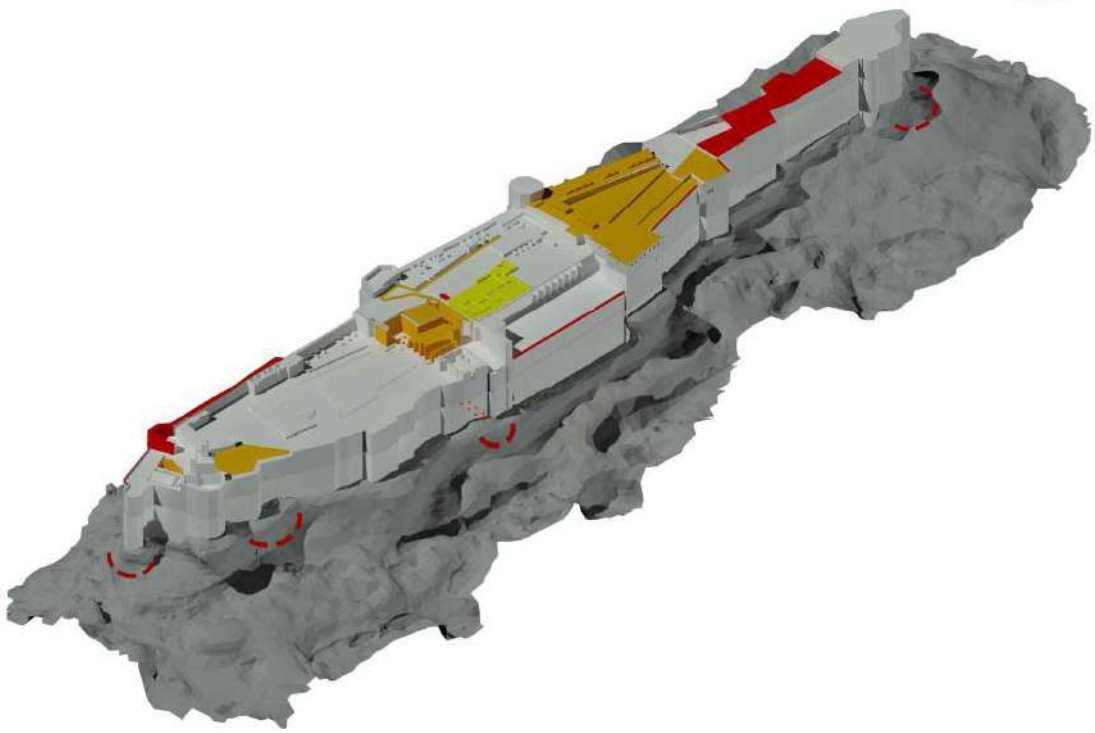
REPORT

ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT OF THE PROJECT



"IDENTIFICATION, DESIGN OR PRIORITIZED MEASURES TO ADDRESS SAFETY CONCERNS AND PREVENT LOSS OF HERITAGE STRUCTURES IN THE CASTLE OF GJIROKASTRA"

Category (Pursuant to Annex II of Albanian Law No. 10440, dated 07.07.2011 and Directive 2011/92/EU on EIA):

10. Infrastructure Projects.

b) Urban development projects, including the construction of shopping centres and car parks.

Developer: Albanian Development Fund (ADF)

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"Expertize and/or professional service linked to Environmental Impact Assessment".

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ADF	ALBANIAN DEVELOPMENT FUND
ARAP	ABBREVIATED RESETTLEMENT ACTION PLAN
CHP	CULTURE HERITAGE PLAN
CHS	COMMUNITY HEALTH AND SAFETY
CM	COUNCIL OF MINISTERS OF REPUBLIC OF ALBANIA
DCM	DECISSION OF COUNCIL OF MINISTERS OF REPUBLIC OF ALBANIA
EBRD	EUROPEAN BANK FOR RECONSTRUCTION AND DEVELOPMENT
EPRP	EMERGENCY PREPAREDNESS AND RESPONSE PLAN.
ESIA	ENVIRONMENTAL AND SOCIAL IMPACT ASSESSMENT
ESMP	ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN
GHG	GREENHOUSE GASES
GIIP	GOOD INTERNATIONAL INDUSTRY PRACTICE
GIS	GEOGRAPHIC INFORMATION SYSTEM
GLP	GENERAL LOCAL PLAN
GoA	GOVERNMENT OF ALBANIA
ILO	INTERNATIONAL LABOUR ORGANISATION
MEP	MECHANICAL, ELECTRICAL AND PLUMBING
MIE	MINISTRY OF INFRASTRUCTURE AND ENERGY
MTE	MINISTRY OF TOURISM AND ENVIRONMENT
NAPA	NATIONAL AGENCY OF PROTECTED AREA
NCA	NATIONAL CADASTRE AGENCY
NEA	NATIONAL ENVIRONMENTAL AGENCY
OHS	OCCUPATIONAL HEALTH AND SAFETY
OP	OPERATIONAL POLICY OF THE WORLD BANK
OSHEE	ELECTRICITY DISTRIBUTION SYSTEM OPERATOR
PIUTD	PROJECT FOR INTEGRATED URBAN AND TOURISM DEVELOPMENT
PM	PARTICULATE MATTER
PPE	PERSONAL PROTECTION EQUIPMENT

RAP	RESETTLEMENT ACTION PLAN
RED	REGIONAL ENVIRONMENTAL DIRECTORATE
SEP	STAKEHOLDER ENGAGEMENT PLAN
UN	UNITED NATIONS
UNEP	UNITED NATIONS ENVIRONMENTAL PROGRAM
WB	WORLD BANK

I. INTRODUCTION

1.1. PROJECT PURPOSE

Gjirokastra, and its castle, is a unique place. Inscribed on the World Heritage List in 2005, this city "bears outstanding testimony to the diversity of urban societies in the Balkans and longstanding ways of life which have today almost vanished" and "the town planning and housing of Gjirokastra are those of a citadel town…".

A recent effort, the Project for Integrated Urban and Tourism Development (PIUTD), has been funded by the World Bank to support the Government of Albania in developing the economy while improving living conditions. This overall project focuses mainly on urban centers that are of cultural and natural interest to strengthen tourism - thus Gjirokastra. Previous elements of this project have addressed urban upgrading, street improvements, pedestrian trails, museums, and lighting. This project is to specifically address the fortifications given their significance, prominence as an attraction, and current poor condition. The Ministry of Culture and the Municipality of Gjirokastra, have explicitly requested support given the emergency situation and stability of the castle.

A vision for the future of the castle, its uses, visitation, and conservation is sorely needed. This current project, understandably, is focused on the short-term emergency structural and geological interventions required for stabilization. But, this scope is insufficient without an exploration of how residents and visitors view and wish to use the castle.

Main elements of this proposal are:

- ❒ Structural stabilization of rock and bastion
- ❒ Opening sections in the south section of the castle
- ❒ Installing infra-red cameras and portable screen for viewing and understanding life of bats
- ❒ Restoring roof over Museum and prison
- ❒ Establishing new ticket office including accessible toilettes and small interpretation center
- ❒ Conservation of number of spaces which then can be utilized for new functions
- ❒ Fencing off instable and unexcavated archeological sections
- ❒ Additional archeological excavations in one section

Given the current state of condition, this project is primarily focused on the short term, but there must also be the pursuit ofmedium-term objectives to support longer-term goals, which in turn are used to pursue the vision. Such

amanagement plan can organize efforts, identify risks, schedule projects, and, importantly, seek additionalsources of sustainable funding for continued conservation and maintenance. A monument visited and used willbecome a placed loved and thus preserved.

This project is to specifically address the fortifications given their significance, prominence as an attraction, and current poor condition. The Ministry of Culture and the Municipality of Gjirokastra, have explicitly requested support given the emergency situation and stability of the castle.

Because of the adverse effects that these new developments (the project) might have into the Environment, based on EU and national legislation, the project should undergo the Environmental and Social Impact Assessment (ESIA) which is a tool used to identify the social and economic impacts of a project prior to decision-making.

1.2. ENVIRONMENTAL AND SOCIAL IMPACT ASESSMENT PURPOSE

This preliminary Environmental and Social Impact Assessment is prepared for the project “Identification, design or prioritized measures to address safety concerns and prevent loss of heritage structures in the castle of Gjirokastra” and is part of the necessary documentation required for this project.

The Albanian Development Fund (ADF) commissioned the report. The Environmental and Social Impact Assessment is based on a project prepared by the Proskene Cultural Heritage & Conservation (Proskene), in collaboration with Cultural Heritage without Borders (CHwB) in Albania".

The report was prepared pursuant to Law No. 10431, dated 9 June 2011 "On Environmental Protection" and other normative acts of the Ministry of Tourism and Environment. In addition, the Environmental and Social Management Framework of the World Bank has guided this report.

Pursuant to the above-mentioned law, the project is included in Appendix II: Projects subject to preliminary environment impact assessment (Category 10/b: “Infrastructure Projects: Urban Development Projects including the construction of shopping centres and car parks). As such, this project will be subject to the Preliminary Environmental Impact Assessment (Screening).

The content of this report is in accordance with Decision of Council of Ministers No. 686, dated 29.07.2015 "On Approval of Rules, Responsibilities and Deadlines for conducting the Environmental Impact Assessment (EIA) and Procedures for the Transfer of Environmental Permits" (amended).

The purpose of the ESIA is to ensure that the proposed investments implemented through the Project comply with the existing environmental protection laws,

regulations and standards in Albania and ESMF principles, guidelines and procedures. The report aims to give consideration to the environmental and social impacts of the proposed project in order to orient the institutions or decision-making bodies in approving the performance of the activity.

The report aims to identify negative and positive effects and to propose mitigation measures taking into account the economic interests of the investor as well as rational use of natural resources and coordination of the economic and social development of the area with the requirements of sustainable development. The main purposes of this assessment are to:

1. Identify potential environmental impacts in the study area during the works for Structural stabilization of rock and bastion; Opening sections in the south section of the castle; Restoring roof over Museum and prison; Establishing new ticket office including accessible toilettes and small interpretation center; Conservation of number of spaces which then can be utilized for new functions
2. Identify possible socio-economic impacts in the study area during and after the implementation of the project
3. Propose the necessary measures to be undertaken for minimizing and preventing the effects created on the environment
4. Ensure that environmental considerations are explicitly addressed and considered in the decision-making process.
5. Protect and rehabilitate the natural environment ensuring the sustainable continuity of the biological environment comprising flora and fauna in the environments surrounding of the area taken into consideration.
6. Protect the cultural heritage and promote sustainable development, helping on the local infrastructure development being one of the key elements to the development itself.

II. LEGAL FRAMEWORK AND SAFEGUARD PROCEDURES

2.1. ENVIRONMENTAL LEGISLATION IN ALBANIA

Law No. 10431 dated 9 June 2011 "On Environmental Protection" is the main law in the field of environment is the Law No. 10431, dated 9 June 2011 "On Environmental Protection". This law establishes national and local policies on environmental protection, requirements for the preparation of estimates of environmental impact and strategic environmental assessment, requirements for permitting activities that affect the environment, the prevention and reduction of environmental pollution, environmental norms and standards, environmental monitoring and control tasks of state bodies in relation to environmental issues, the role of the public and sanctions imposed for violation of the Law.

Law No. 10440, dated 7 July 2011 "On Environmental Impact Assessment",sets out the rules, procedures and deadlines for identifying and assessing the impacts of direct and indirect environmental projects or activities. The law defines the steps necessary to implement ESIA procedures: submission of application, preliminary review, selection and classification criteria, hearings and public consultations, access to information, tasks and rights of other bodies. The law also provides the list of activities that should be subject to the Profound and Preliminary ESIA. Some articles of the law were amended by Law No. 12/2015 on Amendments to the Law No. 10 440, dated 07.07.2011, "On environmental impact assessment".

Law No. 10448, dated 14.7.2011 "On Environmental Permits"aimed at preventing, reducing and maintaining control of pollution caused by certain categories of activities, in order to achieve a high level of environmental protection in general, human health and quality of life. This law defines the rules for allowing the development of some activities that cause environmental pollution in Albania. Pursuant to Law No. 60/2014, Appendix 1 of the Law No. 10 448, dated 14.7.2011, "On environmental permits" has changed.

The aim of the ***Law No. 162/2014, dated 04.12.2014 "On Protection of ambient air quality"*** is improving public health and ensuring a high level of environmental protection through integrating ambient air quality issues in other policies as well as establishing requirements on its monitoring, assessment and planning and promoting international cooperation to this end. The Law consists of 6 Chapters: General provisions (I); Environmental air quality (II); Air emissions (III); Trans boundary air pollution (IV); Offences (V); Transitional provisions (VI). This Law fully complies with Directive 2008/50/EC of the European Parliament and of the Council on ambient air quality and cleaner air for Europe.

Law No. 10463, dated 22.09.2011 "On integrated waste management",as amended by the law 156/2013, aims to ensure the protection of environment and human health against pollution and damage resulting from solid waste. To

this end, it sets out rules governing the environmental treatment of solid wastes at every stage: creation, collection, separation, transportation, recycling, processing and disposal. The Law further aims at waste reduction and the reduction of the hazardous and dangerous impact of waste. The Law is implemented by:

- DCM No. 389, dated 27.6.2018 "On some amendments and additions to Decision No. 452, dated 11.7.2012, of the Council of Ministers "On waste landfills"
- DCM No 319, dated 31.5.2018 "On the adoption of measures for the costs of integrated waste management"
- DCM No. 94, dated 14.2.2018 "On some amendments and additions to Decision no. 641, dated 1.10.2014, of the Council of Ministers "On the approval of rules for the export of waste and the transit of non-hazardous waste and inert waste"
- DCM No. 575, dated 24.6.2015 "On approving the requirements for inert waste management"
- DCM No. 641, dated 1.10.2014 "On the adoption of rules for the export of waste and the transit of non-hazardous waste and inert waste"
- DCM No. 99, dated 18.2.2005 "On the approval of the Albanian List of Waste Classification".
- Regulation No. 117 of 13 February 2013 on the criteria used for determining when certain types of metal scrap cease to be waste.
- Regulation No. 177 dated 6 March 2012 on packaging and their residues.
- Order No. 1957 dated 6 November 2014 approving the model of authorization for the export of solid waste and the model of authorization for the transit of non-dangerous solid waste.
- Order No. 893, dated 04 October 2013 approving the model register for operators that generate, collect, and recycle used oils.

In addition to the above-mentioned legislation, the preparation of the ESIA is based on the following legislation:

- Law No. 81/2017, dated 18.05.2017 "On Protected Areas"
- Law No. 73/2015, dated 09.7.2015 "On some amendments to Law No. 107/2014 "Planning and Territorial Development"
- Law No. 107/2014 dated 31.07.2014 "On the Planning and Development of Territories"
- Law No. 10463, dated 22.9.2011 "On integrated waste management".
- Law No. 9774, dated 12.07.2007 "On the Assessment and Management of Environmental Noise".
- Law No. 9587, dated 20.07.2007 "On Protection of Biodiversity".
- Law No. 9385, dated 04.05.2005 "On Forests and Forest Service".
- Law No. 9115, dated 24.07.2003 "On Environmental Treatment of Polluted Waters.
- Law No. 8897, dated 2002, "On protection of air from pollution".
- DCM No. 686, dated 29.07.2015 "On approval of the rules, responsibilities and deadlines for development procedures of environment impact assessment (EIA) and procedures for the transfer environmental decision statement "
- DCM No. 419, dated 25.06.2014 "On approval of the special requirements for the review of environmental permit applications for types A, B and C, for the transfer of licenses from one subject to another, the conditions for the respective environmental permits and regulations their detailed examination by the competent authorities to issue these permits by NLC".
- DCM No. 417, dated 25.06.2014 "On approval of the Environmental Permit fees"
- DCM No. 227, dated 30.04.2014 "On establishing the rules, requirements and procedures for informing and involving the public in environmental decision-making".
- DCM No. 47, dated 29.01.2014 "On defining the regulation for the organization and functioning of the National Environment Agency and Regional Environment Agencies"
- DCM No. 48, dated 29.01.2014 "On the creation and manner of organization of the state Inspectorate on Environment, Forestry and Water administration"
- DCM No. 175, dated 19.01.2011 "On approval of the national strategy and waste management plan of the national waste management"

- DCM No. 587, dated 7.07.2010 "On the monitoring and control of noise levels in urban and tourist centres".
- DCM No. 853, dated 28.12.2005 "On approving the list of hazardous wastes, residues and other wastes to be imported for purposes prohibited storage, disposal and destruction".
- DCM No. 248, dated 24.04.2003 "On Approval of the Interim Standards on Air Emission and their implementation".
- DCM No. 435, dated 12.09.2002 "On Approval of the air emission norms in the Republic of Albania".
- DCM No. 103, dated 31.03.2002 "On environmental monitoring in the Republic of Albania".
- Instruction of the Minister of Environment and Minister of Finance No. 7938, dated 17.07.2014 "On the determination of fees and corresponding values for the services performed by the Ministry of Environment for the EIA process'
- Instruction of the Minister of Environment, Forestry and Water Management, No. 8 dated 27.11.2007 "Limiting the noise level in certain environments"

Albania is also a party to international agreements on biodiversity, climate change, desertification process, endangered species, hazardous waste, Protection of Ozone Layer and lagoons. Albania has also ratified the Kyoto Protocol in December 2004 and the Stockholm Convention on Persistent Organic Pollutants in July 2004.

2.2. SOCIAL LEGISLATION

2.2.1. Legislation on territory planning, cultural heritage and chance finds

Projects for all types of building above ground and underground and engineering infrastructure projects across the entire country are based on standards and technical requirements of legal acts in force.

Law No. 107/2014 “On territory planning and development” aims at ensuring the sustainable development of the territory through the rational use of land and natural resources; assessing the actual and future potential of the territory development on a local and national level by balancing natural resources with economic demand and public and private interests. It also aim to coordinate the effort for: i) conservation of natural resources such as land, air, water, forests, flora and fauna; ii) creation of territories eligible for functional construction; iii)

promoting the economic, social, and cultural life in local and national level; iv) safeguarding the resources of adequate supplies; v) providing for life safety, national security, public order and public health; and vi) promoting the balanced regional development to ensure sustainable distribution of population. The Law is implemented by:

- Regulation No. 408 date 13.5.2015 approving the territory planning and development regulation.
- Regulation 686 date 22.11.2017 on the territory planning.
- Regulation No. 739 date 13.12.2017 amending and supplementing Regulation No. 725 date 2.9.2015 on the organization and functioning of the Territory Development Agency.
- Regulation No. 427 date 8.6.2016 on the organization and functioning of the National Agency of Territory Planning.

Amended by

- Law No. 28/2017 amending and supplementing Law no. 107/2014 on the territory planning as amended.

Law No. 27/2018, dated 17.05.2018 "On Cultural Heritage and Museums" is the primary legal framework governing the management of tangible and intangible cultural heritage in Albania. The Law aims to promulgate and protect the cultural heritage in the territory of the Republic of Albania.

This Law, in relation to the field of territorial planning and development, defines inter alia:

- the cases of construction in public or private properties, which must obtain written approval from the National Council of Restorations and the National Council of Archeology;
- cases of excavations, restorations, uses and any other action in the cultural monuments, as well as any alteration on the ground under their protection, to be done with the authorization of the National Council of Restoration, Archaeological Institute, Archaeological Service Agency;
- the rules and types of constructional interventions in the Museum Areas, museum ensembles, historical centers, archaeological parks.

According to the law, if anything unusual will be found during the digging and excavation process the contractor has to stop immediately works, urgently inform the local authorities, the Culture Monuments Institute and the Ministry of Culture. They will send archaeologists and field specialists in order to check

and evaluate the supposed archaeological objects and the works will restart only if the Culture Monuments Institute will issue the official permit.

2.2.2. Labour related legislation

The Labour Code of the Republic of Albania: Law No. 7961, dated 12.07.1995, amended by Law No. 8085, dated 13.03.1996, Law No. 9125, dated 29.07.2003 and Law No. 10053, dated 29.12.2008 "Labour Code of the Republic of Albania" regulates relations between employers and employees. The law reflects Constitutional principles, as well as the basic principles of international conventions on labour, trade unions, prevention of discrimination, etc. The code is widely considered to be a fair and effective law.

The Labour Code provides for basic rights regarding the prohibition of compulsory labour, prohibition of discrimination, the freedom to join a trade union and collective bargaining.

The Labour Code provides general rules for the employee's obligations and responsibilities, as well as the prohibition of competition after the termination of labour relationship. Also, the employer's general obligations are specified in accordance with article 32-38 of this law. Safety and health protection are the responsibility of employers.

Labour Code also stipulates the duration of work and breaks, including daily and night work and extra payment; the weekly working time and holidays, the maximum duration of extra hours and compensation.

The Labour Code provides for special protection for juveniles and women, special provisions on payment and minimum wage. A separate chapter (XIV) provides rules for the termination of the work relationship. Also, general consideration is provided on the protection of the right to work and the right to strike.

Law "On health and safety in the workplace". On 22.12.2016, the Albanian Parliament approved the law no. 135/2016 "On health and safety in the workplace, emergencies and the salvation in the mining activity and in underground works of hydropower activities". Law 135/2016 was published in the official gazette no. 265, dated 12.01.2017 and entered into force 15 days after its publication.

Law 135/2016 defines the general principles governing health and safety at work in the mining activities and underground works of hydropower activities, and guarantees the safety and protection of the health of employees and other persons working in these sectors.

Pursuant to this law entities engaged in activities, studies or projects in the mining sector and underground works of hydropower activities are obliged to

fulfill the requirements of safety in the workplace provided in the law and the secondary legislation.

