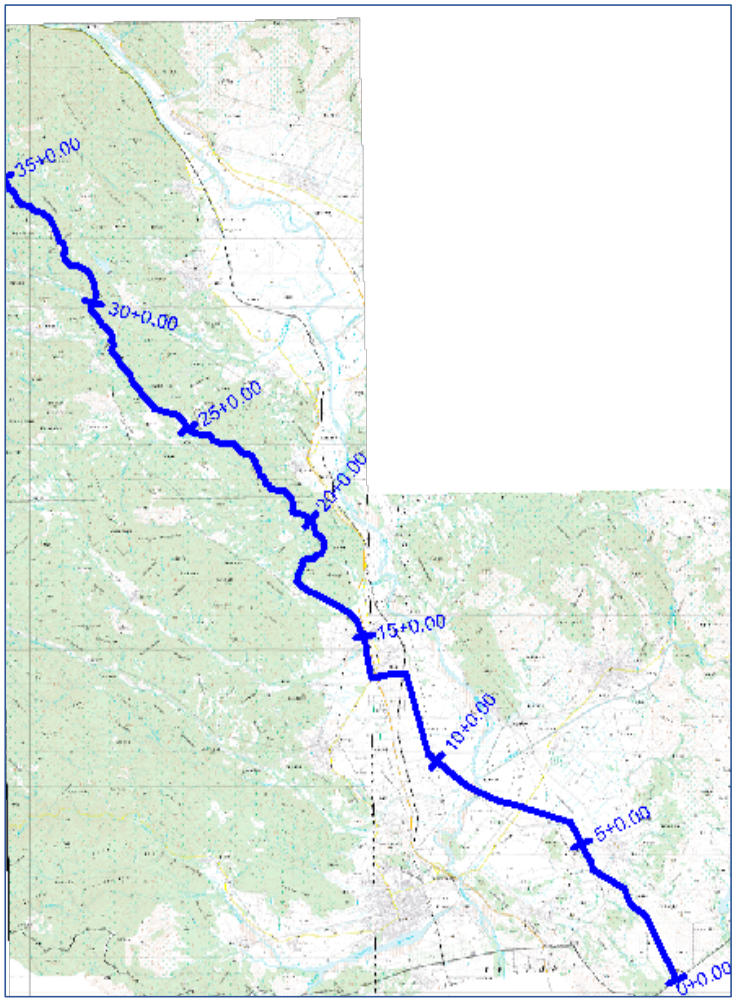
Annex 1: Intersection of Interconnection Gas Pipeline with existing infrastructure and location

Annex 2: Land use along the corridor of the Project

Annex 3: Archaeological heritage sites along the corridor of the Project

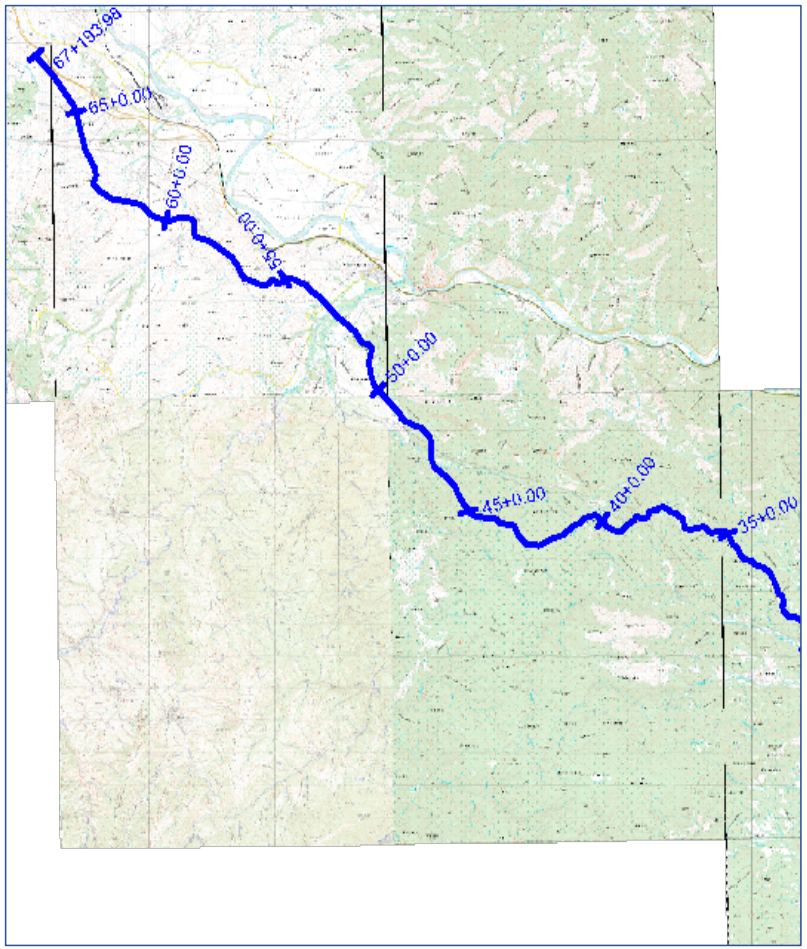
Annex 4: Questionnaire for the socio-economic survey for the Project

Annex 1: Intersection of Interconnection Gas Pipeline with existing infrastructure and location

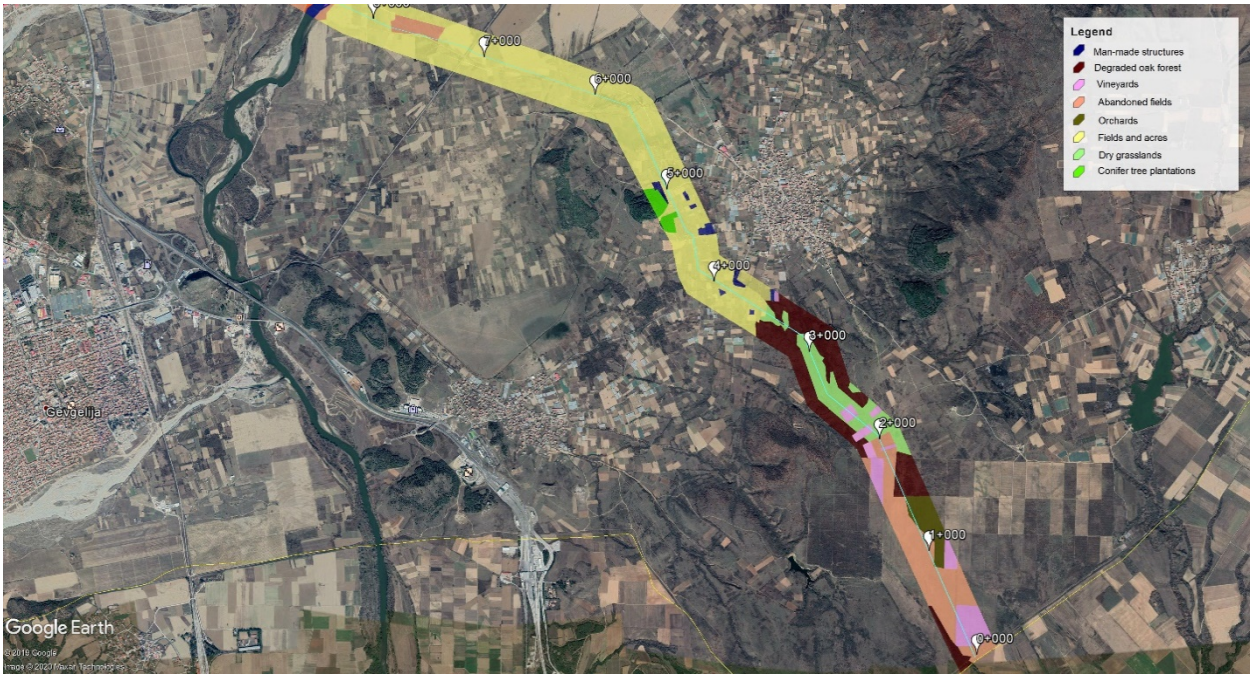


Location (km+m)	Type of infrastructures	Location (km+m)	Type of infrastructures
km 8+789.00	Unpaved road	km 13+999.92	Canal
km 8+848.42	Unpaved road	km 14+010.79	Water supply system D140mm
km 9+067.27	Unpaved road	km 14+055.54	Canal
km 9+091.85	River Sermeninska - start	km 14+059.62	Unpaved road
km 9+281.15	River Sermeninska - end	km 14+117.56	Canal
km 9+696.00	Unpaved road	km 14+181.79	OHL 10kV
km 9+745.78	Unpaved road	km 14+198.04	Water supply line D150mm
km 9+783.90	OHL 110kV	km 14+202.39	Canal
km 10+377.24	Unpaved road	km 14+223.11	Irrigation system D140mm
km 10+452.46	OHL 110kV	km 14+252.44	Unpaved road
km 10+786.93	Unpaved road	km 14+280.87	Irrigation system D140mm
km 10+922.89	Unpaved road	km 14+371.55	Irrigation system D140mm
km 10+929.04	C	km 14+603.30	Unpaved road
km 10+936.07	Unpaved road	km 14+619.81	River Kovanska - start
km 11+241.47	Unpaved road	km 14+631.12	River Kovanska - end
km 11+330.09	Sewage line D1500mm	km 14+783.24	Unpaved road
km 11+428.86	Unpaved road	km 14+877.20	Unpaved road
km 12+292.20	Unpaved road	km 14+983.46	Unpaved road
km 12+510.52	Unpaved road	km 15+172.98	OHL 10kV
km 12+579.70	Unpaved road	km 15+203.95	Unpaved road
km 12+670.53	Unpaved road	km 15+436.85	Unpaved road
km 12+754.37	Oil pipeline D460mm	km 15+573.27	Unpaved road
km 12+761.99	Unpaved road	km 15+587.82	OHL 10kV
km 12+831.37	Railway Skopje - Gevgelija	km 15+807.73	Unpaved road
km 12+844.21	Unpaved road	km 17+125.90	Unpaved road
km 13+531.57	OKL 110kV	km 17+129.63	Oil pipeline D460mm
km 13+546.99	Unpaved road	km 18+477.90	River Zuica
km 13+549.86	IT infrastructure - cable	km 20+375.57	Unpaved road
km 13+557.30	Highway "Friendship"- start	km 22+801.85	Unpaved road
km 13+584.42	Highway "Friendship"- end	km 26+030.77	Unpaved road
km 13+598.29	IT infrastructure - cable	km 28+608.07	River Petruska
km 13+604.49	OHL 110kV	km 28+760.90	Asphalt road
km 13+624.36	Highway "Friendship" (ramp)- start	km 28+905.60	River Stara
km 13+634.96	Highway "Friendship" (ramp)- end	km 30+000.00	Unpaved road
km 13+654.87	Water supply pipeline D200mm	km 30+200.00	OHL 400 kV
km 13+729.75	Regional road R103 (Gevgelija – Skopje) - start	km 33+062.74	Unpaved road
km 13+735.79	Regional road R103 (Gevgelija – Skopje) - end	km 33+392.06	Unpaved road
km 13+818.37	Asphalt road to Technological Industrial Development Zone - start	km 35+617.98	Unpaved road
km 13+839.62	Asphalt road to Technological Industrial Development Zone - end	km 35+761.19	Oil pipeline D460mm
km 13+923.66	Unpaved road	km 35+891.21	Unpaved road