2.2.3. Legislation on Private Property and Expropriation

Expropriation process. The legislation governing the expropriation process for the private properties is described below:

- ❒ Law no. 11/2020, dated 05.03.2020 "On some changes and amendments on Law no. 8651, dated 22.12.1999 'On expropriation and temporary use of private property for public interest.
- ❒ Law no. 8651, dated 22.12.1999 'On expropriation and temporary use of private property for public interest', as amended and;
- ❒ Decision of Council of Ministers (DCM) no. 126, dated 23.3.2000 'On the composition and procedures of special committees for expropriation',
- ❒ DCM no. 127, dated 23.3.2000 'On the content and procedures for submission of request for expropriation and temporary use of private property for public interest',
- ❒ DCM no. 138, dated 23.3.2000 'On the technical criteria for the evaluation and calculation for compensation of expropriated properties, devaluated properties and third party rights(as amended)';

Under Law no. 8561, dated 22.12.1999 on expropriation and temporary use of private property for public interest provides for the State's right to expropriate or take private property for temporary use for purposes of a "public interest" that cannot be achieved or protected in another manner. The State must compensate the value of land expropriated and any reduction in the value of property caused to properties bordering with the expropriated property.

Under the Expropriation Law, the expropriation value (compensation) is calculated by a special committee based on the assessment of the properties subject to expropriation (by considering their initial value, depreciation, destination, location, indexes of the market price changes and of the currency). A Decision of the Council of Ministers no. 138 dated 23.03.2000 explains the evaluation methodology of the land subject to expropriation procedures is defined (in ALL/m2) by decisions of the Council of Ministers approving the price reference according to Law no. 9235, dated 29.07.2004, on restitution and compensation of properties.

The Republic of Albania Law on Expropriation and Temporary Takings of the Private Property for Public Interest (passed in 1999, amended in 2016) guides land acquisition and serves as a general framework for expropriation in the Republic of Albania.

The Law does not use the term „involuntary resettlement", which is used in the relevant World Bank policy documents, but instead uses the term expropriation.

This law enables government institutions, and to a certain extent private legal person to acquire private property for projects that are deemed to be of national and/or local interest, while protecting the interests of all project affected persons with legal title, whose assets are to be expropriated. The law also enshrines the principle of fair compensation.

The most important features of the Law on Expropriation are:

• The Law provides an exhaustive list of what is deemed as public interest (Art. 8/ç of Law "On Expropriation…)";

• The beneficiary subject in the expropriation process will be the relevant Municipality of each city (Art. 9 of the Law "On Expropriation…)"

• The procedure will be considered complete, when the owners through a statement approve the transaction of the property in favor of the Government;

• The decision of expropriation (for owners not agreeing to the expropriation) will be approved by the Council of Ministers and will enter into force immediately, and published in the Official Journal;

• The affected owners have access to judicial procedures if amicable settlement on the compensation is not reached. However, if there is no contest, the decision of the Council of Ministers will be final and binding.

• The devaluation of property. Compensation is due in cases when, although there is no land take but the assets or access to assets, and livelihood is affected (land is devaluated and the livelihood has deteriorated as a result of the project).

The estimation of the value is based on the type of land to be expropriated (agricultural land, woodland, meadow etc.); the characteristics for the estimation are different (i.e. in case of the agricultural land: the land category; the range from the urban zone; situation under or above the water level etc.).

The Civil Code establishes the obligation to compensate for property damage which consists of the value of the damage caused and the expected profit (Art. 640).

Law on Cadastre: The new Law on Cadastre, or Law no.111/2018 on "Cadaster" ("the Law") adopted by the Albanian Parliament on 2 February 2019, entered into force on 21 March 2019. It supersedes Law no.33/2012 dated 21 March 2012 on "Registration of Immovable Properties".

The Law governs the registrations of immovable property transactions that occur after its entry into force. In addition, it introduces certain new principles on registration process, rights over immovable properties and related documents.

Mandatory notification and registration of public authorities' deeds. The Law requires that all deeds related to immovable properties must be registered and undergo a preliminary registration. Such preliminary registration is initiated with the online declaration of deeds by courts, notaries, bailiffs and other state authorities with the digital national cadaster. The online declaration must be done upon formalization of the deed. Any subsequent deed or transaction for disposal of the immovable property which lacks a chronological sequence and creates an overlap will be refused by the Agency. Further to the online declaration, the abovementioned authorities must submit hard copies of such deeds to the Regional Cadaster Directorate within 10 days from the formalization.

Extension of the mortgage over the land into the new building. The mortgage over the land may be extended only to a future building or parts of it that are free of any preliminary transfer agreement. In addition, the land owners are not allowed to transfer their rights over their future parts of a building in case a mortgage is registered over the land. The above provisions aim to improve the practice and solve all disputes arising so far with regard to the extension of mortgage.

Law "On the completion of the ownership transitional processes in the Republic of Albania". The Law 20/2020 is published on the Official Gazette no. 70, dated 22.04.2020. The purpose of the Law 20/2020 is to establish a simplified and harmonized legal framework for the finalization of the transitional registration procedures of the state and private land consisting of:

- ❒ The registration of ownership titles of agricultural land;
- ❒ The finalization of the transfer to their users of the ownership of agricultural land previously owned by cooperatives and agricultural enterprises;
- ❒ The legalization and registration of illegal constructions, constructions without an ownership title and yards granted for use;
- ❒ The specification of ownership rights of individuals and entities, which have benefited from the Law no. 7665, dated 21.01.1993 "On development of economic zones with touristic priority", repealed;
- ❒ The finalization of the inventory update process of public real estate; Handling of the problems related to the overlapping of ownership immovable property titles.

2.2.4. *Legislation on the Access to Information*

Law No 119/2014 "On the Right to Information" regulates the right of access to information being produced or held by public sector bodies. The rules contained in this law are designated to ensure the public access to information, in the

framework of assuming the rights and freedoms of the individual in practice, as well as establishing views on the state and society situation. This law aims also at encouraging integrity, transparency and accountability of the public sector bodies

Law No. 8672, dated 26.10.2000, "On the Aarhus Convention Ratification on public right to information, to participate in decision-making and to have access to justice in environmental matters". The international agreements ratified by the Republic of Albania, pursuant to the Constitution, occupy a privileged rank at the domestic legal order. An international agreement ratified by law of the parliament prevails over the laws of the country that are incompatible with it, and it is directly applicable, except the case when it is not self-executing and its application requires the adoption of a law. In the field of environment the major part of the international treaties are not self-executing and require positive measures in order to be properly implemented at the domestic level.

2.3. WORLD BANK ENVIRONMENTAL AND SOCIAL SAFEGUARD POLICIES

Like in any project financed by, or with financial participation of, the World Bank, the environmental and social safeguards as defined in the Bank's Operational Procedures (OPs) will be respected for the purposes of this project implementation. ESMF and RPF will be the guidance documents for achiving the safeguard requirement standard of documents. They are revised and recently published at ADF website.

World Bank classifies its projects into four Environmental Assessment categories according to the likely impacts on the environment they will have. This classification is as follows (only main conditions mentioned):

1. *Category A*: A proposed project is classified as Category A if it is likely to have significant adverse environmental impacts.
2. *Category B*: A proposed project is classified as Category B if its potential adverse environmental impacts on human populations or environmentally important areas— including wetlands, forests, grasslands, and other natural habitats—are less adverse than those of Category A projects. These impacts are site-specific; few if any of them are irreversible; and in most cases mitigation measures can be designed more readily than for Category A projects. ***This particular subproject has been categorized as B***.
3. *Category C*: A proposed project is classified as Category C if it is likely to have minimal or no adverse environmental impacts. Beyond screening, no further Environmental Assessment action is required for a Category C project.
4. *Category FI:* A proposed project is classified as Category FI if it involves investment of Bank funds through a financial intermediary, in subprojects

that may result in adverse environmental impacts; this case, in any way, is not applicable to the PIUTD project.

The World Bank's OP 4.01 Environmental Assessment is considered to be the umbrella policy for the Bank's environmental safeguard policies. These policies are critical for ensuring that potentially adverse environmental and social consequences are identified, minimized, and properly mitigated. The WB carries out screening of each proposed project to determine the appropriate extent and type of EA to be undertaken and whether or not the project may trigger other safeguard policies. The safeguard policies, the triggers for each policy, as well as status of their relevancy for the proposed project are presented in the table 1, below:

Table 1. World Bank Environmental and Social Safeguard operational policies

Operational Policy	Triggers	Status
Environmental Assessment (OP 4.01)	If a project is likely to have potential (adverse) environmental risks and impacts in its area of influence.	Yes
Involuntary Resettlement (OP 4.12)	Physical relocation and land loss resulting in: (i) relocation or loss of shelter; (ii) loss of assets or access to assets; (iii) loss of income sources or means of livelihood, whether or not the affected people must move to another location.	No
Indigenous Peoples (OP 4.10)	If there are indigenous peoples in the project area, and potential adverse impacts on indigenous peoples are anticipated, and indigenous peoples are among the intended beneficiaries.	No
Pest Management (OP 4.09)	If procurement of pesticides is envisaged; If the project may affect pest management in the way that harm could be done, even though the project is not envisaged to procure pesticides. This includes projects that may (i) lead to substantially increased pesticide use and subsequent increase in health and environmental risk, (ii) maintain or expand present pest management practices that are unsustainable, not based on an IPM approach, and/or pose significant health or environmental risks.	No
Physical Cultural Resources (OP 4.11)	The policy is triggered by projects which, prima facie, entail the risk of damaging cultural property (e.g. any project that includes large scale excavations, movement of earth, surface environmental changes or demolition).	No
Natural Habitats (OP 4.04)	The policy is triggered by any project with the potential to cause significant conversion (loss) or degradation of natural habitats whether directly (through construction) or indirectly (through human activities induced by the project).	No
Projects on International Waterways (OP 7.50)	If the project is on international waterway such as: any river, canal, lake, or similar body of water that forms a boundary between, or any river or body of surface water that flows through, two or more states (or any tributary or other	No

	body of surface water that is a component of this waterway); any bay, gulf, strait, or channel bounded by two or more states or, if within one state, recognized as a necessary channel of communication between the open sea and other states-and any river flowing into such waters.	

The World Bank Operational Policy on Involuntary Resettlement requires that environmental and social impacts of all its supporting projects should be mitigated according to operational polices that spell out the principles and planning methods for mitigation work. This applies whenever land or property must be acquired, or its use modified, for a project, or loss of income because of land take, residence or access to resources, either permanent or temporary whether the occupation is legal or illegal.

In any instance where there is a gap or conflict between the Albanian Law on Expropriation and OP 4.12, World Bank Operational Policy 4.12 will prevail or implementing agencies will provide a solution in compliance with OP 4.12. The World Bank OP 4.12 aims to achieve the following objectives:

a) Involuntary resettlement should be avoided where feasible, or minimized, exploring all viable alternative project designs.

b) Where it is not feasible to avoid resettlement, resettlement activities should be conceived and executed as sustainable development programs, providing sufficient investment resources to enable the persons displaced by the project to share in project benefits. Displaced persons should be meaningfully consulted and should have opportunities to participate in planning and implementing resettlement programs.

c) Displaced persons should be assisted in their efforts to improve their livelihoods and standards of living or at least to restore them, in real terms, to pre-displacement levels or to levels prevailing prior to the beginning of project implementation, whichever is higher.

III. ENVIRONMENTAL AND SOCIAL BASELINE CONDITIONS

3.1. SOCIAL BASELINE

3.1.1. Location

The municipality of Gjirokastra is located in southern Albania.The present Gjirokastra municipality was formed in 2015 according to the local government reform (Law 115/2014 "On Territorial and Administrative Division of Local Government Units in the Republic of Albania").

The Municipality was formed by merging the previous Municipality of Gjirokastra and the communes of Cepo, Lazarat, Picar, Lunxhëri, Odrie and Antigonea. The area of the Municipality is 469.25 km² and 38 villages are part of it. The seat of the municipality is the city of Gjirokaster. Gjirokastër city lies in a valley between the Mali i Gjerë (wide mountain) and the river Drino, at 300 metres above sea level.

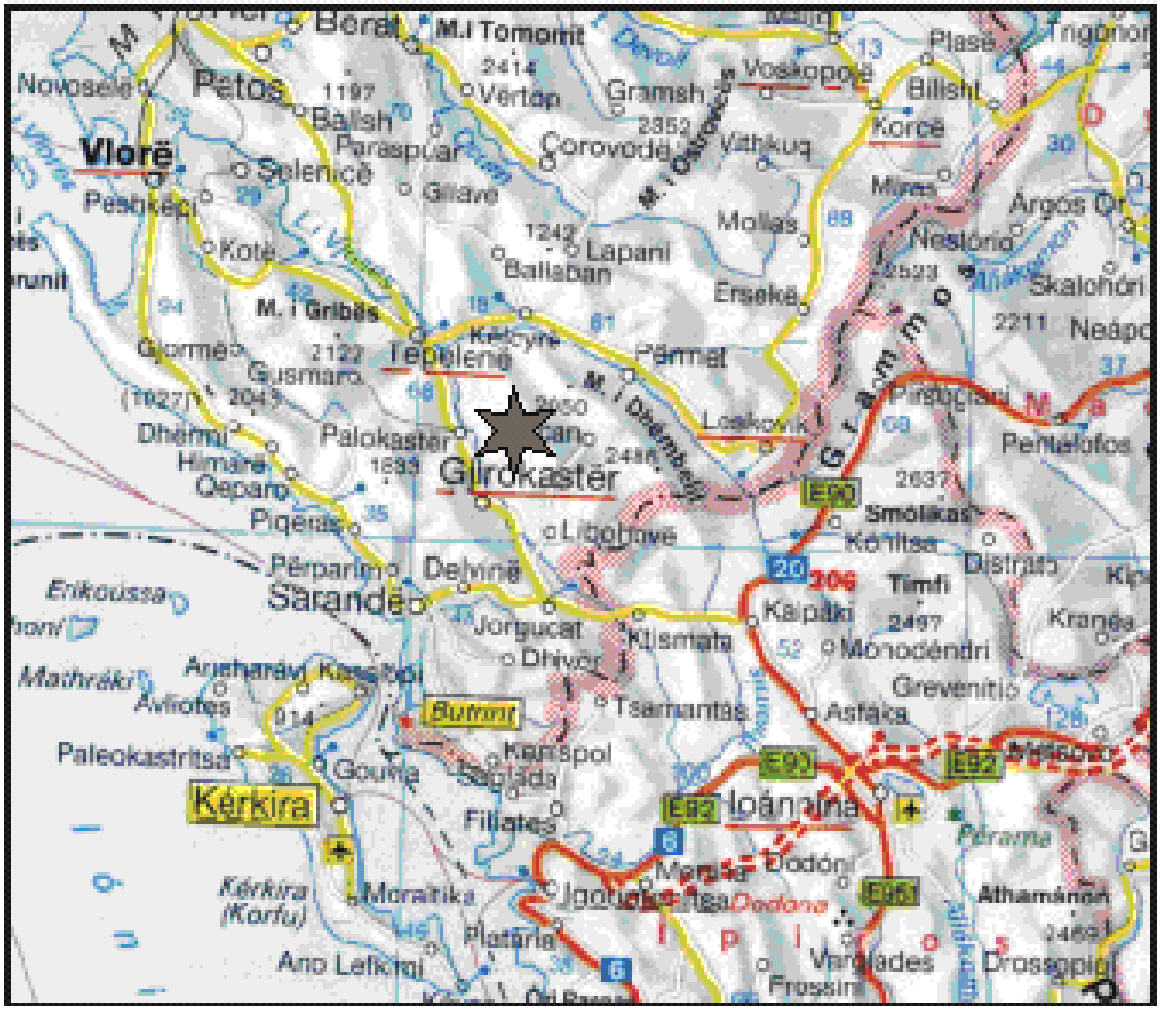


Figure 1. Map of Gjirokastra region

3.1.2. Population

Gjirokastër by the population is the largest municipality in the Gjirokastër District (Prefercture). According to INSTAT, based on the 2011 Census, Gjirokastër Municipality was estimated to have 28,673 residents (a density of 53.91 persons/km2) living in 6,919 housing units, while the county as a whole has a total of 72,176 inhabitants. The population of the municipality includes the urban and rural population in its Administrative Units such as: Antigonë; Cepo; Lazarat; Lunxhëri; Odrie and Picar.

The city of Gjirokastër itself has a resident population of 19,836 inhabitants which are a predominantly urban population. In the municipality, the population was spread out with 16.76% from the age 0 to 14, 69.24% from 15 to 64, and 13.98% who were 65 years of age or older. As far as the city itself is concerned, the population was spread out with 16.93% from the age 0 to 14, 70.27% from 15 to 64, and 12.78% who were 65 years of age or older

3.1.3. Infrastructure

Gjirokastra is accessible only by national road in a very good condition. The main access road to Gjirokastra town, linking it also with neighbouring municipalities of Tepelene, Libohove and Dropull as well as the local settlements, is made from the highway SH4. This national highway links the Municipality from north with the road SH8 coming from Tirana, from the south with the road towards Saranda and more in south with border-cross point of Kakavia with Greece. Another access road construction, through Kardhiqi valley and Kalasa valley, has begun and is planned to link Gjirokastra and Saranda by shortening the travelling distance and time.

The distance from Tirana Airport to Gjirokastra is 218 km, from Saranda to Gjirokastra 55 km, from Vlora to Gjirokastra 126 km and from Permet to Gjirokastra 59.4 km, while the distance from Gjirokastra to Ioannina Airport (Greece) is 83.3 km.

The local settlements (villages) are linked with paved roads but generally the local roads are in a very bad condition, most of them are very narrow dirt roads. The main cultural heritage sites in the nearby area (Antigonea Archaeological Park and the Church of Saint Mary “Labova e Kryqit) are accessible by asphalted roads.

Gjirokastra Municipality has an intercity transport with the urban centres of Tirana, Saranda, Vlora, Korce and Permet. According to General Local Development Plan for Gjirokastra the bus service links Gjirokastra town with the following local destinations to: Lazarat, Sofratike, Zagori, Libohove, Polican and Kakavije.

According to the General Local Plan (Territory Development Plan) for Gjirokaster Municipality, the total population, as referred by new administrative composition and INSTAT, is 28,673 in a total area of 469.25 km² which is 39,73% of total population of Gjirokasta district (Prefecture). City of Gjirokaster has a populationof 19,836 which is 69.18% of the municipality.

3.1.4. Economic Development and Employment

In 2017, according to INSTAT there were 2,122 registered businesses in the Municipality of Gjirokastra, out of which 62.5% were businesses relying on services (trade, transport and storage, accommodation and food service, information and communication, other services). 30% of registered businesses were engaged into agriculture, forestry and fishing businesses and 7.5% in industry and construction. According to General Local Development Plan for Gjirokastra referring to INSTAT data, the weight of these sectors in 2011 was respectively 66.7%, 24.6% and 8.7%, showing a 5.4% increase of the agriculture sector in 2017 compared to 2011.

Several nationally renowned companies have their headquarters or location of their production units in Gjirokastra such as Gea sha, Elka sh.a, Marmo shpk,, Eurobeton, Gjirofarm, Tecnotrof, Aliko ndertim shpk, Argjiro Building, Kozi fason, Linekx. These companies operate in different sectors such as agro-processing, construction, Textile and Façon industry, etc., employing between 100 to 400 employees in each of these businesses.

Rural areas of the Municipality play a major role in socio-economic development with livestock and agriculture being the main economic activities. The main agriculture products are fruits and vegetables and recently there is an increase of vineyards in the areas of Picari and Lunxheria. The rural area is known for its cattle breeding and qualitative livestock products. Livestock farming in Gjirokastra Municipality is based in small family farms. Tourism services have increased significantly, especially in the city of Gjirokastra, following the year 2005 when Gjirokastra was inscribed as a UNESCO site.

3.1.5. Culture and Religion

Gjirokastra was founded in the 3rd century BCE as a fortified settlement of the kingdom of Epirus, one of several Greek city-states in the area. In the 2nd century BCE, the Romans conquered the area, destroying the hilltop town and fort; new fortifications were not built until the 6th century (Lamprakos, 2010). The town survived through the medieval period under the rule of feudal families, especially the Zenebishi family. The Ottomans conquered Albania in the early 15th century and Gjirokastra, with its strategic location and rich agricultural hinterland, was made a provincial capital. The majority of inhabitants converted

to Islam - a process facilitated by the Bektashi dervishes who accompanied the Ottoman troops (the order had a special link to the elite Janissary corps (Lamprakos, 2010).

The city's name has either legendary or more mundane origins. In historical sources, the city of Gjirokastra is mentioned for the first time in 1336 by the Byzantine emperor Johan VI Kantakuzeni in the form of "Argjiropolene", so the field of Argur or Argurinëve. In the XII - XIV century, according to archaeologists, the castle of Gjirokastra takes full shape, around it rise the dwellings and neighborhoods of the town (Nika, 2020).

The linguistic form "gjino + kastër", that is, "Gjino Castle", is formed in a pure Arbërian environment. Gjirokastra, consequently the principality of Gjin Zenebish, replaced Adrianople (Dryinopolis), which from the sixth century onwards, has been the capital of the twenty-four provinces of Southern Albania (Nika, 2020).

The culture of the Gjirokastra district is characterised by a wealth of folk costumes, musical traditions and regional customs. It is famous for wood and stone work, as well as for its dairy products and raki (an alcoholic drink) production. Gjirokastra lace is famous throughout the country and, like many of these crafts, skills are passed down from generation to generation. Men work with metals such as copper and brass to craft decorative plates, wall-hangings, and utensils.

Iso-Polyphonic Music. Traditional Albanian iso-polyphonic music can be divided into two major stylistic groups as performed by the Ghegs of northern Albania and the Tosks and Labs living in the southern part of the country. The term iso is related to the ison of Byzantine church music and refers to the drone accompanying polyphonic singing. The drone is performed in two ways: either it is continuous and sung on the syllable 'e', using staggered breathing; or the drone is sometimes sung as a rhythmic tone, performed to the text of the song. Rendered mainly by male singers, the music traditionally accompanies a wide range of social events, such as weddings, funerals, harvest feasts, religious celebrations and festivals such as the Albanian folk festival in Gjirokastra. Albanian polyphonic music has been UNESCO-recognized since 2005 as an "intangible cultural heritage."