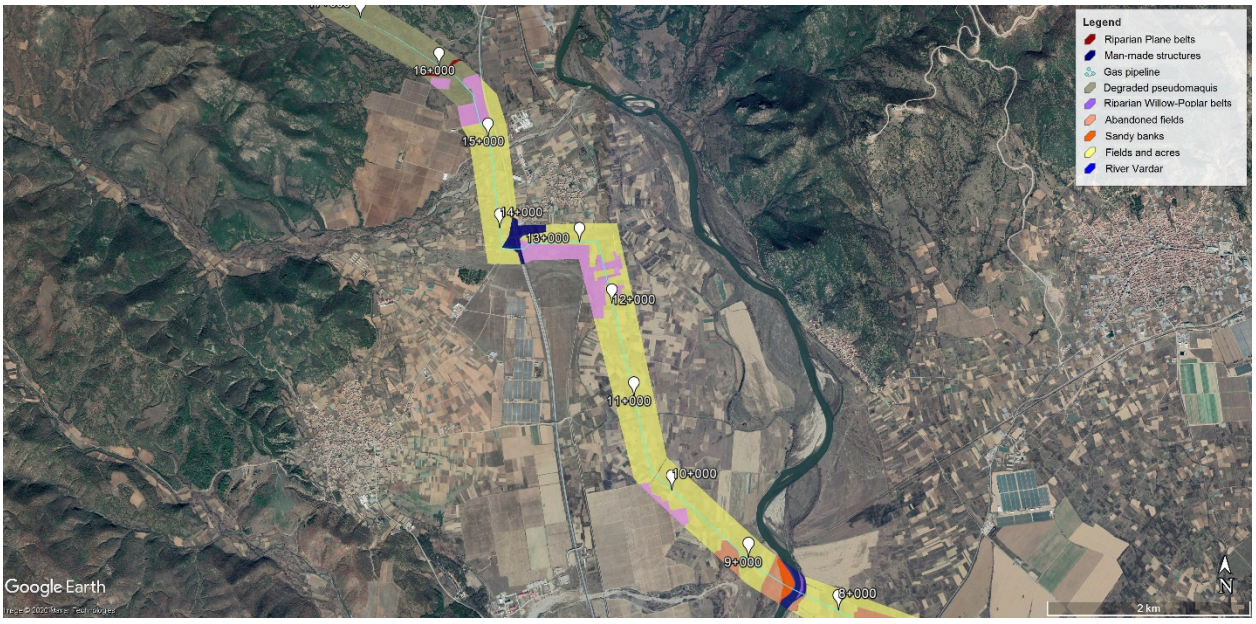
Annex 1: Intersection of Interconnection Gas Pipeline with existing infrastructure and location



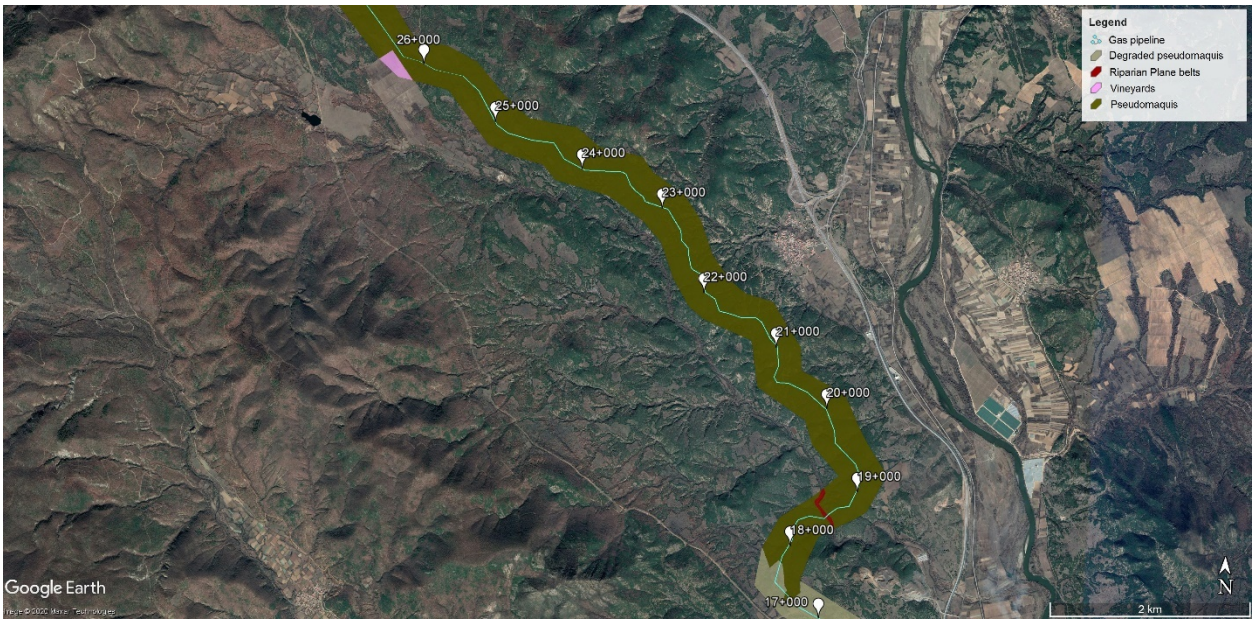
Location (km+m)	Type of infrastructures	Location (km+m)	Type of infrastructures	Location (km+m)	Type of infrastructures
km 36+232.09	Unpaved road	km 52+539.08	Underground electricity cable 10kV	km 59+727.15	Unpaved road
km 36+244.80	Oil pipeline D460mm	km 52+614.26	OHL 10kV	km 60+098.67	Unpaved road
km 36+770.43	Oil pipeline	km 52+732.59	Unpaved road	km 60+141.72	Unpaved road
km 37+700.00	OHL 400 kV	km 52+886.38	Earth canal	km 60+144.37	Canal
km 37+896.07	Unpaved road	km 52+896.30	Water supply line D250mm	km 60+197.24	River Selo
km 38+751.85	Unpaved road	km 52+901.78	Unpaved road	km 60+252.78	Unpaved road
km 39+607.02	Unpaved road	km 52+903.44	OHL 35kV	km 60+480.18	Unpaved road
km 39+784.82	Unpaved road	km 52+995.77	Unpaved road	km 60+640.55	OHL 35kV
km 40+349.09	Unpaved road	km 53+455.22	Unpaved road	km 60+735.77	Unpaved road
km 40+407.04	Unpaved road	km 53+593.62	Unpaved road	km 60+974.15	Unpaved road
km 42+356.82	Unpaved road	km 53+695.68	Unpaved road	km 61+051.10	Unpaved road
km 44+675.31	Unpaved road	km 53+811.53	Unpaved road	km 61+166.42	Canal
km 45+200.29	Unpaved road	km 54+157.44	Unpaved road	km 61+235.46	Unpaved road
km 46+402.43	Unpaved road	km 54+435.99	Unpaved road	km 61+303.18	Unpaved road
km 46+751.83	River Maminska	km 54+485.90	Unpaved road	km 61+471.17	Unpaved road
km 47+102.52	Unpaved road	km 54+528.50	Unpaved road	km 61+672.29	Unpaved road
km 47+129.41	Unpaved road	km 54+834.13	Unpaved road	km 61+705.19	Unpaved road
km 47+345.60	Unpaved road	km 55+285.04	Unpaved road	km 61+776.04	Unpaved road
km 46+365.95	River Drenska	km 55+297.78	IT cable	km 61+789.38	Unpaved road
km 47+634.29	Unpaved road	km 55+348.84	IT cable	km 61+934.92	Canal
km 47+965.00	OHL 400kV	km 55+358.19	Unpaved road	km 61+938.89	Unpaved road
km 48+129.78	Unpaved road	km 55+395.33	Unpaved road	km 62+530.07	River Gjuleva
km 48+129.91	IT Cable	km 55+406.84	IT cable	km 62+542.61	OHL 35kV
km 48+964.06	Unpaved road	km 56+391.47	Unpaved road	km 62+651.02	Unpaved road
km 49+326.03	Unpaved road	km 57+100.81	OHL 400kV	km 62+653.02	IT cable
km 51+018.11	OHL 35kV	km 57+249.05	Unpaved road	km 62+762.60	OHL 35kV
km 51+109.86	Unpaved road	km 57+315.52	Unpaved road	km 62+957.74	OHL 110kV
km 51+234.50	Asphalt road (Demir Kapija – v.Chiflik)	km 57+342.62	Canal	km 63+003.29	Unpaved road
km 51+240.86	IT Cable	km 57+984.01	OHL 10kV	km 63+610.61	River Disanska
km 51+279.00	OHL 10kV	km 58+109.34	Unpaved road	km 63+648.15	Unpaved road
km 51+639.16	OHL 10kV	km 58+514.20	Unpaved road	km 64+041.53	Unpaved road
km 51+657.07	Oil pipeline D460mm	km 58+573.23	Unpaved road	km 64+089.29	Unpaved road
km 52+184.59	River Doshnica	km 58+582.60	River Przdevska	km 64+126.65	Unpaved road
km 52+218.13	River Boshava	km 58+593.23	Asphalt road v. Przdevo	km 64+157.16	Irrigation pipeline
km 52+290.03	Canal	km 58+596.06	IT cable	km 64+420.49	OHL 400kV
km 52+293.27	Unpaved road	km 58+599.37	Water supply line D110mm	km 64+504.22	OHL 400kV
km 52+307.98	Unpaved road	km 58+624.00	OHL 10kV	km 65+861.69	Unpaved road
km 52+309.74	Sewage system D350mm	km 58+703.89	Unpaved road		
km 52+387.90	Canal	km 58+909.42	Unpaved road		
km 52+530.66	Regional road P109 Demir Kapija -v.Besvica	km 59+309.69	Unpaved road		