According to the 2011 census, the percentages of the local population per religious group are: Islam 42,3%, Bektashis 5,3%, Eastern Orthodox 14,6%, Roman Catholics 2,8%, while a 35,2 had not declared any religion or is non-religious. According to the Gjirokastër county census data (which includes other municipalities besides Gjirokastër), it had the highest percentage of atheists compared to all other counties in Albania, with Vlora being the second (6.3% compared to 6.01%).

3.1.6. Tourism in Gjirokastra

Considering the existing accommodation capacities in registered establishments and the additional onesidentified through online platforms, it results with an approximate number of 1,111 beds present on the market in Gjirokastra Municipality. The accommodation businesses are mostly small and medium enterprises run as family businesses.

Table 2. Registered and identified capacity of accommodation establishments in Gjirokastra

Type of establishment	*Number ofestablishments*	*Approximatednumber of beds*
Hotels	*40*	*935*
Hostels	*4*	*60*
Motels	*36*	*100*
Guesthouses	*3*	*16*
B&B	*2*	*-*
Total	**85**	**1,111**

Source: Horwath 2019

According to the list of the accommodation, in Gjirokastra there is only 1 hotel with 80 beds in the centre of the old town and 2 others with 60 beds each in lower part of the city and they account for 21.4% of the total hotel capacities in Gjirokastra.

Some 55 small hotels and guesthouses are located in the historic area. Most of them are adopted in the renovated old Ottoman style houses. The accommodation businesses are mostly small and medium enterprises run as family businesses.

Referring to the interviews carried out with the accommodation establishments during the field mission, the accounted ADR for upscale hotels is 45-60 EUR, for mid-range hotels is 30-45 EUR and for hostels is 11-13 EUR.

Table 3. Gjirokastra key attractions

Cultural attractions	
UNESCO World Heritage List	*Gjirokastra's Historical Centre:* - *Bazaar* - *Castle Isopolyphonic music*
Monuments	*The Big Bridges of Dunavat, Hammam and the Seven Springs, Antigonea Archaeological Park, Paleokastra castle, Kardhiq castle, Castle of Libohova, Kollorca bridge, Roman amphitheatre ruins of Adrianopoli, Ruins of ancient theatre in Sofratikë,*
Vernacular architecture prototypes	*Zekate house, Skenduli house, Babameto house, Babaramo house, Ismail Kadare house, Inn of Zagoria, Inn of Dulaj, Hammam of 7 Fountains*
Museums and galleries	*Gjirokastra museum and Army museum in the Castle, Ethnographic Museum, Cold War Tunnel Museum, Art Gallery "Gjin Zenebishi"*
Sacral heritage attractions	
Churches and monasteries	*Mitropolia church, Church of St. Mehilli, Church of Saint Mary (Labovë e Kryqit), Church of St. Mary Sleeping in Sopik*
Mosques	*The Bazaar Mosque, Bektashi Tekke of Melan, Tekke of Zalli*
Natural attractions	
Mountains	*Mountain "i Gjere", Shendelli-Lunxheri-Burreto Mountains ridge*
Rivers and canyons	*Drino River, Kardhiq River, waterfall and canyons of "Gurra e Progonatit", water source of Glina*
Monuments	*National Natural Park of Sotira, Natural park of Viroi, 600-years old Plan tree of Libohova*
Gastronomy	
Infrastructure	*15 restaurants in hotels and 30 restaurants from TripAdvisor*
Cuisine	*Traditional, Mediterranean and Greek*
Local ingredients	*Vegetables, fruits, dairy products, meat, honey, herbs*
Events	
Cultural	*National Folk Festival (every five years), Folk International Festival "Argjiro-Fest", Festival "Divani Lunxhiot", Day of Isopoliphony, European Heritage Days (Craft Fair)*

Gastronomy	*Dough festival*
Other	*Wood and stone carvings*
Honor of Gjirokastra	
Personalities	*Musine Kokalari (1917-1983), linguistic Eqerem Çabej (1908- 1980), writer Ismail Kadare*

(Source: Horwath, 2019)

Tourism demand

A total number of 97,294 arrivals in Gjirokastra were estimated for the year 2017 with a total of 146,730 overnights. Average length of stay in Gjirokastra is 1.5 nights on whole year basis. Arrivals and overnights were estimated based on data regarding occupancy rate and average length of stay gathered through interviews. The average occupancy of the accommodation establishments in Gjirokastra is reflecting the seasonality pattern. Occupancy rates are around 60-70% during the peak months (July-September), around 50-55% during the shoulder season (May, June and October) and very low during the spring and winter months.

The seasonality in Gjirokastra is not as sharp as in the coastal destinations. From March to end of October there are more organized groups (70-80%) while individuals come year-round. Package tours with the purpose of active and adventure activities are mainly organized from March to May and cultural tours from May to October with peak during summer period July – August.

Table 4. Visitors to the national cultural attractions in Gjirokaster

Key attractions	2013	2014	2015	2016	2017
GjirokastraCastle	*9,023*	*32,317*	*34,499*	*62,503*	*76,666*
Antigonea ArchaeologicalPark	*7,339*	*528*	*424*	*805*	*1,023*
Total visits	**16,362**	**32,845**	**34,923**	**63,308**	**77,689**

Source: Institute of Culture Monuments

Number of visits to the national cultural attractions is increasing 39% on average annually, with the highestincrease in 2014 compared to 2013. Moreover, visits to Onufri Iconographic Museum are increasing morerapidly compared to others.

According to the Ministry of Culture, in the period from January to April 2018, the total number of visitorsto the Castle was 27,468 with an increase of 77% compared to the same period of 2017.

Table 5. Domestic and foreign visitors to the national cultural attractions in Gjirokaster

Key attractions	Domestic	Foreigners	Visitors with no tickets	Total Visitors
GjirokastraCastle	*23,767*	*50,059*	*2,840*	*76,666*
Antigonea ArchaeologicalPark	*102*	*318*	*603*	*1,023*
Total visits	**23,869**	**50,377**	**3,443**	**77,689**

Source: Institute of Culture Monuments

Some 11,000 people visited the Ethnographic Museum in 2017, while the house of Ismail Kadare was visited by 3,000 visitors and around 5-6,000 students/pupils.

According to the interviews with the Albanian tour operators offering Gjirokastra (South Albania) in their tours and with tourism businesses during the field mission in Gjirokastra, two groups of guests were identified:

Overnight tourists:

Individuals visiting Gjirokastra as part of their tour in Albania or in transit from Greece. They mostly stay 1 night in Gjirokastra in high season and up to 3 nights in low season as they also engage in nature-based activities;

Package tours, spending 1-2 overnights in Gjirokastra as part of the overall tour in South Albania with the purpose of active and adventure activities (hiking to Zagoria and Pogoni areas, hiking to Kurveleshi and Zagoria areas, horseback riding from Gjirokastra to Ionian coast);

Foreign tourists on cultural tours with 1-2 nights in Gjirokastra coming with the purpose of visiting historic centre of Gjirokastra town;

Business tourists with overnight in Gjirokastra town;

Same day visitors:

Individuals and package same day tours visiting historic centre of Gjirokastra town; they mainly come from Saranda.

Referring to the interviews done with tourism businesses during the field mission in Gjirokastra and Tirana based tour operators offering Gjirokastra (South Albania) in their tours, the main source markets are Germany, France, Italy, UK, Austria and Switzerland, followed by Spain, Netherlands, Poland, USA and Australia. International market counts for around 70-80%. The rest are Albanians (Albanian citizens, Albanian expatriates and Albanian citizens of Kosovo). Guests come both in organized package bus tours and individually in small groups of friends. Most of tourists visiting Gjirokastra are second and third age followed by other younger travellers. Tourists participating in package tours with the purpose of active and adventure activities are mainly of age 40 and 50 and they travel in couples and group of friends, but also as individuals gathered in a group.

3.1.7. Castle of Gjirokastra

The city of Gjirokastra is located in Southern Albania and lies within the broad Drinos River Valley. Gjirokastra, and its castle, is a unique place. Inscribed on the World Heritage List in 2005, this city "bears outstanding testimony to the diversity of urban societies in the Balkans and longstanding ways of life which have today almost vanished" and "the town planning and housing of Gjirokastra are those of a citadel town…" (UNESCO). This citadel or castle sits above the town on an elongated geological formation with steep sides, which naturally form a defensive barrier. It was here, understandably, that a series of defenses were built over hundreds of years, taking advantage of the natural geology to protect the population. Today, it is an impressive structure from below, looming over the town and valley with its sheer masonry walls, towers, and ramparts. From within, the views are sweeping, taking in the entire town, valley, and mountains beyond. Its position commands the valley from west to east and north to south.

The castle of Gjirokastra has been a constantly evolving structure, first primarily for the defense of the town, then regional military control, and later for imprisonment. The castle´s final stage of evolution, as a cultural place, is woefully incomplete. Attempts have been made through the conversion of the prison into a museum, the construction of an infrequently used amphitheater, and lately, the installation of limited didactic panels for tourists. The castle, with all its phases, is not without its problems. Issues with the underlying complex and often unstable geology have caused numerous structural complications. The various and varied construction stages have also caused structural problems, and resident and visitor safety is a concern.

The fortress is an old stonework construction situated along the ridge of a high cliff. The narrow building has a circumference of 1,400 paces and stretches from east to west, with a length of 600 broad paces and a width of 100 paces. Its long, solid ramparts resemble a galley. Inside the fortress there is only one main street

running from east to west. Ranged on both sides of the street are 200 two storey stonework houses, roofed entirely with slate. Within the fortress is the Mosque of Sultan Bayazid II the Saint, with a slate roof and a stone minaret. It is a large old mosque with a spiritual atmosphere and is 80 feet long and 40 feet wide. Inside it there are four carved columns and a wooden ceiling of joined beams with very fine decoration. Since the fortress is situated on the top of a high cliff, water is collected in a huge cistern at the foot of the minaret. All the houses within the walls get their drinking water from this source, i.e. from rain water that flows into this sealike cistern.

Each house has its own private cistern as well. The fortress has two gates with three strong and solid iron doorways each. The eastern gate is approached by a stone staircase, and for this reason horsemen have difficulty entering and leaving by this gate.

The castle itself has undergone different construction phases as a response to improving military defenses, administrative needs and housing of troops and equipment; also, as a response to an imposing grandeur and lifestyle required by the various medieval and post medieval Albanian and Ottoman owner-rulers. Further expansion of the castle expansion and large-scale modernization, structural repairs and changes to the surrounding slopes and small cliff exposures continued in the 19th and 20th centuries.

The castle and wider site are only partially open to the public and contain the Museum of Gjirokastra, the National Museum of Armaments and the Prison Museum. Access is only currently provided by the southwest gate by way of a cobbled road and various footpaths but access via the north gate near the old city of Gjirokastra and east gate could be developed in the future. The castle was designated as a 1st category monument by the Government of Albania already in 1948. The management of the siteis held jointly by the Ministry of Culture (for the castle) and the Municipality (for the museums) and there are a small number of on-site staff mainly for ticketing and operation of the museums. Visitor

The DCM No. 619, date 7.7.2015. “For proclaiming "historic center" of an area in the city of Gjirokastra” has defined the borders of the historic center, while the more detailed regulation “For the protection, integrated conservation and administration of Gjirokaster’s historic centre and the surrounding buffer zone” defines the rules for the possible interventions. Thus in the core zone interventions are limited to the restoration of the existing buildings, while in the buffer zone new constructions are allowed with limitation in height, density and architectural style.

3.2. PHYSICAL ENVIRONMENT

3.2.1. Climate

The geographical position of Albania determines its Mediterranean climate (Figure 2), characterized by mild and humid winters followed by hot and dry summers. Rainfall occurs mainly during the second half of the year. Climatic conditions differ considerably according to regions. The coastal plains have a strong maritime influence, causing a gradient of lower temperatures and reduced precipitation eastwards from the coast (MTE, 2016).

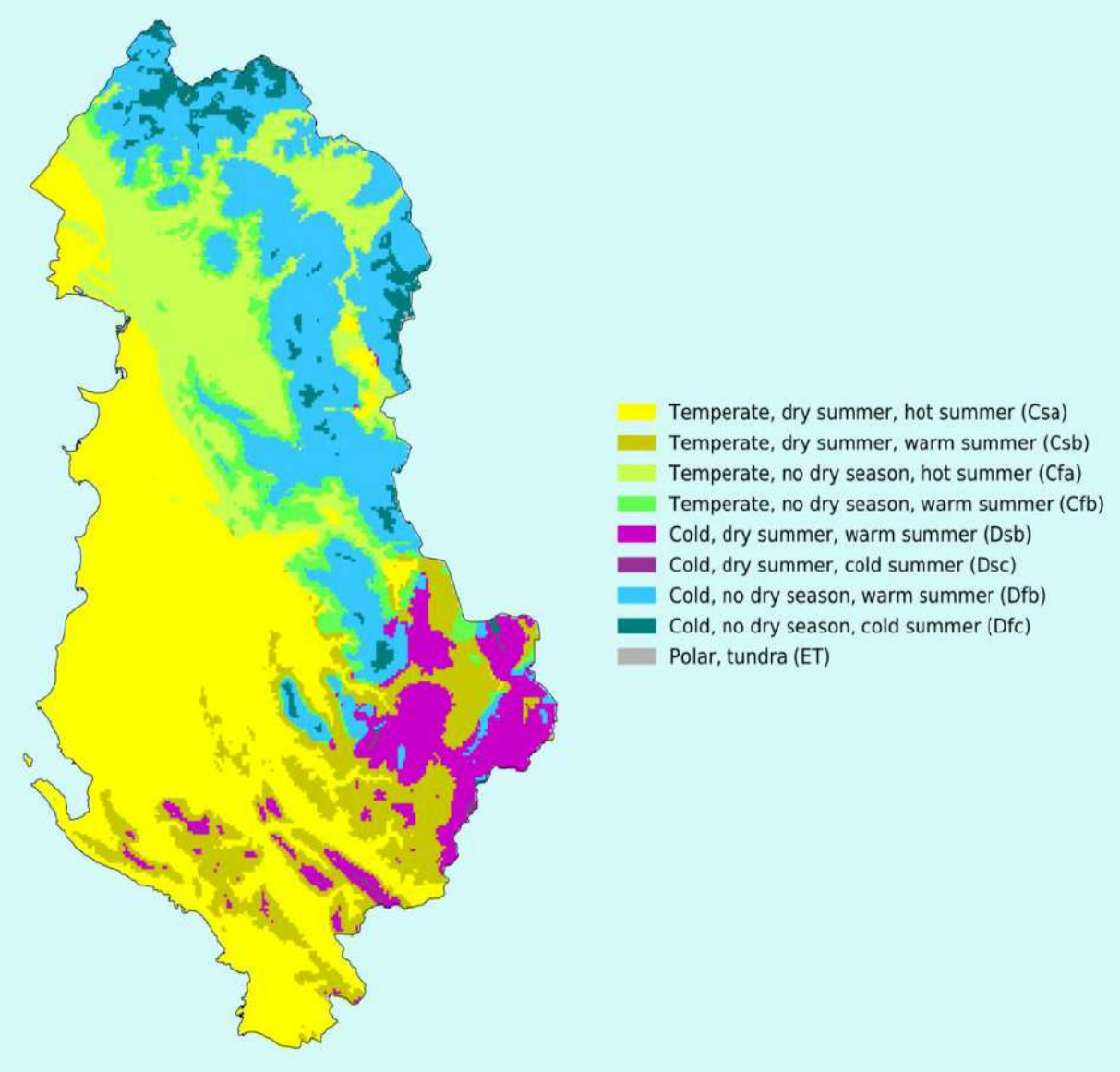


Figure 2. Köppen-Geiger climate classification map for Albania (1980-2016) (Source: Beck et al. 2018).

Analysis of mean temperature for the period 1930 to 2006 against the 1961 to 90 average shows that the period 1931 to 1970 had a positive anomaly followed by a negative anomaly between 1971 and 2000 (MTE, 2016). After 2000 there has been a period with a positive anomaly from 2001 to present. This is a consequence of an increase in both maximum and minimum daily temperatures, especially in summer time. Several years after 1990 are characterized by an increasing rate of minimum temperature, higher than that of the maximum temperature in the summer. Further analysis shows that since the turn of the century there has been a positive trend of increasing temperature for all seasons (winter: from +1.60 to +2.5oC; spring: from +2.00 to +3.0oC; summer: +3.0oC; and autumn: +2.0oC). The northern part of the coastal zone does have lower temperatures in the winter season compared to the middle and southern zones, but summer temperatures are similar across all coastal regions (MTE, 2016).

Gjirokastra lies on 233m above sea level. The climate is warm and temperate in Gjirokastra. There is more rainfall in the winter than in the summer in Gjirokastra. The climate here is classified as Csa (Hot Mediterranean Summer) by the Köppen-Geiger system. The temperature here averages 14.3 °C. The warmest month of the year is August, with an average temperature of 23.4 °C. January has the lowest average temperature of the year. It is 5.5 °C. The data presented here are the for the period of 30 years (1982-2012)

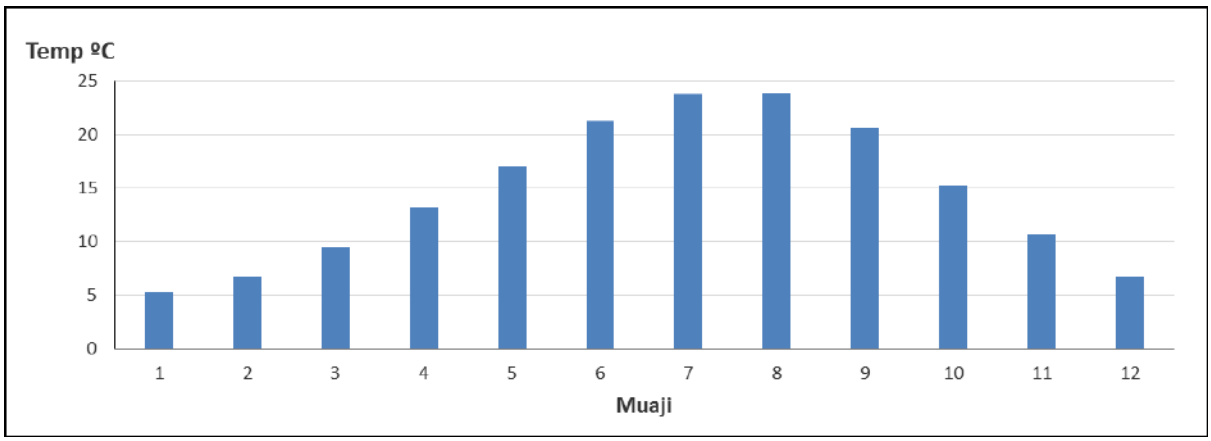


Figure 3. Average Annual Temperature for Gjirokastra (Source: Climate-data.org)

The driest month is July, with 20 mm of rainfall. With an average of 286 mm | 11.3 inch, the most precipitation falls in December. The annual rainfall is 1593 mm.

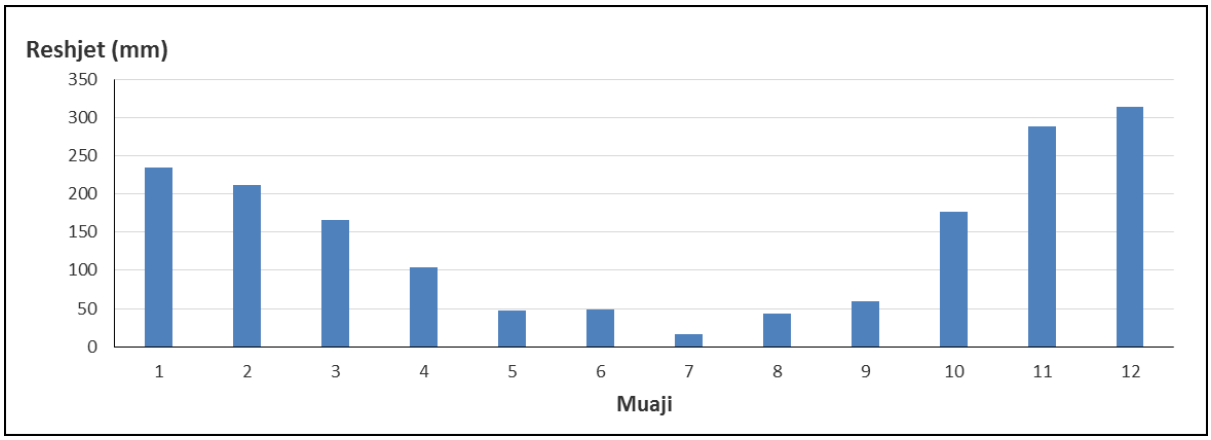


Figure 4. Monthly rainfall for Gjirokastra (Source: Climate-data.org).

The wind experienced at any given location is highly dependent on local topography and other factors, and instantaneous wind speed and direction vary more widely than hourly averages.

The average hourly wind speed in Gjirokastër experiences mild seasonal variation over the course of the year.