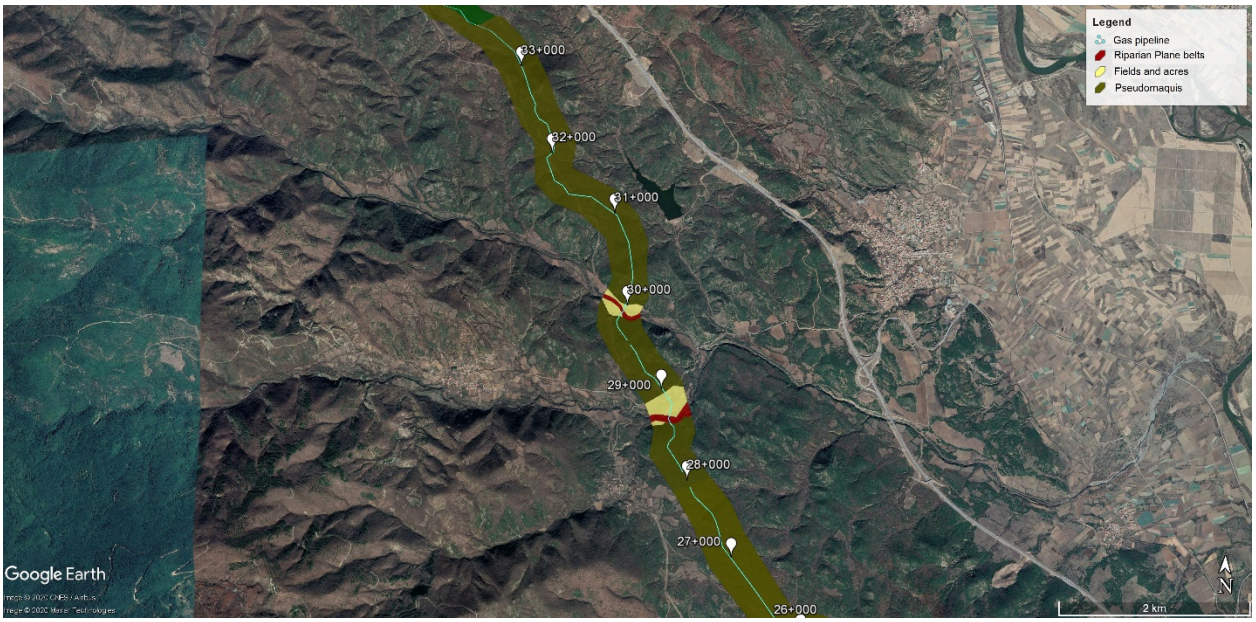
Land use from km 0+000.00 to km8+000.00



Land use from km 8+000.00 to km 16+000.00

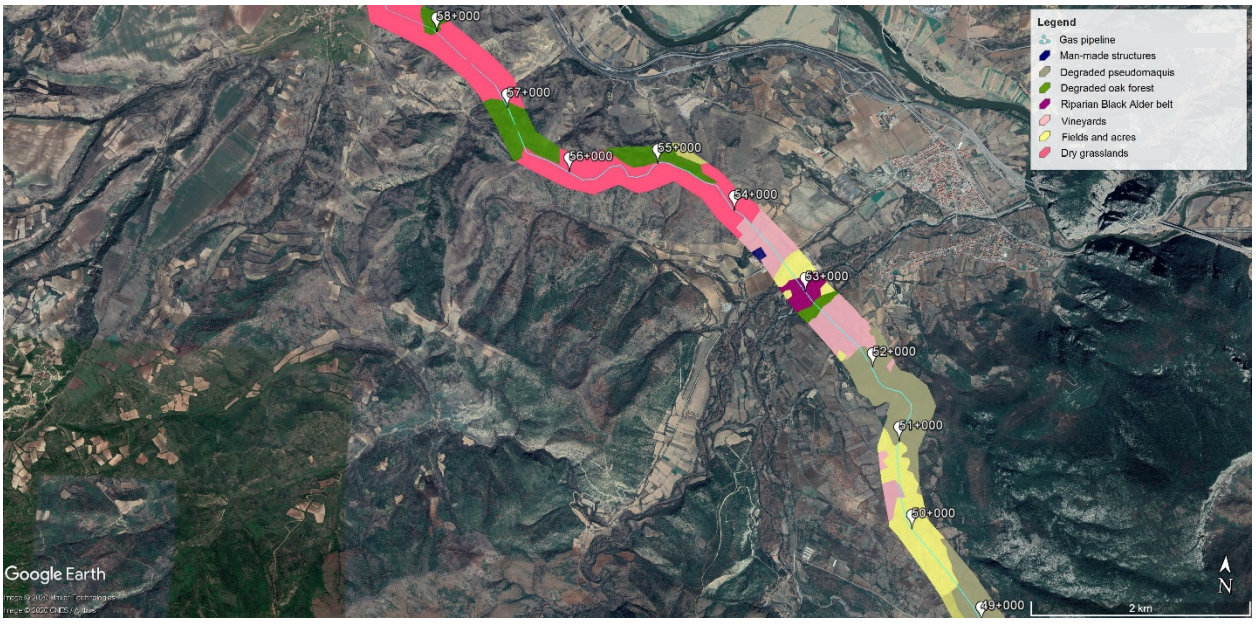


Land use from km 16+000.00 to km 26+000.00

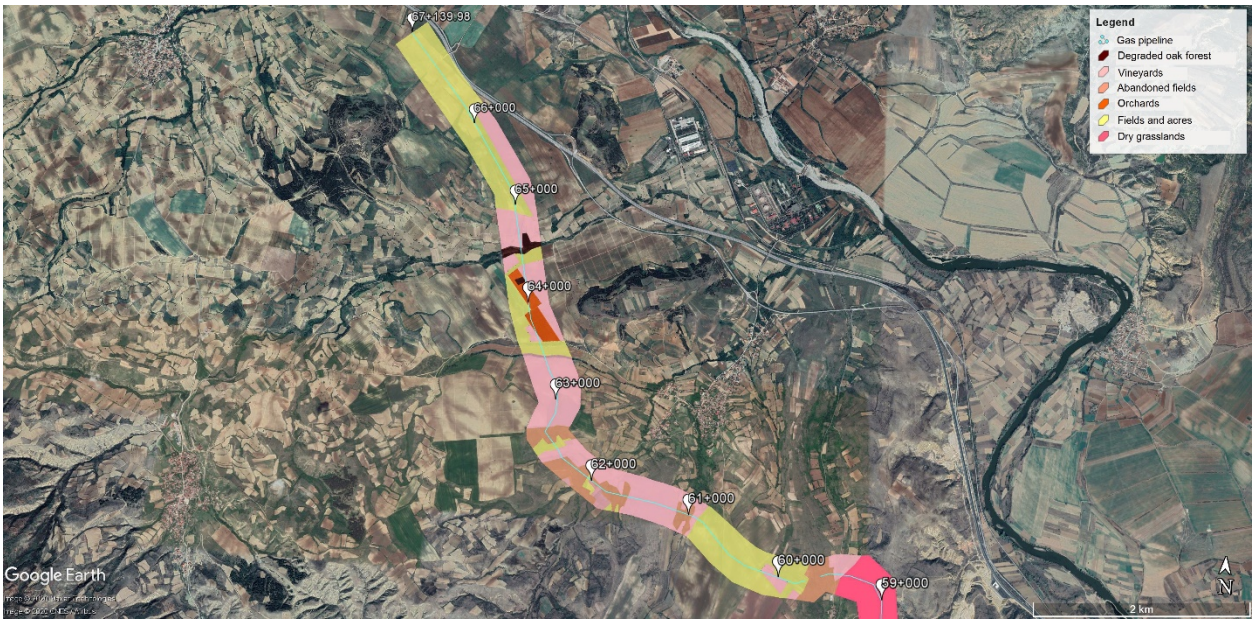