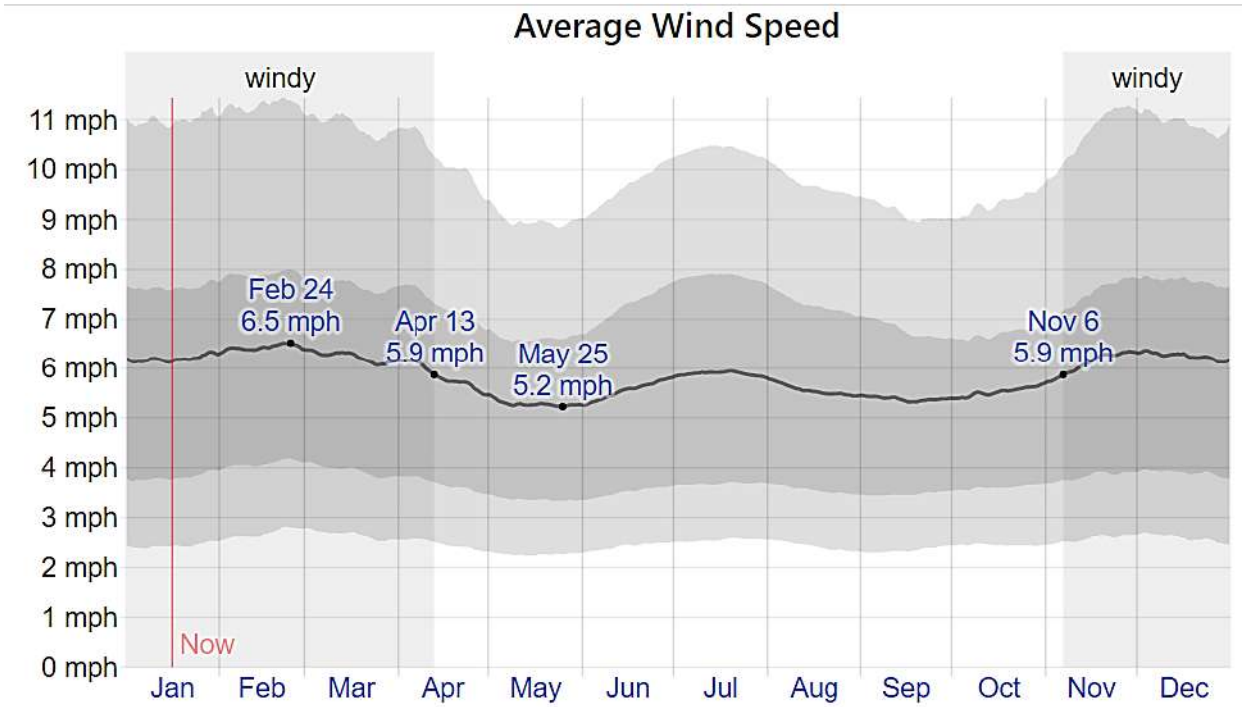


Figure 5. The average of mean hourly wind speeds for Gjirokastra (Source: weatherspark.com).

The windier part of the year lasts for 5.2 months, from November 6 to April 13, with average wind speeds of more than 5.9 miles per hour. The windiest day of the year is February 24, with an average hourly wind speed of 6.5 miles per hour.

The calmer time of year lasts for 6.8 months, from April 13 to November 6. The calmest day of the year is May 25, with an average hourly wind speed of 5.2 miles per hour.month is July, with 20 mm of rainfall. With an average of 286 mm | 11.3 inch, the most precipitation falls in December. The annual rainfall is 1593 mm.

The predominant average hourly wind direction in Gjirokastër varies throughout the year. The wind is most often from the east for 3.9 weeks, from April 23 to May 20 and for 6.4 months, from September 15 to March 27, with a peak percentage of 29% on May 6. The wind is most often from the west for 2.6 weeks, from May 20 to June 7 and for 1.0 months, from August 14 to September 15, with a peak percentage of 33% on August 22. The wind is most often from the north for 2.2 months, from June 7 to August 14, with a peak percentage of 38% on July 15.

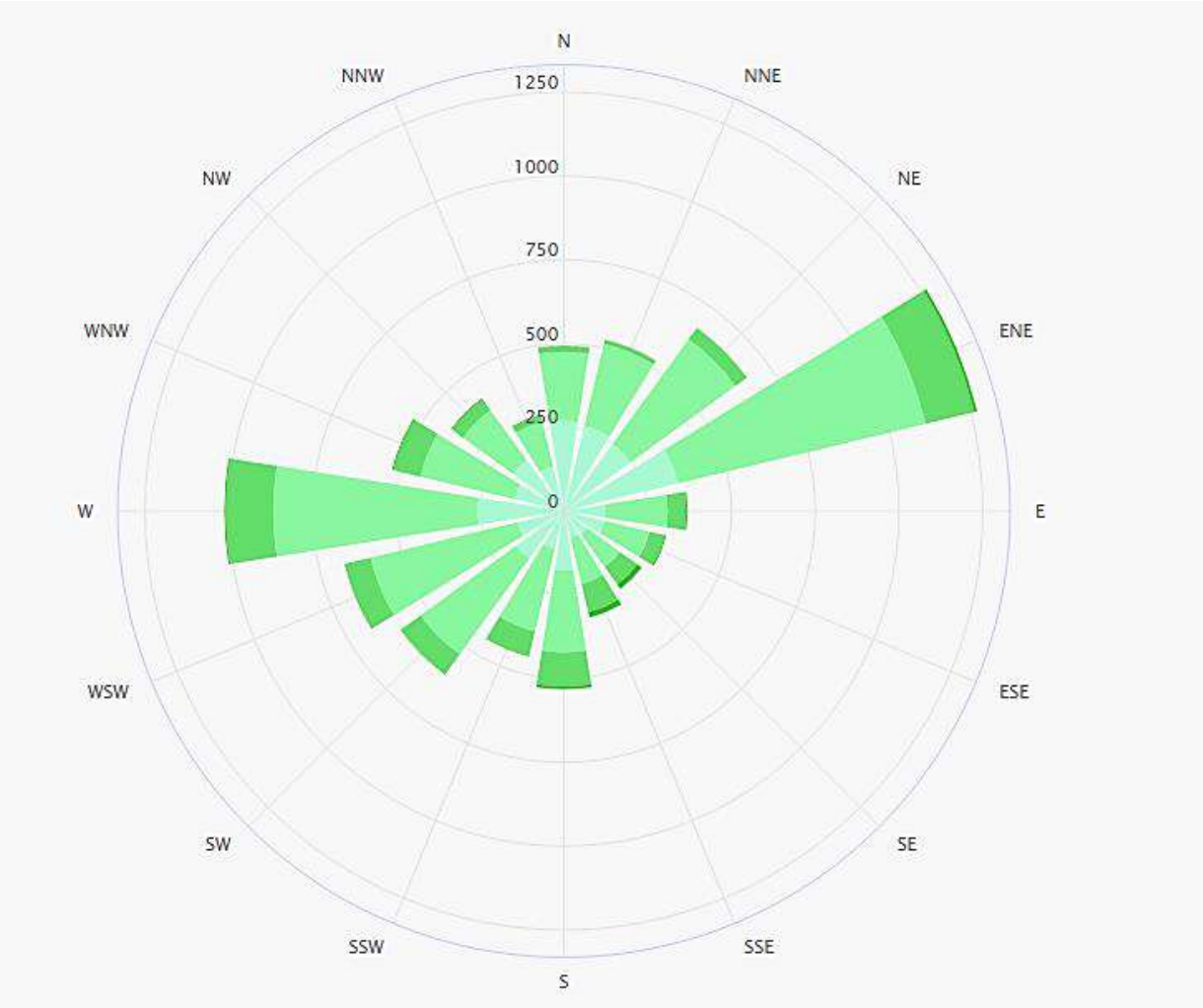


Figure 6. Wind Rose for Gjirokastra (Source: meteoblue.com)

Table 6. Climate data for Gjirokastra (1982-2012)

	January	February	March	April	May	June	July	August	September	October	November	December
Avg. Temperature (°C)	5.5	7	9.4	12.7	16.9	21	23.3	23.4	19.9	15.2	10.7	6.9
Min. Temperature (°C)	1.7	3	5.1	8	11.7	15.2	17	17.1	14.4	10.5	6.7	3.2
Max. Temperature (°C)	9.4	11	13.7	17.4	22.2	26.8	29.6	29.7	25.5	19.9	14.7	10.7
Avg. Temperature (°F)	41.9	44.6	48.9	54.9	62.4	69.8	73.9	74.1	67.8	59.4	51.3	44.4
Min. Temperature (°F)	35.1	37.4	41.2	46.4	53.1	59.4	62.6	62.8	57.9	50.9	44.1	37.8
Max. Temperature (°F)	48.9	51.8	56.7	63.3	72.0	80.2	85.3	85.5	77.9	67.8	58.5	51.3
Precipitation / Rainfall (mm)	224	212	145	102	67	32	20	29	77	155	244	286

(Source: https://en.climate-data.org/europe/albania/gjirokastra/gjirokastra-28421/)

3.2.2. Geological Overview of Gjirokasta area

The region of Gjirokastra is located south of the Shkoda-Peja fault, which divides the Dinaric Mountains from the Hellenides Montains, within the territory of which the region falls. The Hellenides Mountains, which in turn can be divided in internal and external, are part of the Dinaric-Albanian-Hellenic thrustbelt, which was formed during the Alpine orogeny. The external Hellenides, in particular, include the tectonic-sedimentary domains Krasta-Cukali, Kruja, Ionian, Sazani and Durres.

The region of Gjirokastra falls into the Ionian zone. This zone includes areas characterized by synclines and anticlines with NW-SE orientation (Figure 5), which from east to west are: Permeti syncline, anticline of Berat, the syncline of Memaliaj, anticline of Kurveleshi, syncline of Shushica and Cika anticline. These structures exhibit a westward asymmetry and are complicated by thrust faults located at their western flanks. The amount of tectonic transport of the thrust faults, both in the area of Kruja and in the Ionian zone is estimated to be between fifteen and fifty km (Xhufi and Canaj, 1999; Frasheri et al., 2009).

The historic center of Gjirokastra is located, from a geological point of view, along the eastern flank of the Mali i Gere anticline, which is connected to the western flank of the Drino syncline. The deposits identified, mainly Mesozoic carbonates and Paleogene terrigenous units (Figure 5), constitute a homoclinal with a general NNW-SSE trend, gently dipping to ENE (ca. 20°). The terrigenous portion of the geological substrate, which houses the castle and much of the historic city center, lies in unconformity above the underlying carbonate units (Figure 5).

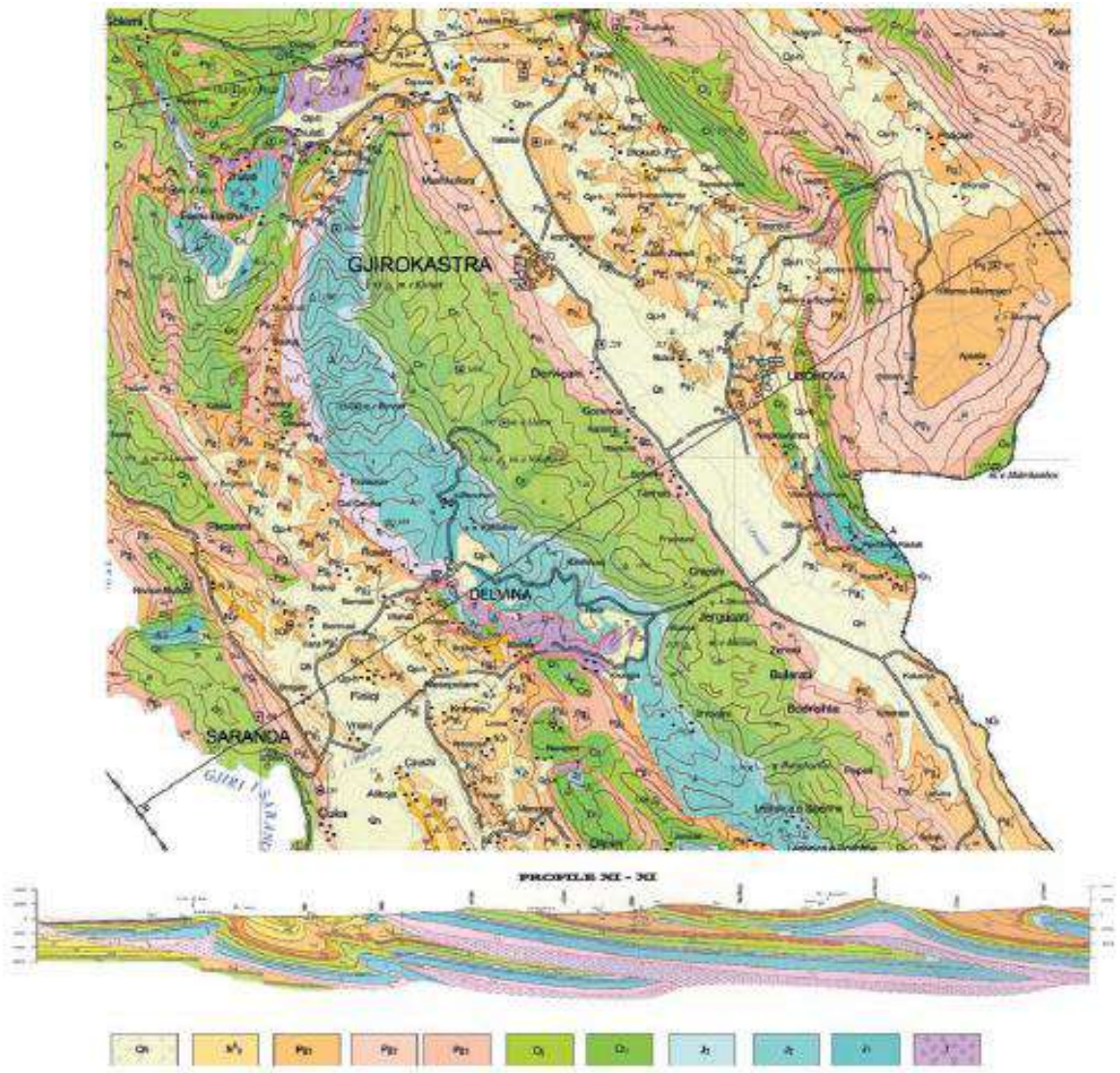


Figure 7. Geological Map of Gjirokastra and Geological Cross section (Source: Jigyasu et al, 2014)

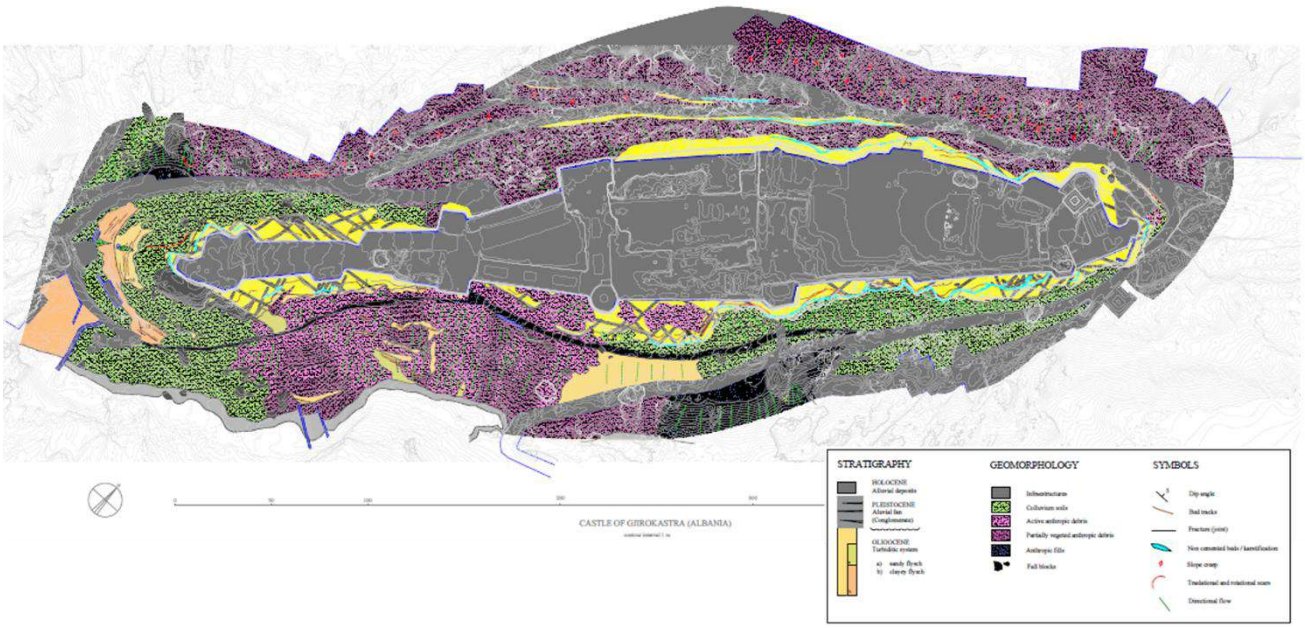


Figure 8. Gjeomorphology and Stratigraphy of Gjirokastra Castle

Based on all the previous information, the geological-geotechnical stability of the level of support on which the exterior walls of the castle are built has been studied, establishing the risk level for the different sections of the wall, based on the probability that produce a failure in the geological substrate and its possible impact on the walls it supports.

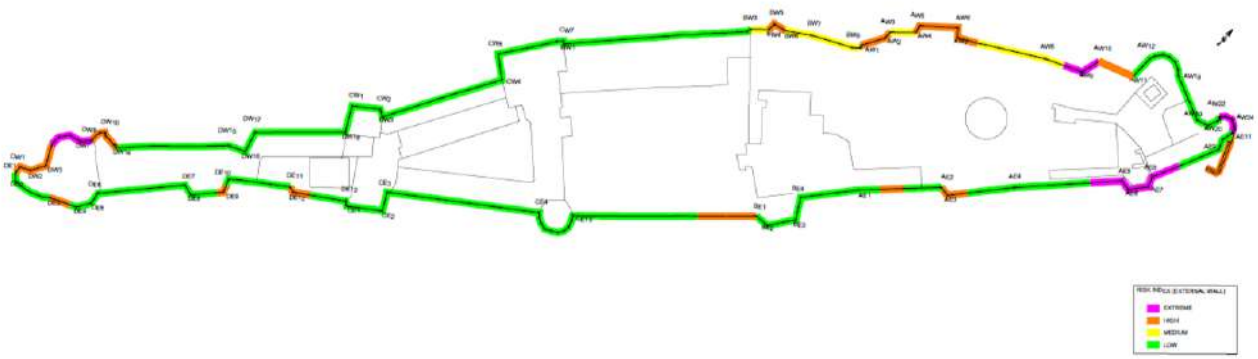


Figure 9. Map of geological risk of project area

3.2.3. Hydrogeology

The Mali Gjere karst massif is located in south Albania on the border with Greece (Figure 8); its total surface area is 440 km², mostly located in Albanian territory (54 km² in Greek territory). The highest point of the massif is at 1798 m a.s.l., whereas the mean altitude is about 900 m a.s.l. The crest of the Mali Gjere Mountain is the natural water divide between the Drinos River basin located on the east, and the Bistrica River basin located on the west. Some sulphate springs recharge the Drinos River in Greek territory; the biggest of them is Rogozi Spring with the mean discharge of about 0.5 m³/s and with the sulphate ion concentration of about 700 mg/l.

The Mali Gjere Mountain is an anticline dipping to the east with 25-30°, whereas the structure is overthrown to the west. The major units constituting the study area are the carbonate formations, like the Triassic dolomites, the Jurassic limestone with siliceous rocks and the Cretaceous and Palaeogene stratified limestone. The carbonate rocks are surrounded mainly by the Palaeogene and Noegen flysch formation, while the Permo-Triassic clayey-gypsum has a small outcrop in the western side of the Mali Gjere Mountain. In the central-eastern side of the karst massif, in the Jorguct-Dervican area, along a length of 6.5 km, the carbonate rocks contact the Quaternary gravel deposits of the Drinos River valley.

Most of the karst water drains to the western side of the Mali Gjere massif where the Blue Eye Spring (mean discharge 18.4 m3/s) issues at an elevation of about 45 m lower than that of the Drinos Valley. Also some springs, each with a discharge of less than 0.1 m3/s, issue from this side of the massif. The biggest spring of the eastern side of the massif is the Viroi ephemeral spring (maximal discharge more than 40 m3/s). The total discharge of all the springs of Mali Gjere karst massif results about 743*106 m³/year, (23.6 m³/s). By the balance calculations results that the total discharge of the springs of studied karst massif is about 30-35 % bigger than the calculated mean efficient precipitation of the massif, which corresponds to a water quantity of about 226*106 m³/year (7.17 m³/s).

Usually from May month to October or November the karst groundwater level steadily decreases and the ground water flows mainly to the west of the massif, to Blue Eye Spring. At that season all the springs of the eastern side of the massif including the Viroi Spring, dry up. The yearly amplitude of the karst water fluctuation in Goranxi Cave is about 32 m. During the dry season the Drinos River is totally lost in the gravely aquifer which piezometric level suffers an unusual yearly decrease of about 20 to 25 m. Water level counters suggest the seepage of the gravely aquifer groundwater to the karst massif in the area Jorgucat - Dervican, and particularly around the Goranxi Cave (Figure 8).

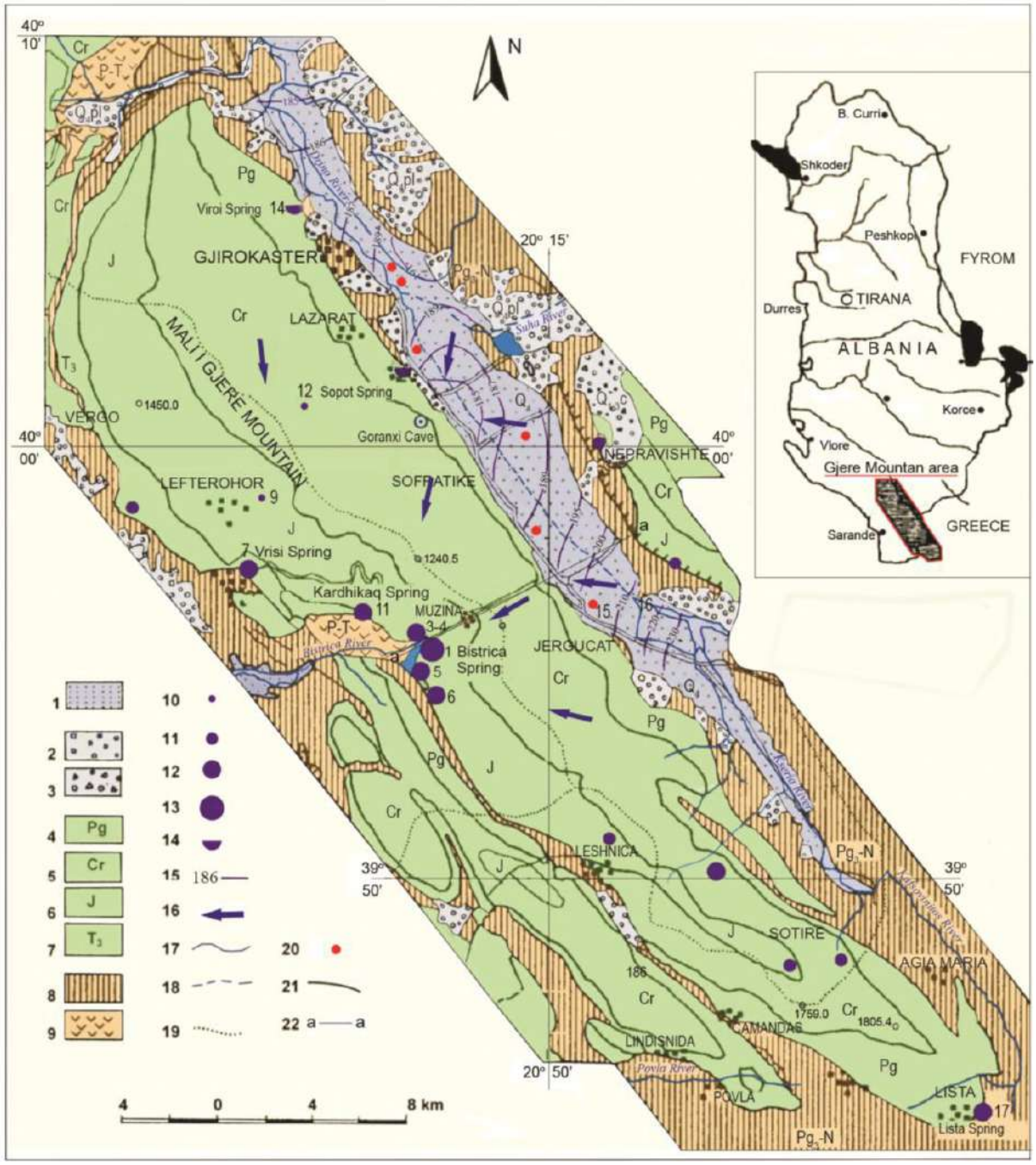


Figure 10. Hydrogeological map of the project area (Source: Efthimi et al., 2007)

3.2.4. Air Quality

Air pollution should be understood as the presence or introduction of chemical substances, substances and biological materials into the atmosphere, generated by human activities or natural processes that cause adverse effects on human health and the environment. Air pollutants may be classified as primary and secondary.

Primary pollutants are those substances emitted directly to the atmosphere such as carbon monoxide (CO, emitted by old vehicles) and sulphur dioxide (SO2, released from factory chimneys). The primary substances are: - Oxygen sulphur (SOx), especially sulphur dioxide SO2, which is produced by various industrial processes.

Secondary pollutants are gases that are usually not emitted directly but are formed in the air when primary pollutants act or interact with each other. The most problematic areas are the spaces of former industrial enterprises.

Albania currently has no comprehensive database about national air quality. However, motor vehicles are major emission sources for several air pollutants, including nitrogen oxides (NOX), carbon monoxide (CO), particulate matter (PM), and hydrocarbons (HCs). They represent the main indicators for the assessment of air quality, based on guidelines EU and reflected in Decision of Council of Ministers of Albania No. 803, dated 04.12.2003 "On approval of the air quality standards".

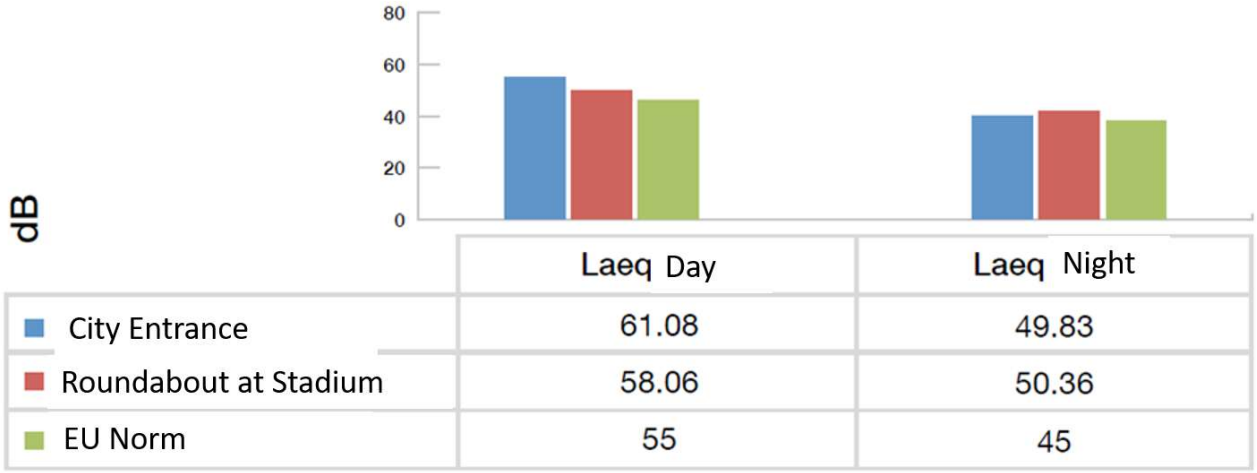
3.2.5. Noise (Acoustic pollution)

The acoustic pressure is a basic measure of the vibrations of air that make up the noise. Since the acoustic pressure interval that the human auditor can detect is very wide, these measurements are measured at a logarithmic scale with a decibels unit (dB).

Urban Noise Level (LAeq): is the equivalent continuous weighted acoustic pressure (A0) level, produced by all sources of noise that exist in a given location and during a given time.

The urban noise monitoring in the city of Gjirokastra is conducted by the Institute of Public Health aims to measure the level of acoustic pollution. Monitoring is done at two stations; city entrance road intersection and the roundabout near the stadium during the day and the night (L*aeq* day and L*aeq* night). When the noise level is about 65 dBA, sleep becomes serious concern and most of the annoying population.

As it can be depicted from the Figure 9, the values recorded exceed the standards (EU norms) for both stations during the day and the night. At the city entrance road intersection, the noise level during the day exceeds the norm by 11% while during the night the norm is exceeded by 10%. At roundabout near the stadium, the noise level during the day exceeds the norm by 5% while at night this value is exceeded by 12%.



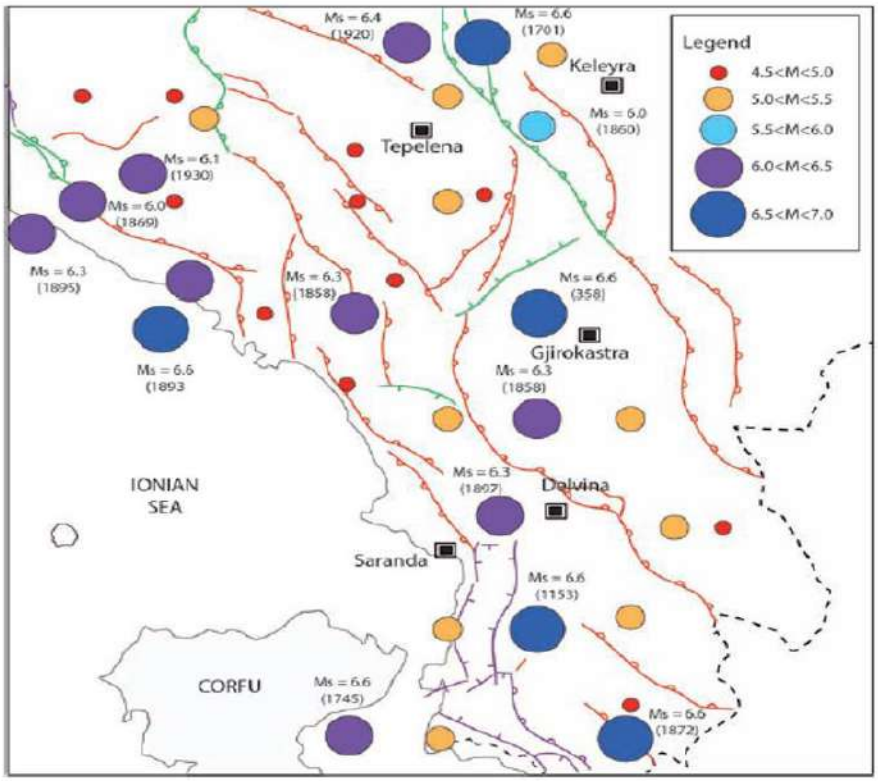
	Laeq Day	Laeq Night
City Entrance	61.08	49.83
Roundabout at Stadium	58.06	50.36
EU Norm	55	45

Figure 11. Noise monitoring in the city of Gjirokastra (Source: AKM2 2019)

3.2.6. Seizmic Hazardous in Gjirokastra

Albania is characterized by shallow crustal seismicity. The different present-day tectonic regime in eastern and western Albania requires the use of separate strong motion relations. The extensional region, into which the normal faulting earthquakes are generated, is located in eastern Albania. The compressional region, into which mainly thrust faulting and much rare strike-slip faulting earthquakes are generated, is located in western part of it.

In Figure 10 there is a fragment of the map of active faults in Albania for the Gjirokastra area (Aliaj et al., 2004) with the main earthquakes that have occurred in this area. The active structural elements are represented on this map by the type of deformation (normal fault, reverse fault, thrust and backthrust, strike-slip, flexure, evaporate diapir dome) and their chronology of activity. They are noted by color.



Active faults in the Gjirokastra site area and its vicinity (from Aliaj et al., 2004). The colors express the chronology of faults activity, noted as follows: blue- Quaternary, green- Pliocene- Quaternary, and red – pre-Pliocene, but active also during Pliocene-Quaternary. The epicenters of the earthquakes around Gjirokastra are also noted.

Figure 12. Active faults in the Gjirokastra site area and its vicinity (Aliaj et al., 2004)

There are the hazard curves developed for PGA and response spectralaccelerations for a suite of periods with engineering interest for Gjirokastra cultural heritage sites. Then, the annual frequency of exceedances are plotted (dashed horizontal lines), which correspond to probabilities typically used. The seismic macro-zonation of Gjirokastra is given in Figure 11.

According to seismic regionalization map, the municipality of Gjirokastra is included in the zone where within the next 100 years, for the average land conditions, earthquakes with intensity I0 = 7 degree (MSK-64) can be expected.

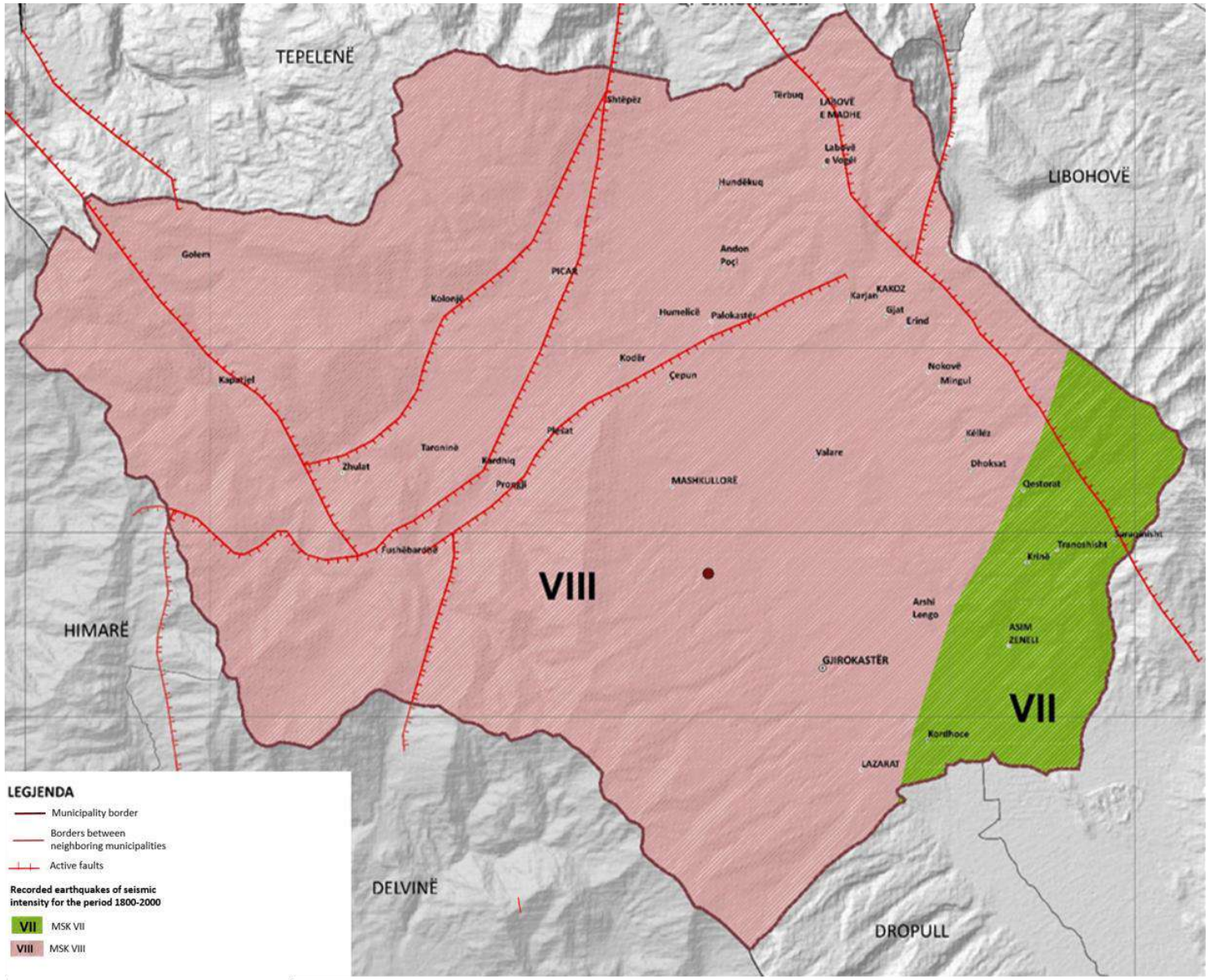


Figure 13. Seismic macrozonation in Gjirokastra (Souce: GLP Gjirokastra, 2017)

Seismic microzonation of level 1 in Gjirokastra

Data analysis has showed the presence of both stable zones susceptible to local amplifications and unstable zones susceptible to geological instability. Zones arenumbered in ascending order, based on the amplification expected (Jigyasu et al, 2014).

Zone 1) Marly-calcareous bedrock occupies the western sector of thecity and is characterized by the presence of thick-layered and fractured marly calcareousunits, with dip slope attitude towards thenortheast, locally overlaid in disconformity by cemented calcareous conglomerates.

Zone 2) Siliciclastic terrigenous geological bedrock. The marly limestone is unconformably covered by siliciclastic turbidite deposits, consisting ofalternating medium and tick sandstone and siltstone beds, dipping 15°-20° towards the northeast.

Zone 3) Alluvial fan 1. This zone is located in the southern sector of the study area, just south of the city, and is characterized by the presence of alluvial fandeposits that cover the siliciclastic turbidite unit.

Zone 4) Alluvial fan 2. This zone is located in the northern sector ofthe study area, just north of the city, and is characterized by the presence of alluvial fan deposits that cover the marly-calcareous bedrock.

Zone 5) Wide- and narrow-incised valley. The area of the wide-incised valley covers the zone which runs between the stadium and thefloodplain of the Drino River, carved into theterrigenous turbiditic unit

Zone 6) Alluvial plain. This zone is developed primarily west of the Drino River, along the foothills hosting thealluvial fans fed by rivers flowing from themountains just west of Gjirokastra.

Zone 7) Zone susceptible to rock falls, toppling of blocks. This zone occupies areas of the city close toescarpments carved into the marly-calcareous bedrock and adjacent to the conglomerates overlying the terrigenous turbidite units. One of the critical areas in terms of susceptibility to rock falls and the toppling of blocks is occupied by the city's fortress, where a geological survey documented fallen blocks on both sides of the relief.

Zone 8) Zone susceptible to complexl and slides. The areas of the city located on steep slopes carved into the turbidite unit may be affected by gravitational instability. These processes are currently active in some areas of the city and involve structures built near steep slopes.

Place	Coordinates		Probability	PGA 0.01 s	SA			
	N	E			0.2 s	0.5 s	1.0 s	2.0 s
1.Antigone	40.07	20.20	10%/10	0.111	0.258	0.132	0.066	0.028
			10%/50	0.238	0.555	0.306	0.152	0.066
2.Cepo	40.13	20.08	10%/10	0.114	0.265	0.135	0.068	0.029
			10%/50	0.242	0.562	0.314	0.156	0.068
3.Gjirokastër	40.07	20.08	10%/10	0.115	0.269	0.137	0.07	0.029
			10%/50	0.242	0.565	0.318	0.159	0.069
4.Lazarat	40.04	20.13	10%/10	0.115	0.268	0.137	0.069	0.029
			10%/50	0.242	0.564	0.317	0.158	0.068
5.Libohovë	40.02	20.27	10%/10	0.113	0.263	0.134	0.068	0.028
			10%/50	0.241	0.561	0.312	0.155	0.067
6.Lunxhëri	40.16	20.13	10%/10	0.111	0.26	0.133	0.067	0.028
			10%/50	0.239	0.557	0.308	0.153	0.066
7.Odrie	40.18	20.10	10%/10	0.111	0.26	0.133	0.067	0.028
			10%/50	0.239	0.557	0.308	0.153	0.066
8.Picar	40.17	20.04	10%/10	0.115	0.266	0.137	0.07	0.029
			10%/50	0.242	0.564	0.317	0.158	0.068
9.Qëndër Libohovë	40.02	20.27	10%/10	0.113	0.263	0.134	0.068	0.028
			10%/50	0.241	0.561	0.312	0.155	0.067
10.Zagorie	40.22	20.24	10%/10	0.105	0.248	0.128	0.064	0.028
			10%/50	0.231	0.538	0.294	0.148	0.064

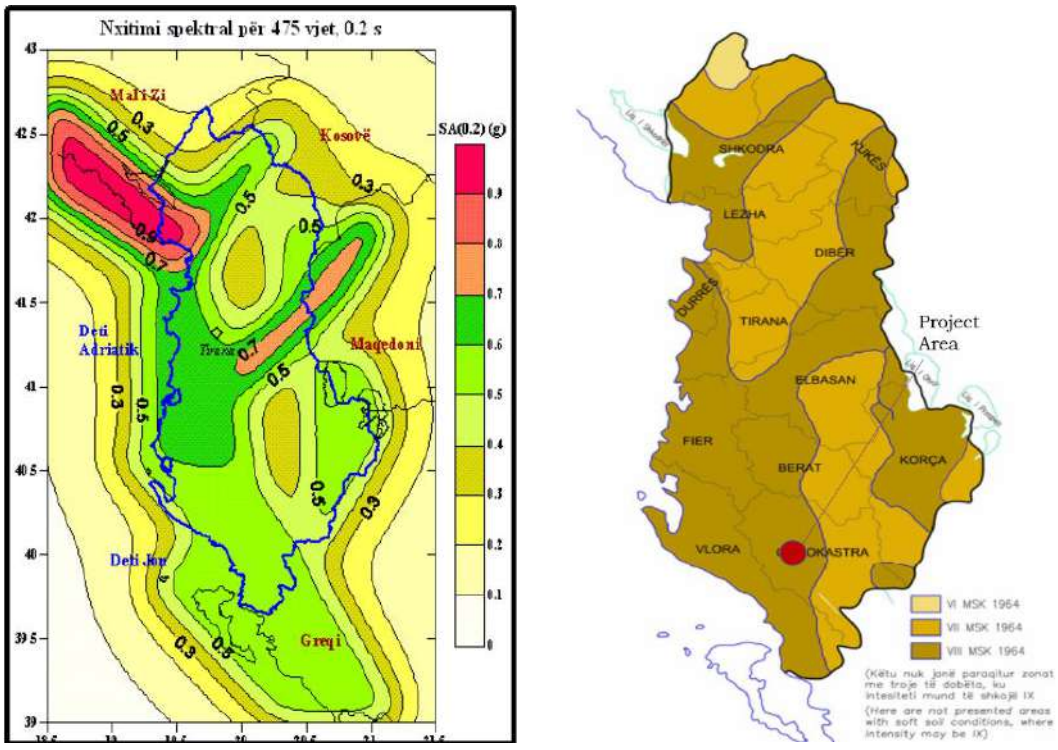


Figure 14. Map of Sa (0.2) 5 % damping for Albania on rock site and for probability 10 % / 50 years or 475 years return period (Left) and the Map of Seismic Hazard in Albania (Right) (Source: Aliaj et al. 2010).

3.3. BIOLOGICAL ENVIRONMENT

Biodiversity is a very important component of the natural resources of a country, area or region. The origins of this diversity lie in the geographic position, geological, pedologic, hydrological, relieve and climate factors.

The geographic position, geological construction, climatic conditions, water resources and the soil in the territories of Gjirokastra have created habitats suitable for the living plant and animal world.

3.3.1. Protected Areas

In phyto-geographic terms, the territory of the district of Gjirokastra lies in the Mediterranean Region. The whole territory of this district is located between three mountain ranges: Trebeshine – Dhembel –Nemercke, Shëndëlli-Lunxhëri-Bureto and Murganë-Mali i Gjerë-Mali i Lucës, which are part of the South Mountaneous Region. The direction of the mountain ranges, which run almost parallel to each other, is South-East/North-West. It is this direction of the mountain ranges that creates specific climatic and terrain conditions for the growth and development of a varied, spontaneous flora. (Malo & Shuka, 2007). These mountain ranges create two deep valleys: the Drino Valley and the Zagoria Valley with altitudes ranging from 200 m to 2400 m a.s.l. and energy up to 700 m/km^2. From the records over the past years, it turns out that in the district of Gjirokastra there are 719 naturally growing plant taxa constituting almost 22 % of the flora of our country.