Land use from km 26+000.00 to km 33+000.00

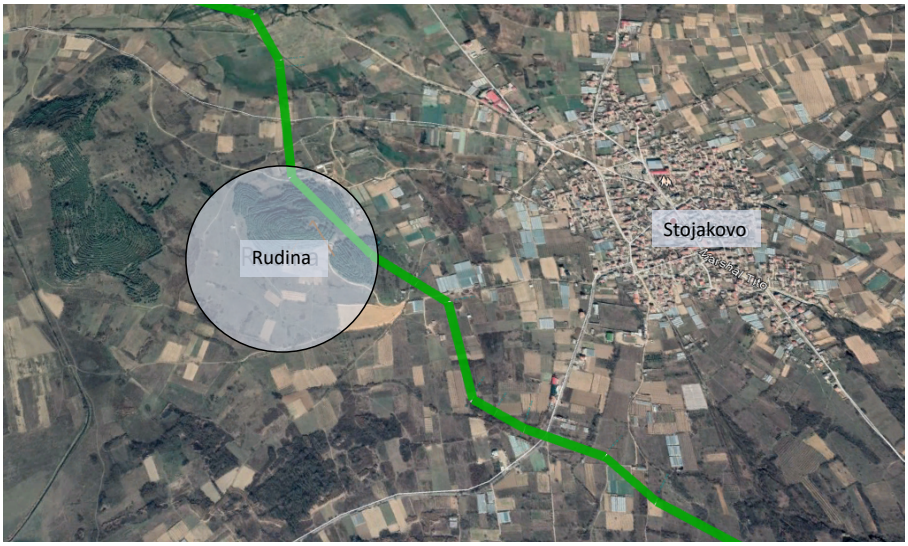
Land use from km 33+000.00 to km 49+000.00



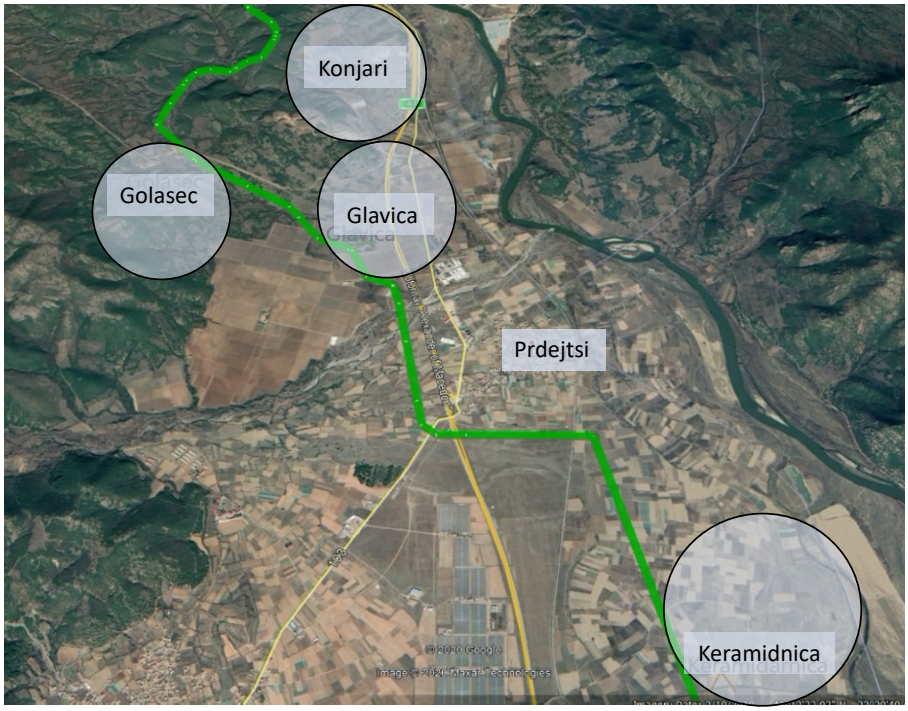
Land use from km 49+000.00 to km 59+000.00



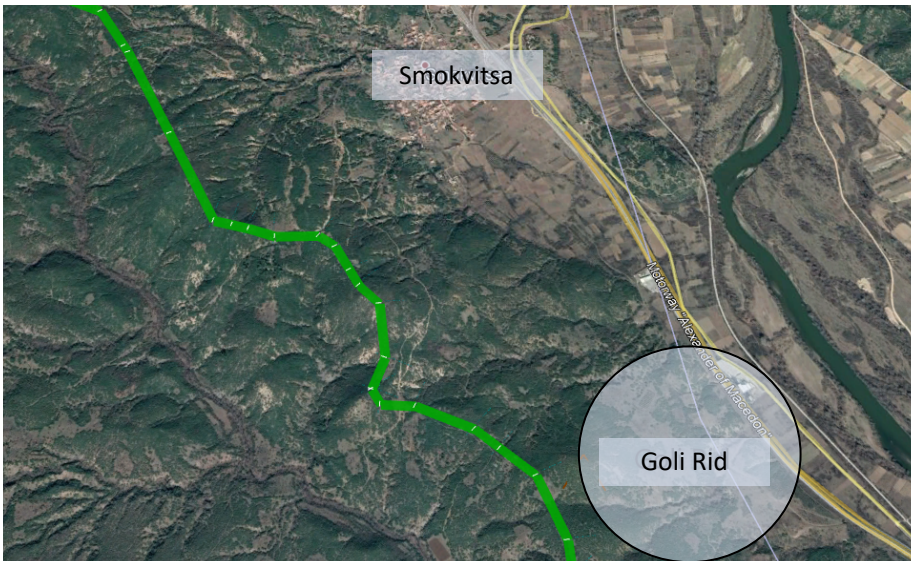
Land use from km 59+000.00 to km 67+139.00



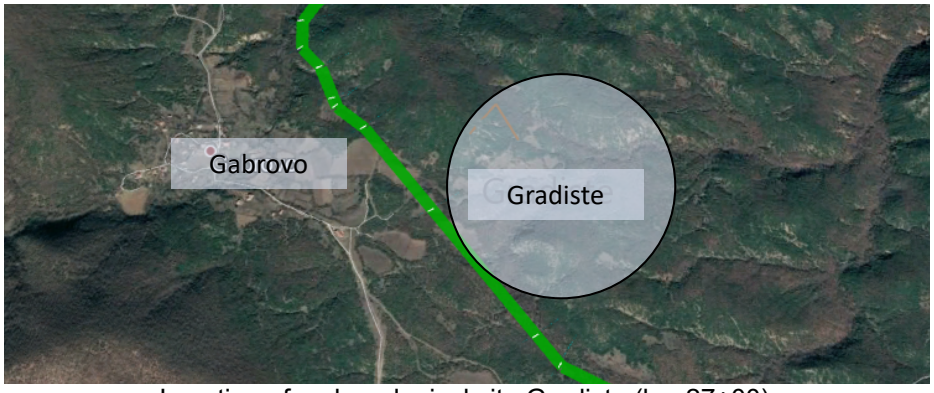
Location of archaeological site Rudine (km 5+00)



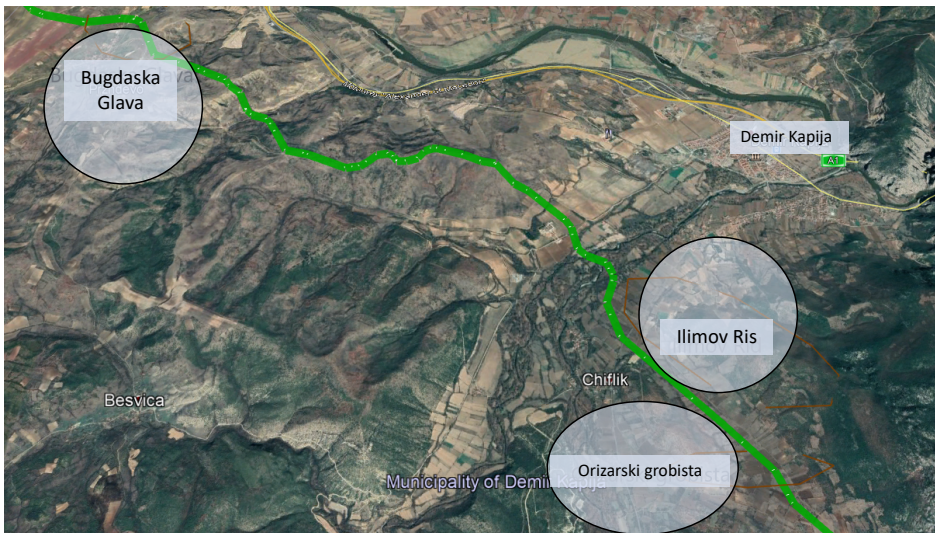
Location of archaeological site Keramidnica (km 11+00), Glavica (km 16+00), Golasec(km 17+500) and Konjari (km 19+00)



Location of archaeological site Goli Rid (km 19+500)



Location of archaeological site Gradiste (km 27+00)



Location of archaeological sites Bugdaska Glava (km 49+00), Ilimov Ris (km 49+500) and Orizarski grobista (km 58+00)

Socio – economic survey for the needs of the Project Interconnection Natural Gas Pipeline North Macedonia - Greece

Village/Settlement	
Municipality	
Number of citizens	
Number of households	

Age Structure	Number of persons
0-18	
18-50	
50-60	
Over 60	

Gender structure	Number of persons
Men	
Women	

Migration (period 2015-2019)	Number of persons
Migrated	
Immigrated	

Vulnerable groups	Number of persons / households
Single mothers	
Elderly people	
Socially disadvantaged households	
Disabled people	
Members of smaller ethnic groups	
Another category of vulnerable groups	