There are several nature monuments and one protected area within the territory of Gjirokastra.Of particular interest is Kardhiqi, which has the status of "Strict natural reserves \ scientific reserves (Category I of protected areas based on the International Union for Conservation of Nature (IUCN) categorisation. The current surface is 1,800.00 ha. Represents a rugged slope, with steep cliffs, steep cliffs and canyons. The combination of rocky, forest and pasture landscape gives this region a special beauty. The area represent high biodiversity of both habitats and species. The existence of virgin or almost virgin forests significantly increases its natural values. Area is covered mainly with oak forests accompanied by other trees such as *Fraxinus ornus, Acer campestre, Acer obturatum,* rare trees of *Tilia platyphyllos* and *Tilia tomentosa*. The most important and best preserved forest formation remains that of *Abies borisii-regis,* which occupies even the steepest terrains. Pure forest of *Acer pseudoplatanus*, a rare phenomenon in Albanian forest, adds even more the values of this territory. Some of the endangered plants species listed at Albanian Red List book, such as: *Aesculus hippocastanum, Taxus baccata, Achillea grandifolia,* etc. are also found in the area. There are bird and mammal communities associated with forest, aquatic and rocky environments.

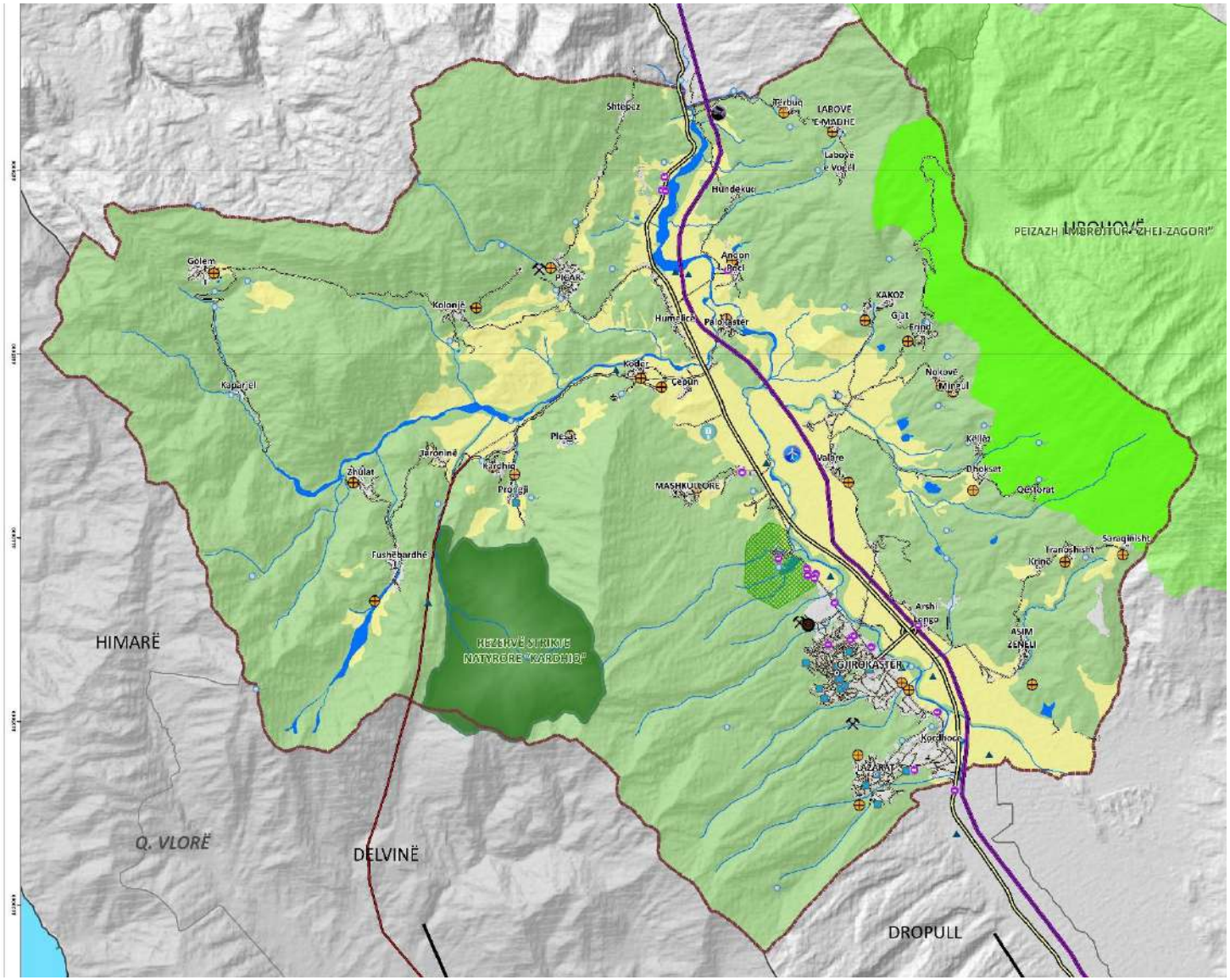


Figure 15. Map of Protected area-Municipality of Gjirokastra (Source: GLP Gjirokaster)

The municipality of Gjirokastra has a large number of nature monuments (Category III of Protected area as per IUCN Categorization). The list includes:Plane tree of Fushë-Bardha; Plane tree of Zhulati; Plane trees of School in Sheper; Oak trees of Çarroku – Sheper; Oak trees of Monastery – Nivan; Plane trees of Nivani; Plane tree of Ndëranit; Oak trees of Skoresë; Plane trees of Çatista; Cypress trees of Hllomo; Plane tree of Poliçani; Oak trees of Poliçani; Plane trees of Koshovica; Oak tree of Tërbuqi: Plane trees of Selo; Pine trees of Kërre; Oak tree of Bodrishtë; Chestnut tree of Nepravishtë; Plane trees of Tranoshishtë; Plane trees of of Monastery- Stegopul; Plane tree of Dhoksati; Plane trees of Këllezi; Plane tree of Mashkullorë (No longer exists); Plane tree of Libohovë; Plane tree of Derviciani; Vënjat of Konckë; Plane tree of Topovë; Canyon of Piksi; Terrace of Ndërani; Stone "forest" of Ndëran; Pass of Çajupi; Stone of Zheji; "Naked" stones of Muzinë; Magmatic rocks on Karst substrates near Picari; Shembja e Zhulalit; Landslides of Këllezi; Landslides of Kaparieli mountain; Vithimat e Buretos; Holes of Konckë; Cave of Vanistrë (Skotinia); Gorge of Selckë; Circus of Lunxhërisë; long stones in Fushë-Bardhe; Pass of Dhëmbeli, etc.

3.3.2. Endemic and endangered species

Four Albanian endemic taxa are reported in Gjirokastra municipality, in altitudes from 300 m to 2480 m above sea level. Three of these endemic species do not have any conservation status, mainly because of their late discovery and limited knowledge about their distribution. One of these species is included in the Albanian species red list.

Noccaea cikaea F.K.Meyer. Endemic species of Southwestern Albania. Usually its population are small and limited.

Hypericum haplophylloides Halascy et Baldacci subsp. haplophylloides. Endemic species of Southwestern Albania. It grows mainly on limestone substrates or karst conglomerates. It is considered endangered species with the status R (rare species).

Viola acrocerauniensis Erben. Endemic species of Southern Albania which grows mainly on limestone substrates or karst conglomerates in altitudes above 800 m above sea level.

Stachys sericophylla Halacsy grows in karstic environment in altitudes from 1800 m to 2300 m above sea level in Nemërçka Mountain

In the territory of Gjirokastra municipality 27 sub-endemic taxa are found. These include: *Astragalus baldaccii* Degen. *Asperula chlorantha* Boiss at Heldr; *Athamanta macedonica* (L) Spreng. subsp albanica Alst. et Sand; *Centaurea epirota* Halácsy. *Centaurea graeca* Griseb.; *Centaurea zuccariniana* DC. *Crataegus heldreichii* Boiss; *Crepis turcica* Degen & Bald; *Crocus boryi* Gayr; *Dianthus haematocalyx* Boiss. et Heldr. subsp. pindicola (Vierh.) Hayek; *Fritillaria thessala* subsp. Ionica;

Gymnospermum altaicum subsp. Scipetarum, *Herniaria parnassica* subsp. Parnasica; *Fritillaria thessala* (Boisss.) Kamari subsp. ionica (Halacsy) Kamari, *Herniaria parnassica* Heldr. et Sart. subsp. parnasica Chaudhri. *Lilium chalcedonicum* L.; *Malcolmia bicolor* Boiss. et Heldr.; *Nepeta spruneri* Boiss.; *Ophrys helenae* Renz.; *Ophrys sphegodes* subsp. Epirotica (Renz) Golz & Rrinhard; *Scabiosa epirota* Halacsy et Bald; *Sideritis raeseri* subsp. raeseri Boiss. et Heldr.; *Solenanthus albanicus* (Degen et al.) Degen et Baldacci; *Silene caesia* Sibth. et Sm; *Silene ungeri* Fenzl.; *Pedicularis graeca* Bunge; *Viola epirota* (Halacsy) Raus, *Linum flavum L. subsp. Albanicum (Hartvig); Viola heterophylla Bertol. var. euboea sensu W. Becker; Viola heterophylla Bertol. subsp. epirota* Halacsyand *Linum flavum* L. subsp. albanicum (Janchen) Hartvig (Malo & Shuka, 2012).

3.3.3. Vegetation at the project site

The project area, which lies in Gjirokastra urban zone, is not characterized by pristine or natural habitats, landscapes with important scenic values or biodiversity (flora and fauna) of conservation interest. However, within the Castle itself and along the roads to the Castle there are several trees and shrubs growning. Most important tree and shrubs growing in the area are: Sorb tree (*Sorbus domestica),* black locust(*Robinia pseudoacacia*), Tree of heaven (*Ailanthus altissima*); Ilex aquifolium (*common holly*), oak species etc. Among the shrubs in the territory of project area are found: common myrtle (*Myrtus communis* L.), tree heaather (*Erica arborea* L.), Mastic tree (*Pistacia lentiscus* L.); Smoke bush (*Cotinus coggygria*, syn. Rhus cotinus), Judas tree (*Cercis siliquastrum* L.

Grasses (annual or bianuall) are represented by *Viola alba* bess, *Cyclamen hederifolium* Ait, *Linum bienne* Miller, *Briza maxima* L. etj.Erica herbacea L.), *Melica uniflora* Retz, *Brachypodium sylvaticum* Beauv, *Helleborus odorus* waldst. Kit, *Digitalis grandiflora* Miller, *Rhamnus fallax* Boiss etj. On the walls of the Castle there are several climbing plants such a European ivy (*Hedera helix*) and (*Pyrostegia venusta*),). In addition several fruit trees such as common fig (Ficus carica), grape vine (Vitis vinifera) etc. can be found in the yards of many families.

Figure 16. Vegetation in the project area (*Sorbus domestica* L.)

Figure 17. Vegetation in the project area (*Robinia pseudoacacia* L.)

Figure 18. Vegetation in the project area (*Querqus spp*)

Figure 19. Vegetation in the project area (*Nerium oleander L.* dhe *Ficus carica L.*)

Figure 20. Trees and shrubs in project area

Figure 21. Oak trees (Querqus spp) in the project area

Figure 22. Wild plants in the project area.

Figure 23. Shrubs growing in the cracks of stone Castles

The fauna at the site included butterflies, birds of different species and which are not endangered species. Amongs the birds found in the area, there are species of genus *Alauda,* species of sparrows (*order Passeriformes*); ducks and geese from the order *Anseriformes*); some birds from the order of wild pigeons (*Columbiformes*); whistles (*Lucinia megarhyncha),* species of genus *Sylyvia,* etc. None of the birds found nest on site, rather use the area for feeding and resting.

3.3.4. Bats Colonies

The castle of Gjirokaster is home to several colonies of bats (*Myotis myotis).* The castle was explored for the first time in 1991 when only one specimen was recorded, while in 1995 some 800 specimens were identified. The first data collected concerning the size of the population using the castle of Gjirokaster were in 1995, with a mixed colony of 800 specimens recorded. Following this survey, and due to the significance of knowing the exact use of this important cultural monument by the bats, a monitoring was implemented. In May 2013, the last rooms of this part were added to monitoring. These rooms host the biggest group of bats during spring with more than 3000 specimens, including hundred of juveniles, in July 2014.

Concerning the seasonal move of these species, it has been clearly identified that the main corridor of the castle used by the bats during the spring/summer is not use by the bats during hibernacula. Therefore, the castle might be linked with one or several hibernation sites in the zone, knowing that *Myotis myotis* is able to cover 200 km during migration to reach hibernation sites (Schierer, 1987).

Concerning the dynamics of the population for the last twenty years, the population trend seems to be positive at a national level. This affirmation is strongly linked with the situation in the Gjirokastër castle, where the mixed maternity colony passed from 800 in 1995 to 3500 specimens in 2014, possibly thanks to the transfer from former colonies in the area around Gjirokastër.

Conserving and opening limited sections H6-7 (without disturbing the bats) would allow visitors to explore this other aspect of the castle.

IV. DESCRIPTION OF THE PROJECT

Gjirokastra, and its castle, is a unique place. Inscribed on the World Heritage List in 2005, this city "bears outstanding testimony to the diversity of urban societies in the Balkans and longstanding ways of life which have today almost vanished" and "the town planning and housing of Gjirokastra are those of a citadel town…" (UNESCO). This citadel or castle sits above the town on an elongated geological formation with steep sides, which naturally form a defensive barrier. It was here, understandably, that a series of defenses were built over hundreds of years, taking advantage of the natural geology to protect the population. Today, it is an impressive structure from below, looming over the town and valley with its sheer masonry walls, towers, and ramparts. From within, the views are sweeping, taking in the entire town, valley, and mountains beyond. Its position commands the valley from west to east and north to south.

The castle of Gjirokastra has been a constantly evolving structure, first primarily for the defense of the town, then regional military control, and later for imprisonment. The castle´s final stage of evolution, as a cultural place, is woefully incomplete. Attempts have been made through the conversion of the prison into a museum, the construction of an infrequently used amphitheater, and lately, the installation of limited didactic panels for tourists. The castle, with all its phases, is not without its problems. Issues with the underlying complex and often unstable geology have caused numerous structural complications. The various and varied construction stages have also caused structural problems, and resident and visitor safety is a concern.

A recent effort, the Project for Integrated Urban and Tourism Development (PIUTD), has been funded by the World Bank to support the Government of Albania in developing the economy while improving living conditions. This overall project focuses mainly on urban centers that are of cultural and natural interest to strengthen tourism - thus Gjirokastra. Previous elements of this project have addressed urban upgrading, street improvements, pedestrian trails, museums, and lighting. This project is to specifically address the fortifications given their significance, prominence as an attraction, and current poor condition. The Ministry of Culture and the Municipality of Gjirokastra, have explicitly requested support given the emergency situation and stability of the castle.

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4.1 PROJECT SITE LAYOUT

The fortress is an old stonework construction situated along the ridge of a high cliff. The narrow building has a circumference of 1,400 paces and stretches from east to west, with a length of 600 broad paces and a width of 100 paces. Its long, solid ramparts resemble a galley. Inside the fortress there is only one main street running from east to west. Ranged on both sides of the street are 200 two storey stonework houses, roofed entirely with slate. Within the fortress is the Mosque of Sultan Bayazid II the Saint, with a slate roof and a stone minaret. It is a large old mosque with a spiritual atmosphere and is 80 feet long and 40 feet wide. Inside it there are four carved columns and a wooden ceiling of joined beams with very fine decoration.

Since the fortress is situated on the top of a high cliff, water is collected in a huge cistern at the foot of the minaret. All the houses within the walls get their dri nking water from this source, i.e. from rain water that flows into this sealike cistern. Each house has its own private cistern as well.The fortress has two gates with three strong and solid iron doorways each. The eastern gate is approached by a stone staircase, and for this reason horsemen have difficulty entering and leaving by this gate. At the third doorway, which is the innermost, there is a pavilion from which one can look out over the whole district. It is here that all the foremost and distinguished citizens assemble and feast their eyes on the gardens and vineyards in the plain below. On the western side is the gate in front of the public prayergrounds. It also has three iron doors. On this side, between the prayergrounds and the fortress is a shallow moat, 100 paces long and 20 paces. There are no moats on the other three sides as they have very steep cliffs.

The manner in which the outer walls of all the homes are constructed has no parallel in all the world. They are all twenty ells high of red sandstone blocks, just stone with no mud, lime or plaster. The walls and the houses are all centuries old, dating from the time of the infidels. The walls are so tall and solid that not even a sparrow can get a claw hold.

Figure 24. Panoramic view of Gjirokastra Castel

Figure 23 below and the following table (Table 7) show the coordinates of the project area according to Gauss–Krüger coordinate system, based on the data of Albanian State Authority for GeoSpatial Information (ASIG).

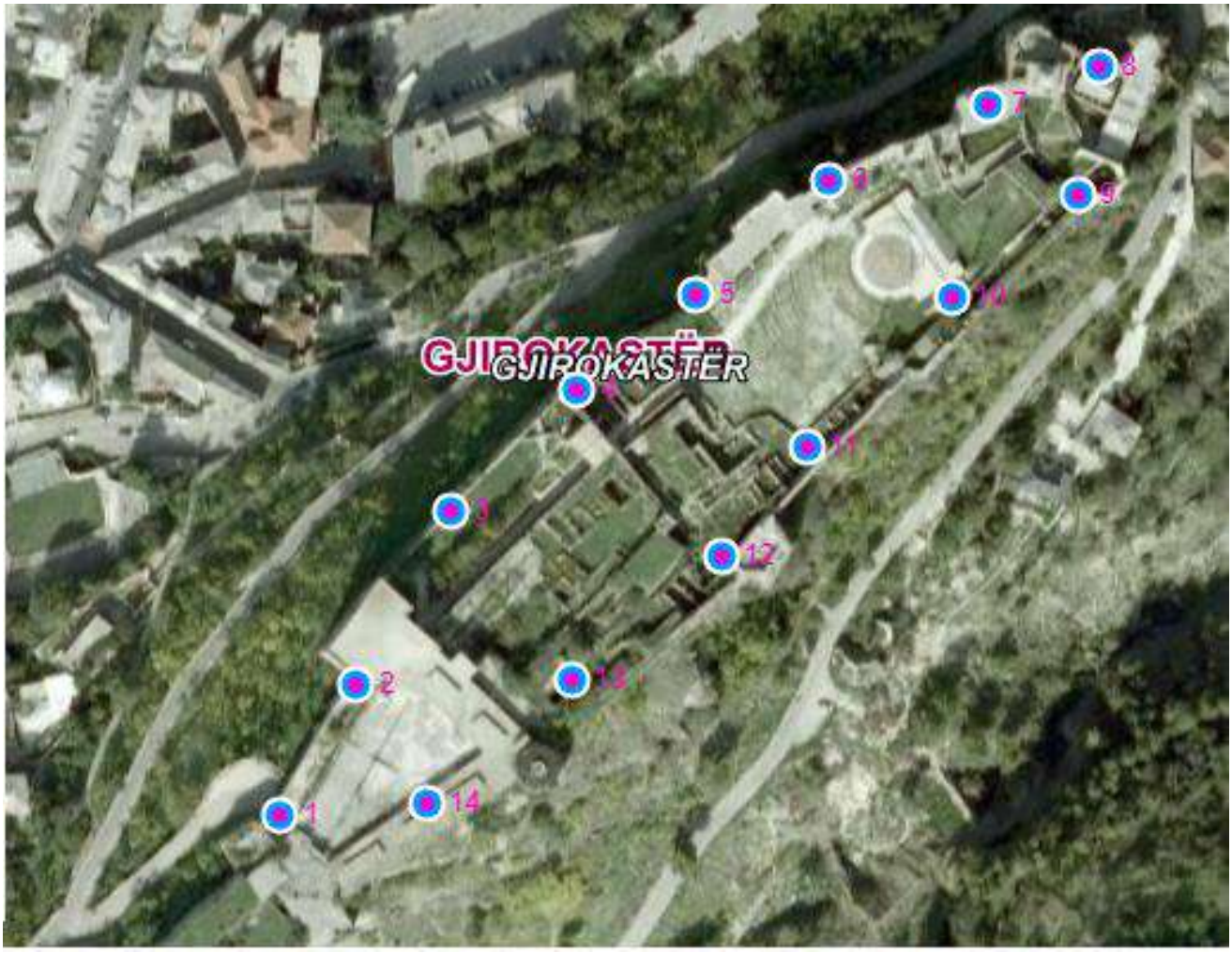

Figure 25. Topographic map of the area

Table 7. Project area coordinates according to Gauss–Krüger coordinate system

Point	Albanian 1986/Gauss-Krüger Zona 4		**Point**	Albanian 1986/Gauss-Krüger Zona 4	
	Easting (E)	Northing (N)		Easting (E)	Northing (N)
1	4426702.862	4438088.996	**2**	4426725.695	4438127.244
3	4426752.861	4438177.346	**4**	4426792.478	4438214.006
5	4426827.086	4438240.921	**6**	4426865.271	4438274.796
7	4426913.816	4438295.953	**8**	4426947.542	4438306.776
9	4426940.833	4438270.446	**10**	4426902.678	4438239.371
11	4426860.206	4438197.843	**12**	4426833.936	4438165.233
13	4426790.119	4438128.621	**14**	4426746.309	4438092.708

4.2. ASSESSMENT OF THE EXISTING SITUATION

To comprehend the project and the needed intervention a thorough assessment of the existing situation is done. The following section presents the main findings on site conditions.

4.2.1. Assesment philosophy

"The prioritization of interventions was one of the most important steps in the process to bring all the four disciplines together in developing the Conservation Plan". What preceded were several key assessments:

- ❒ Comprehensive analysis of all Castle's spaces
- ❒ Comprehensive analysis of all Castle's structures
- ❒ Comprehensive analysis of the geology upon which the castle is situated
- ❒ Hydrological analysis of the castle and geology

These assessments resulted in several levels of classification:

- ❒ architecture: came out with 4 levels of risk starting from very high risk to low/no risk
- ❒ structure came out with 4 levels of risks for structure: starting from extreme risk to low/no risk
- ❒ geology came out with 4 levels of risks for rock: starting from extreme risk to low/no risk.

While conducting the assessment following elements were taken intoaccount:

- ❒ architecture: safety level;potential for use; condition;authenticity/integrity
- ❒ structure: safety level; condition(structural integrity)
- ❒ geology: safety level; condition(structural integrity)

Now, and when combining thefindings from all study areas thecross section of all areas wasmade as per assessed 4 levels ofrisk. This brought us to 4 summarized categories:

Category 1 – Extreme structural/geological risk; Danger to visitors/pedestrians; Imminent loss of heritage value; securing usage potential

Category 2 – High structural/geological risk; Possible danger to visitors/pedestrians; Direct loss of heritage value; enhancing usage potential

Category 3 – Medium structural/geological risk; Possible danger to visitors / pedestrians; Possible loss of heritage value; enhancing usage potential

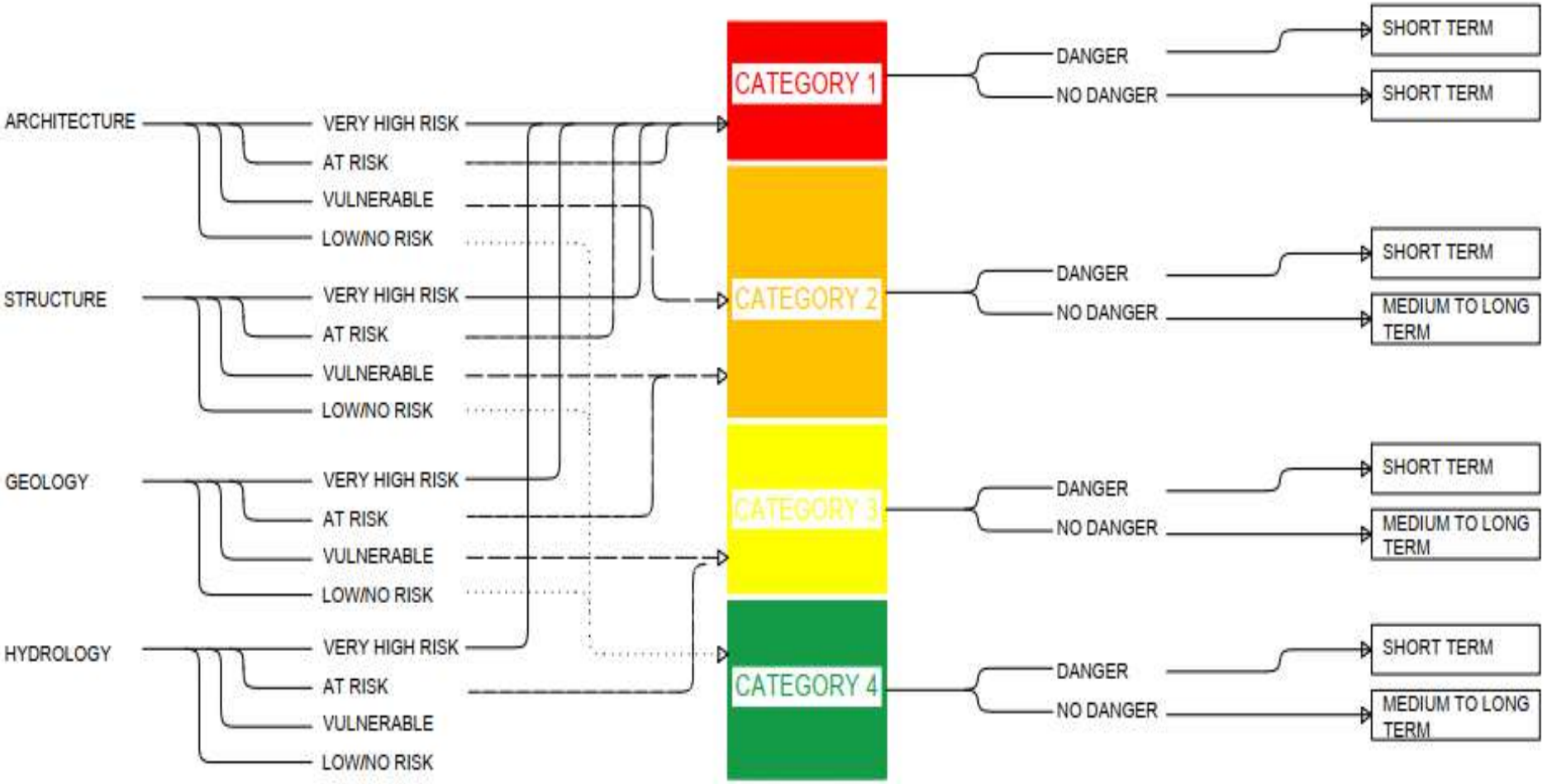

Figure 26. Scheme of categories

Category 4 - No/low structural/geological risk; No danger to visitors/pedestrians; Maintaining heritage value; enhancing usage potential. As to prioritize and decide on how to plan future interventions these 4 categories were then cross-referenced with aspects of safety - and the final result was the priority level for each of the interventions and categories. To illustrate this prioritization methodology two examples will be described.

The first example is the coping stone toward the southwest portion of the castle at the roof of the prison. This would be rated at-risk from a purely structural point of view as it is not sufficiently attached. However, since it is a less architecturally significant and in a newer portion of the castle, it is rated only vulnerable. It is also rated low/no risk from the geological or hydrological points of view. Therefore, it is rated only Category 3. Finally, given that it is no safety danger to people as visitors are not allowed on the roof and there is no road, path, or homes, below it is assigned to the medium- or long-term within the Conservation Plan.

The second example is that of Tower A toward the northeast portion of the castle. This tower exhibits significant multiple cracks on both flanking elevations. Obviously, from the structural point of view the risk level is very high risk. Evaluating it from an architectural point of view it is also at very high risk as it represents a significant tower in the history of the evolution of the castle during expansion and reinforcement against gunpower artillery. From a geological point of view, it is also very high risk as there are two converging fault lines under the tower and large cavities on either side. Hydrologically, it is also very high risk as water from a large portion of the castle drains to this point eroding the foundations and allowing substantial seepage into the geological strata. Therefore, it is in Category I. Given that there is an often-traveled road beneath the tower and a frequent stop for visitors – Tower A is a safety danger and must be addressed in the short-term with in the Conservation Plan.

4.2.2. Assessment Methodology

Assessment methodology was carried out throughout all the surface of the Castle. The Castle's spaces were divided into 19 large areas and 160 subaeras for architectural assessment:

BR- BAT ROOM; B - BASTION; H-HALL; C - COURTYARD; WD - WATER DEPOSIT; ER -ELECTRICAL ROOM; G - GATE; GR - GATE ROOM; CH - CANNON HALL; O - OFFICE SPACE; S - STORAGE; T- TOILETTE; A - ARCHAEOLOGY; CT - CLOCK TOWER; M – MUSEUM; RS - STORAGE ROOF; O - OWEN; P- PRISON; R - RESTAURANT

4 main sections for wall curtain assessment: A, B, C and D

15 areas for geological assessment: A1-15

Each of the sections of assessment were then subdividing the main areas of division to a number of smaller sections for detailed assessment.

ASSESSMENT PATH

The path to assess the spaces was divided among two key forms. The assessment form and the Matrix.

The assessment form steps:

1 - defining the user; usage potential and safety

2 - defining the condition of the space including all the elements of the space

3 - summarizing overall condition in to 4 categories: Very bad; poor; fair; good

M1- The condition is then cross referenced with usage potential and safety in the matrix which results in classification of either of the 4 categories of risk: Very high risk; At risk; Vulnerable or Low/no risk

4 - the assessment chart continues into defining historical content which is summarized to either of 4 categories: Very high; High; Medium and/or Low

M2-The risk category is then cross referenced with historical content outcome in the matrix which results in following categories of prioritization:

A – Immediate risk, high historical content

B – Immediate risk, lower historical content

C – Slow decay, high historical content

D – Slow decay, lower historical content

E – Under threat/vulnerable section, high historical content

F – Under threat/vulnerable section, lower historical content

G – Section in good or fair condition, high or low historical content

5 - The assessment form then included surface area of affected sections and definition of materials for a direct output needed for preliminary costing of interventions.

6 - As well the assessment has identified presence of electrical cabling; plumbing and drainage lines

The summarized data was then presented in:

- Inventory

- Risk maps.

4.2.3. Schedule of conservation plan.

After inspecting points of concern, conducting number of studies and elaborate investigations, the team has arrived to set of conclusions when it comes to two main point of concerns, as specified in ToR. However, we feel that it is our responsibility to at the same time have a holistic view and approach and do the maximum to increase overall quality of visitor's and the experience of the employees. Conservation plan is planned out in three main phases:

- ❒ Short term
- ❒ Medium term
- ❒ Long term

Every phase of the interventions are opening new sections of the Castle and are improving its structure and level of its utilization and enjoyment.Main elements of this proposal are:

- ❒ Structural stabilization of rock and bastion
- ❒ Opening sections in the south section of the castle
- ❒ Installing infra-red cameras and portable screen for viewing and understanding life of bats
- ❒ Restoring roof over Museum and prison
- ❒ Establishing new ticket office including accessible toilettes and small interpretation center
- ❒ Conservation of number of spaces which then can be utilized for new functions
- ❒ Fencing off instable and unexcavated archeological sections
- ❒ Additional archeological excavations in one section.

Category 1: Extreme structural/geological risk;

Danger to visitors/pedestrians;

Imminent loss of hertiage value;

Securing usage potential

Category 2: High structural/ geological risk;

Possible danger to visitors/pedestrians;

Direct loss of heritage value;

Enhancing usage potential

Category 3: Medium structural/geological risk;

Possible danger to visitors/pedestrians;

Possible loss of hertage value;

Enhancing usage potential.

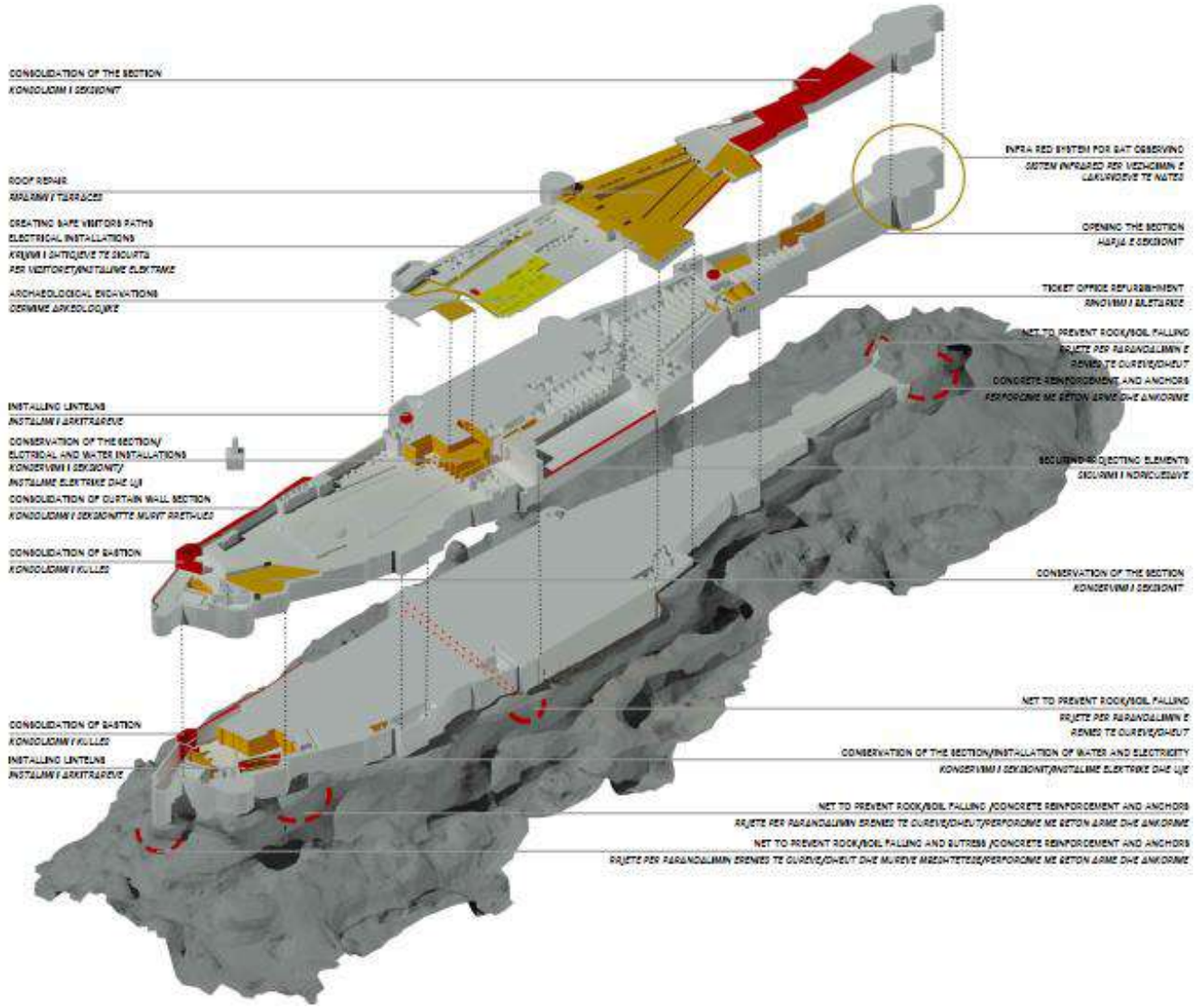

Figure 27. 3D project visualization

Table 8. Types of Intervention

Category	Type of intervention

1	Concrete reinforcement and anchors to prevent rock/soil fall SW
2	Concrete reinforcement and anchors to prevent rock/ soil fall NW
3	Concrete reinforcement and anchors to prevent rock/soil fall NE
4	Concrete reinforcement and anchors to prevent rock/soil fall N
5	Anchors to prevent rock/ soil fall butress
6	Net to prevent rock/soil fall SE
7	Net to prevent rock/soil fall
8	Net to prevent rock/soil fall
9	Net to prevent rock/soil fall
10	Consolidation of B4 Bastion
11	Emergency stabilization of A18 structure
12	Consolidation of section of curtain wall AE3-5
13	Consolidation of section of curtain wall AE8-9
14	Securing projecting elements in public areas
15	Installing lintels
16	Securing bulged masonary walls
17	Consolidation H1-14 section
18	Opening H6 and H7 space
19	Conservation of A6-7
20	Conservation of A 30-33
21	Roof repair M4-M26
22	Creating a safe visitors path
23	Conservation A5
24	Conservation A21
25	Refurbishment of Toillettes
26	Refurbishment of Ticket office
27	New electrical and water installations
28	Removing unused electrical cables and water pipes
29	Additional archeological escavations A13-17
30	Maintenance schedule and monitoring

CATEGORY 1 - Extreme structural/geological risk; Danger to visitors/pedestrians; Imminent loss of heritage value; securing usage potential.

CATEGORY 2 - High structural/geological risk; Possible danger to visitors/ pedestrians; Direct loss of heritage value; enhancing usage potential.

CATEGORY 3 - Medium structural/geological risk; Possible danger to visitors / pedestrians; Possible loss of heritage value; enhancing usage potential.

CATEGORY 4 - No/low structural/geological risk; No danger to visitors / pedestrians; Maintaining heritage value; enhancing usage potential

4.2.4. Structural, Geological and Hydrological Analysis

All the tests and surveys carried out have been non-destructive, neither affecting the integrity of the castle nor hindering the usual regime of tourist visits.

From the side of the analysis of historical structures, very intensive field work has been undertaken, using the laser scanner to study geometries and deformations, installing monitors to control movements and temperature, and performing dynamic, sonic and ground penetration radar tests to characterize and assess the masonry walls. Structural analysis has been carried out at selected points because the degree of damaged observed in the in-situ campaign appointed them as areas of high or extreme risk. Additional understanding regarding the damage phenomena was therefore deemed necessary, and the tools that have been used for that purpose have been kinematic, graphic static and finite element analyses.

For the study of the soil, a geological survey, geomorphological identification, satellite movement monitoring and material characterization has been carried out. For its complete understanding, a series of geophysical tests like electrical resistivity tomography and seismic refraction tomography were carried out on site. Finally, the work was completed with a series of geometric stations to perform the characterization of the strata from the mechanical point of view and their modeling using Finite Element Modelling. The hydrology inspection and analysis campaign has consisted of the investigation of the intensity of rain, the areas of drainage and its movement through strata and on the slopes, concluding that superficial drainage must be addressed urgently. Once all the on-site information collected was processed, an identification of the Castle's risks, classified in short, medium andlong term, has been carried out. Among all of them some are highlighted due to their affection to public safety and/or its culturaland historical values:

- ❒ North East Tower. Sector AE 5-8
- ❒ Missing masonry at base of terrace wall. Sector AE 8-9
- ❒ Masonry Buttress
- ❒ Masonry loss in curtain walls (detailed areas)
- ❒ Retaining wall at interior ramp by NE tunnel
- ❒ Degradation of wall capping
- ❒ Lower terrace masonry walls. Sector AE 8-9
- ❒ Overhanging or fractured conglomerate in four different areas

MASONRY VAULTS

Masonry vaults usually perpendicular to the curtain walls with the exception of two vaults parallel to the wall marked in dark blue at Level 3 plan in Tower C and the long room near the main entrance.

MUSUEM STRUCTURE

Mixed structural system that consists on a unidirectional slab over concrete joists supported at the interior on bidirectional concrete frames, and on load bearing masonry walls at its external perimeter.

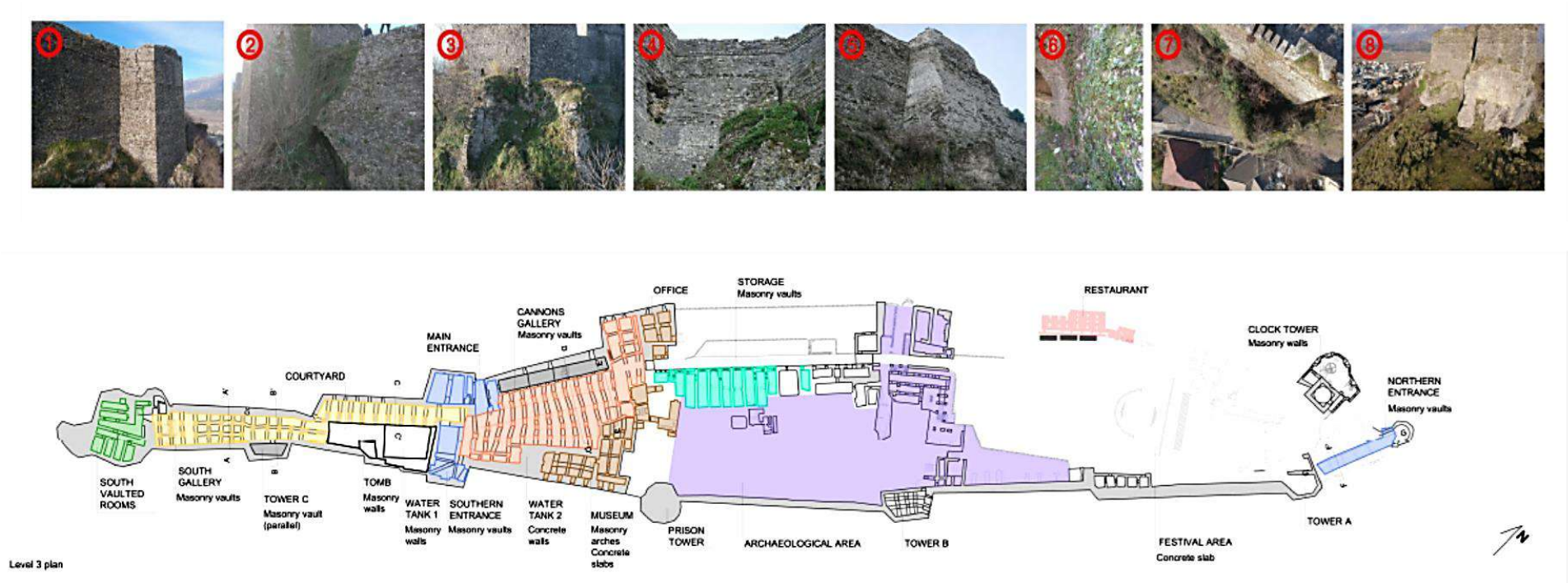

Figure 28. Structural Description

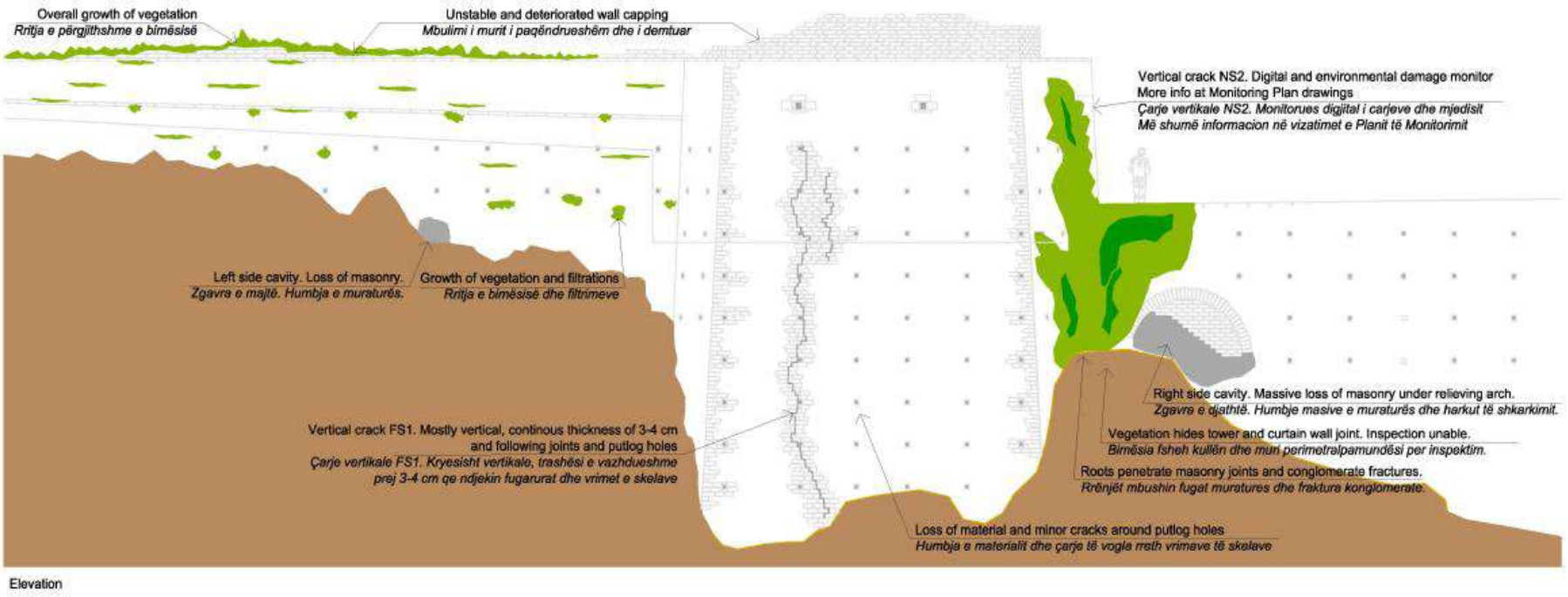

Figure 29. Tower A. Drawing

4.2.5. Structural, Geological and Hydrological Analysis

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MUSUEM STRUCTURE

Mixed structural system that consists on a unidirectional slab over concrete joists supported at the interior on bidirectional concrete frames, and on load bearing masonry walls at its external perimeter.

Figure 30. General photo

Figure 31. General view of A18 area

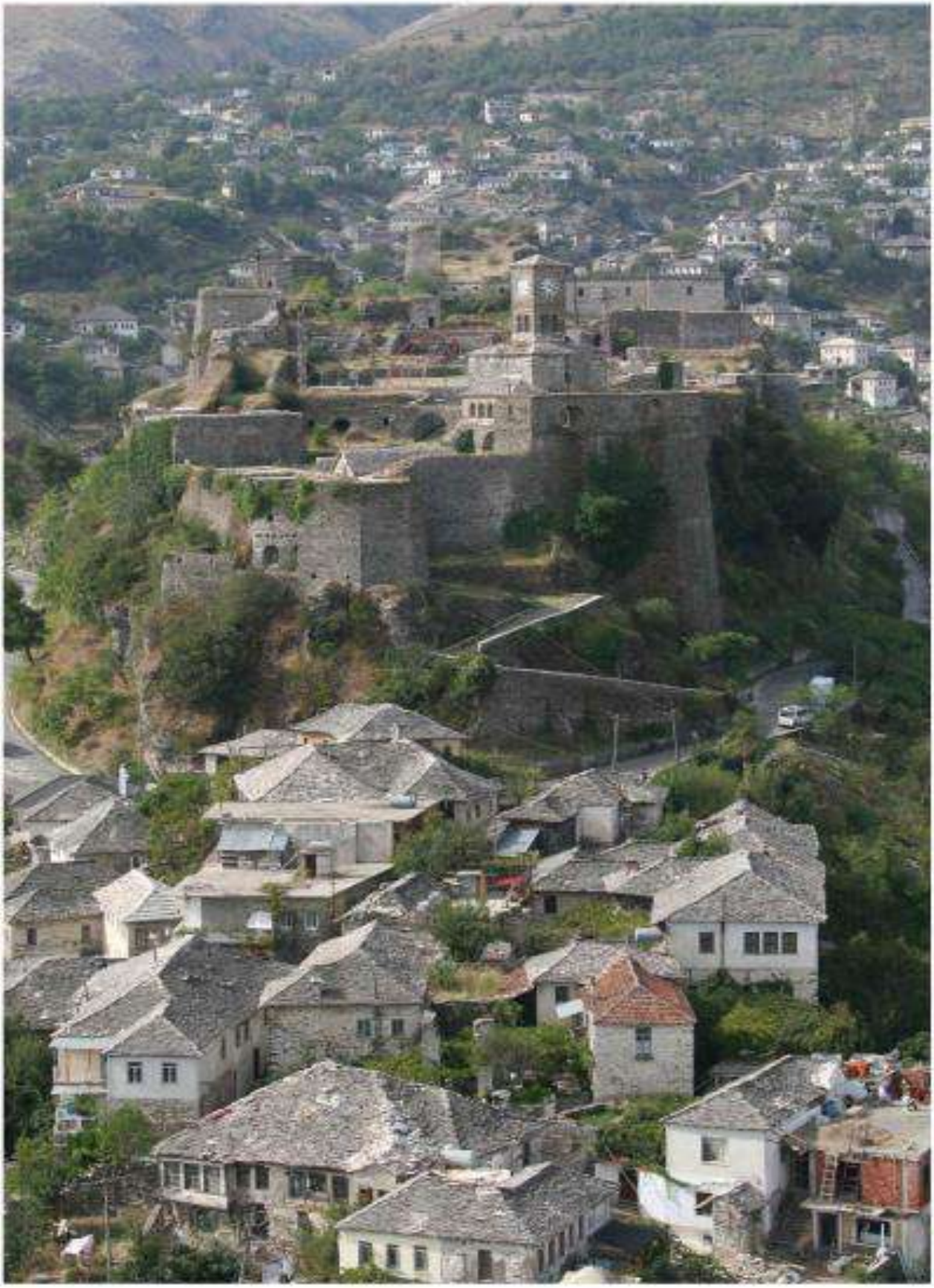


Figure 32. View of castel and surrounding area

Figure 33. Road inside the castel

Figure 34. Castels walls view in East position

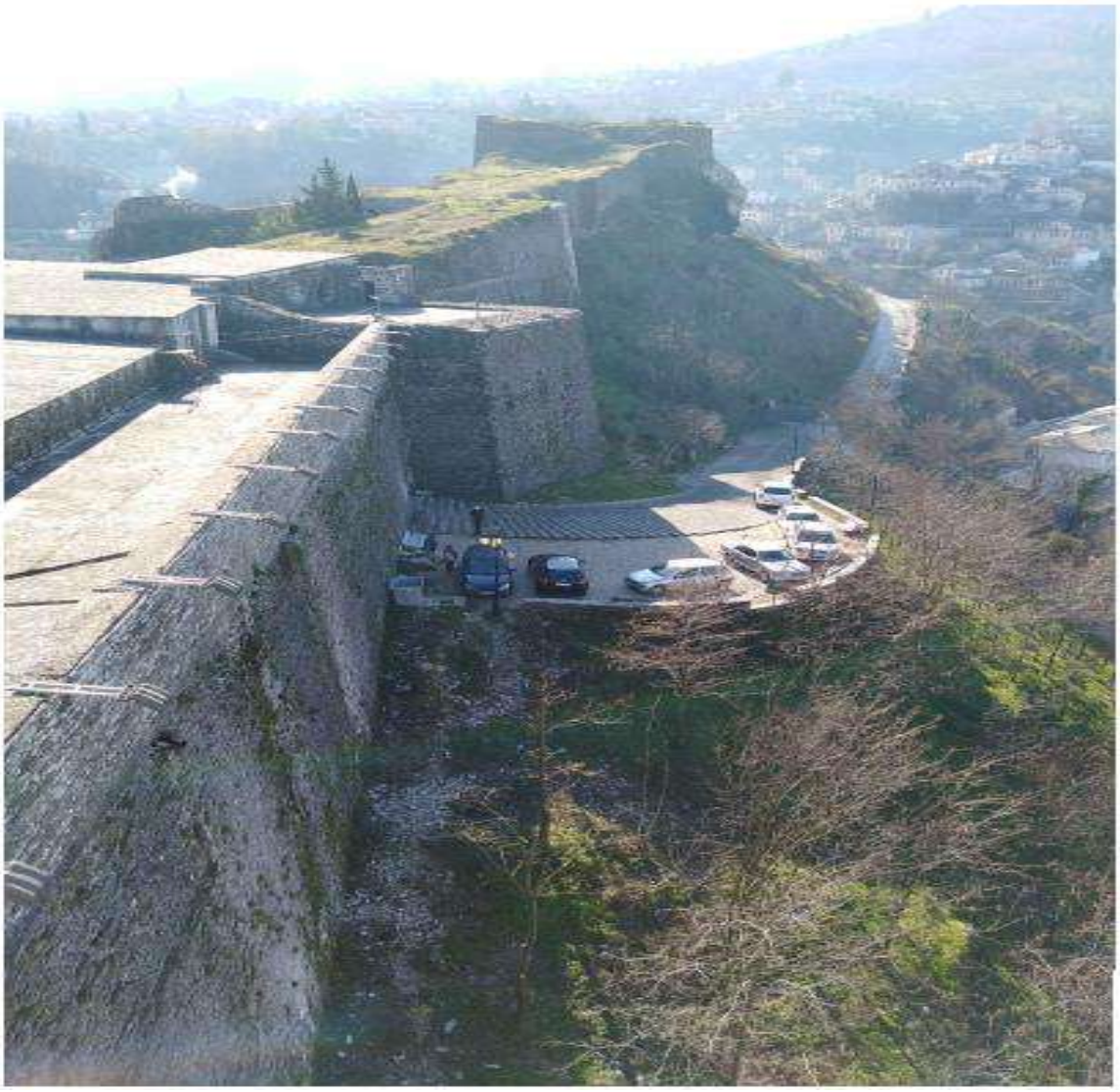


Figure 35. View in west side

Figure 36. Cracks in walls

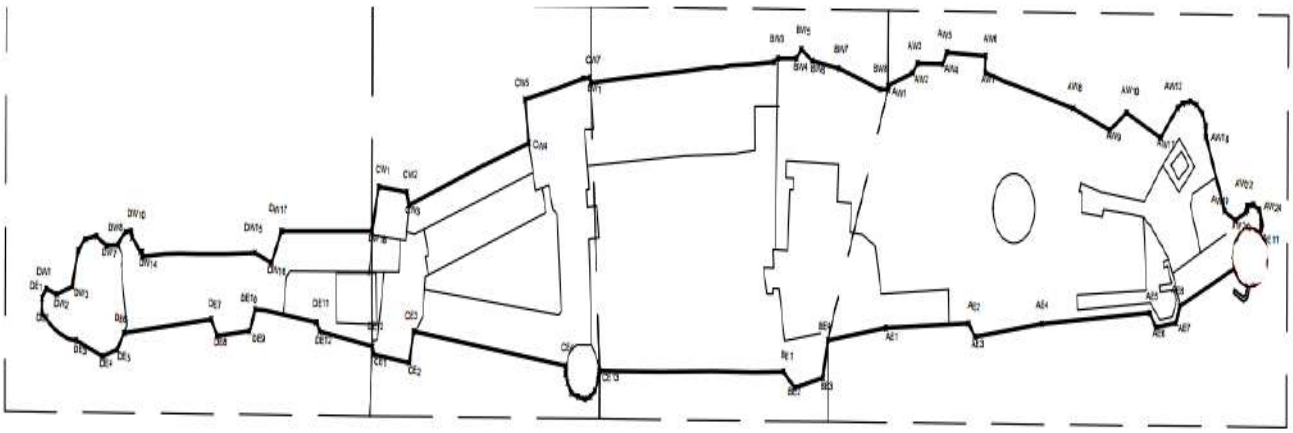


Figure 37. Sketch of the castle

4.3. DESCRIPTION OF CONSTRUCTION PROCESSES

Above all, this must be preserved given the castle´s dominant position, importance to the community, and role in the history of the region. This includes not only the castle, but also the hillside, surrounding landscape, and vistas to and from the site. Given its inclusion in the World Heritage List, the Outstanding Universal Values (historic, social, aesthetic & scientific) must be protected. The castle and town are recognized as being a place of "significance so exceptional as to transcend national boundaries and to be of common importance for present and future generations of all humanity" (UNESCO).

The values are embodied in the physical fabric of the castle. Therefore, there must be efforts to protect and maintain the original materials, authenticity, and integrity, which means that the monuments must be touched as lightly as possible, preserving all remaining original elements. Interventions must only be undertaken where necessary structurally, for both short and long term stability and for visitor safety. These must be identified, and the causes of deterioration must be studied and understood before any intervention begins.

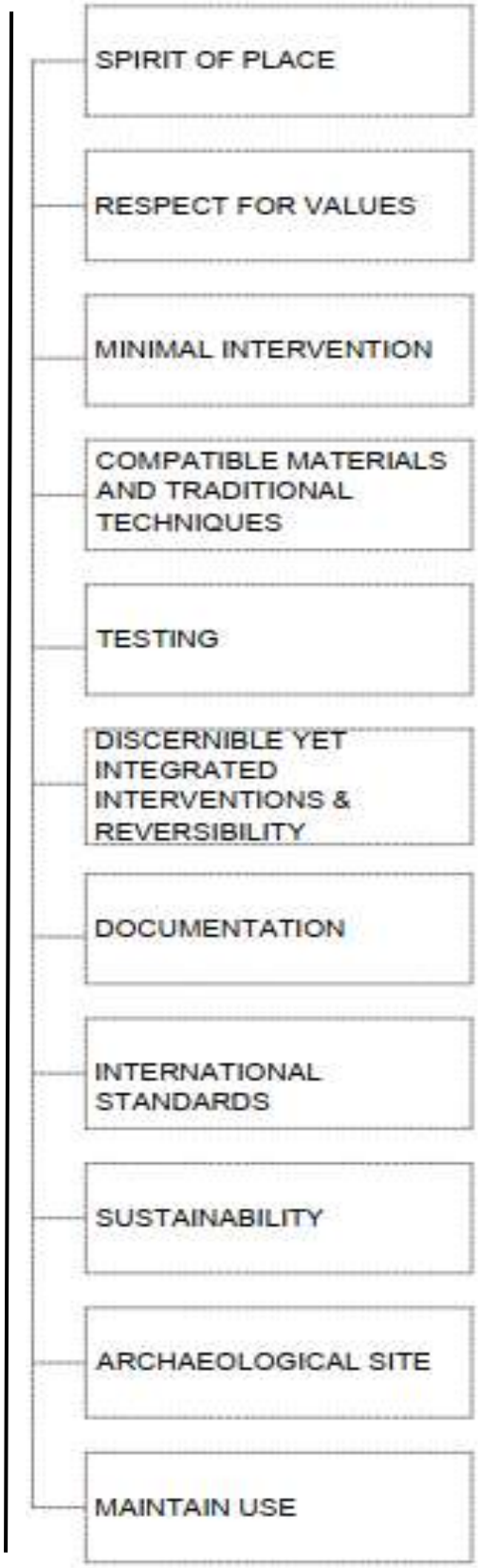
Only compatible materials will be used - the same type and size stone and mortar currently in the castle. The proper texture, color, and appearance of the walls, stones, and mortar will be respected. Any new mortar or plaster that is applied where a significant amount of old mortar or plaster survives will be integrated into the texture and appearance and color. There must not be any speculation or falsified reconstructions. Any new installations must be studied and justified and where possible traditional techniques should be utilized. All original materials, their properties, and attributes must be studied in order to understand what kind of new materials should be used, and they are compatible. In addition, all new materials (including sand, water, mortar, brick, earth) and any proposed treatments.

All interventions will be discernible from the original fabric yet must not distract from the overall impression or experience of the site. This must be marked in a subtle manner indicating upon close inspection of the interventions. These markings must not be obtrusive, and whenever possible new interventions should be made reversible. Records and documentation that can be easily followed and serve as a record of all works must be created and shared. This includes locating historical documents and photographs and the creation of a bibliography. All work will be communicated and shared with all stakeholders and discussed whenever possible. Extensive documentation of all interventions must be conducted before, during, and after any interventions. This includes digital images, 3D models, reports, videos, etc. Any intervention must conform to accepted international practices, standards, and charters. All proposed work will be reviewed before, during, and after interventions. All work should be sustainable and prepared for the long-term. This means incorporating on-site

personnel into the process and a manual for maintenance, a list of priority items, protection of the fragile area, etc. Maintenance includes control of the water on and around the monument, including improved drainage and the removal of harmful vegetation.

Gjirokastra is also an important archaeological site but also a place of tourism. Therefore, the utmost care must be taken in working at the site but also maintain access for visitation. Excavations must be conducted with care, and if any building elements or other objects found, they must be collected, and a designated authority notified. There are or may be found decorative building elements and other such elements on site. Any element(s) discovered must be protected and, if possible, left in place for the removal by an approved archaeologist. Monuments that are used and known are protected. Therefore the monument will be promoted for use as a visitor destination but also used for the community of Gjirokastra. But, the monument must be made safe. This includes creating safety barriers to upper structures, stabilizing rock, and masonry from falling. It also entails informing the public about the project and dangers in certain areas. Maintaining use also means upgrading certain facilities, including the toilet, handicapped access, and didactic signage. Finally, a Visitation Plan must be drafted and approved.

CONSERVATION PHILOSOPHY for the Castle of Gjirokastra "Conservation: all efforts designed to understand cultural heritage, know its history and meaning, ensure its material safeguard and, as required, its presentation, restoration and enhancement" (Nara Document on Authenticity, Larson 1995: xxv). The following Conservation Philosophy has been drafted to serve as a guide for current and future preservation efforts at the castle of Gjirokastra. This philosophy was based on international conservation standards, guiding documents, and extensive experience.



4.3.1. Prioritized long list of interentions

In order to address the three major issues as described above, the current proposal for short-term interventions are divided into seven categories or packages:

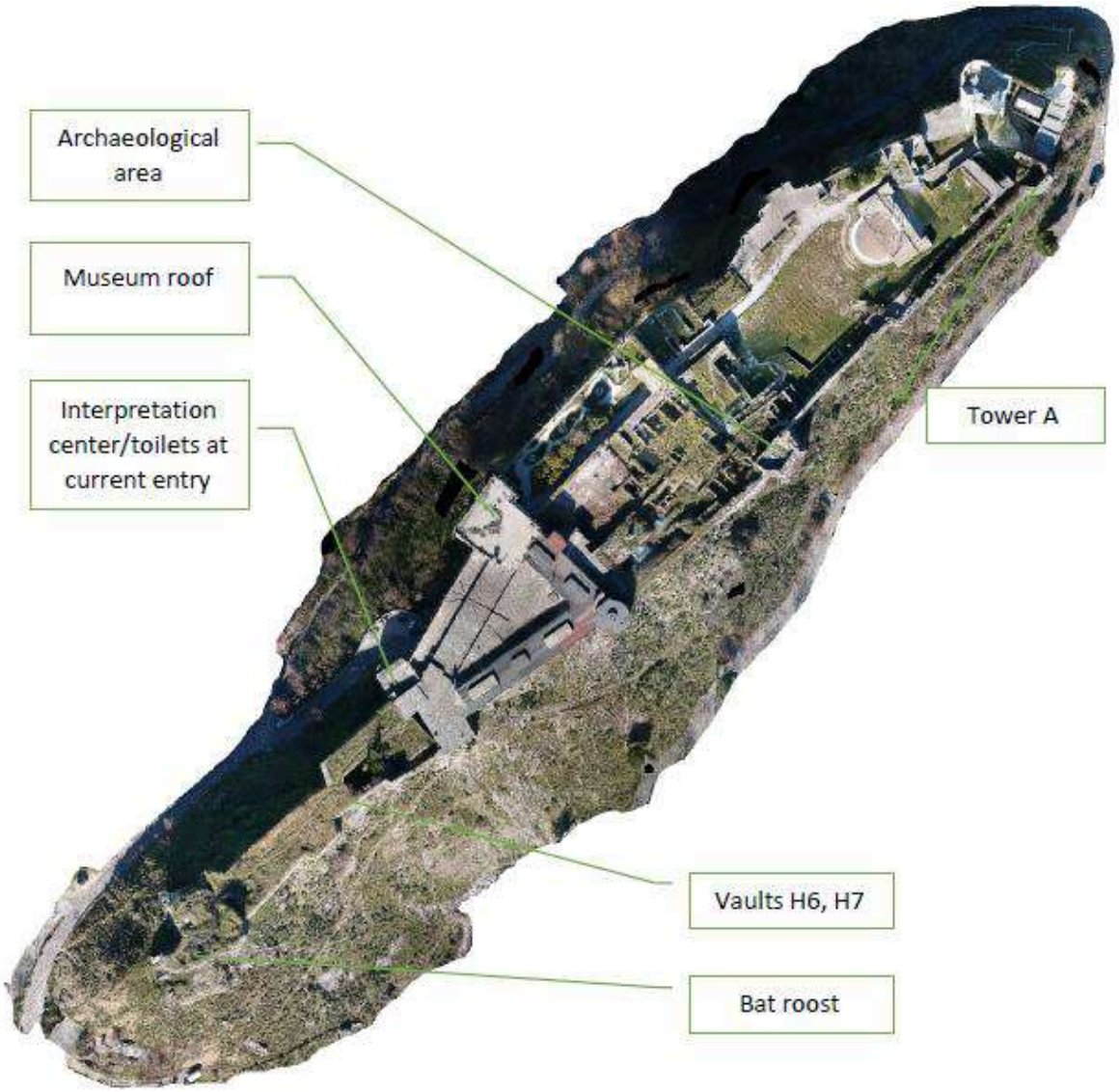


Figure 38. An orthophoto of the castle. Unstable geology is concentrated at the northeast near Tower A and the North Gate, the southwest near the Bat roots and in numerous other areas.

1) Geological Stabilization (considering the whole castle)

2) Tower A

3) Vaults H6-7 (to the southwest)

4) Interpretation Centre/Toilets – GR Vaults (at current entry)

5) Museum Roof

6) Visitor's Path

7) Drainage & Overall Spaces

Each of these will be very briefly described and how the intended interventions are intended to resolve the issues documented on site. This will be followed by a short section on alternatives considered. Before the impacts of each are discussed in the next portion.

GEOLOGICAL STABILIZATION

The scope is for the entire base of the castle. This intervention consists of drilling and pinning the rock to solid substrate and the introduction of special mortar or concrete into the fissures, joints (diaclases) and cavities below the castle. In particular a set of penetrative and large joints cross below Tower A. These geological joints combined with drainage problems have, in part, contributed to the problems described in the following section. In addition to these interventions, there will be netting secured to the rock to prevent rock falls to the road below. Gjirokastra is divided into two parts with the castle in the middle. A small road winds around the base of the castle and loose rock and debris could fall upon the frequently used road. Several smaller rocks which cannot be secured and have already fallen