A. Infrastructure and other facilities in the settlement (within a radius of 5 km)

Type	YES	NO	Type	YES	NO
Asphalt road			Electric energy		
Unpaved road			Water supply		
Hospital			Sewerage		
Vet			Internet / telephony		
Bank			Mail		
Organized collection of solid waste			Own waste disposal		

B. Average income (per household per month - rough estimate)

Group	Source of income	% from the population
Up to 10,000 Denars		
From 10,000 - 20,000 Denars		
From 20,000-30,000 Denars		
Over 30,000 Denars		

C. Resources:

a) Soil (hectares)

Total area of the settlement	Agricultural land area	Cultivated area	Non-cultivated area
Reason for not cultivating	Area under forest	Area under pastures	Area under houses

b) Ownership over land (hectares)

Area	Private property of households (number of households)	Rental from the state (number of households)
1-5		
5-10		
10-20		
Over 20		

c) Irrigation

Source of irrigation	Irrigated area	Source of irrigation	Irrigated area
Springs		Irrigation system (artificial accumulation)	
Wells		Rivers	
Water supply		Others (list)	

d) Crops that are grown - rough

Type	Area	Average production per hectare

e) Livestock - rough

Livestock	Number

f) Orchards:
For own needs (ha):
For sale (ha):
Near the houses (ha):
In the field (ha):
The most common fruits that are grown:

Other activities in the settlement (factory, small businesses, tourism, construction, etc.) ----------

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D) Income at the settlement level (percentage):

Agriculture	Livestock	Employment	Business Activities	Daily work - wages	Another

E) Education

Institutions	Total number of children	Is it in the settlement (yes - no)	Is it outside the settlement (what is the distance)	Are you satisfied with the educational facilities
Preschool				
Primary				
Secondary				
Faculties				

F) General

If you are not satisfied with any above issue what are the reasons:

The most commonly used type of transport (cars, public transport, etc.):

The most commonly used energy source in the settlement (wood, electricity, oil, pellets, etc.)

Your opinion on the announced construction of the **Project Interconnection Natural Gas Pipeline North Macedonia - Greece**

The biggest problems faced by the residents of the settlement (on a priority basis):

1.

2.

3.

4.

Suggestions for improving the lives of residents:

Completed: ---------- in function of ----------

age ---------- profession ----------

Date: _____

Contact number: _____

Socio – economic survey for the needs of the Project Interconnection Natural Gas Pipeline North Macedonia - Greece

Village/Settlement	
Occupation	
Total number of household members	
Age	

A. Total monthly family budget:

Group	Source of income
Up to 10,000 Denars	
From 10,000 - 20,000 Denars	
From 20,000-30,000 Denars	
Over 30,000 Denars	

If you earn income from different sources, state the percentage of participation in the following activities in your family budget:

Agriculture	Livestock	Employment	Business Activities	Daily work - wages	Retirement

Other sources of income if not listed in the table above:

_____

Are you a beneficiary of social assistance or other financial support (care for family member with special need, etc.)? _____

B. Infrastructure and other facilities you use

Type	YES	NO	Type	YES	NO
Asphalt road			Electric energy		
Unpaved road			Water supply		
Hospital			Sewerage		
Vet			Internet / telephony		
Bank			Mail		
Organized collection of solid waste			Own waste disposal		

C. Resources:
a) Soil (hectares)

Total area of the household	Agricultural land area	Cultivated area	Non-cultivated area
Reason for not cultivating	Area under forest	Area under pastures	Area under houses, barn

b) Ownership over land (hectares)

Area	Private household ownership	Under lease from the state or from other natural or legal persons
1-5		
5-10		
10-20		
Over 20		

c) Irrigation

Source of irrigation	Irrigated area	Source of irrigation	Irrigated area
Springs		Irrigation system (artificial accumulation)	
Wells		Rivers	
Water supply		Others (list)	

Specify if there is another irrigation system:

d) Crops that you grow:

Type	Area	Average production per hectare

e) Livestock

Livestock	Number

f) Orchards:
For own needs (ha):
For sale (ha):
Near the houses (ha):
In the field (ha):
The most common fruits that are grown:

Educational facilities (if your family members visit them)

Institutions	Total number of children from the household	Is it in the settlement (yes - no)	Is it outside the settlement (what is the distance)	Are you satisfied with the educational facilities
Preschool				
Primary				
Secondary				
Faculties				

If you are not satisfied with any above issues what are the reasons:

Do you have access to health care?

The most commonly used type of transport (cars, public transport, etc.):

The most commonly used energy source in the household (wood, electricity, oil, pellets, etc.)

How much energy is needed (m^3 of wood, tons of oil, pellets, electricity, etc.)?

What is the most common reason for using that type of energy source (price, availability, opportunity)?

Your opinion on the announced **the Project Interconnection Natural Gas Pipeline North Macedonia - Greece**

Whether the announced construction of the Project will improve the quality of your life, explain what your expectations are:

The biggest problems you face in your daily life in your settlement (on a priority basis):

1.

2.

3.

4.

Suggestions for improving the lives of residents:

Are you generally happy with life in your neighbourhood?

Have you considered leaving your place of residence?

Do your children plan to stay in your neighbourhood after graduation?

Do you think that the construction of **the Project Interconnection Natural Gas Pipeline North Macedonia – Greece** twill keep the young generations in the region and will enable faster economic development?

Date of completion of the survey:
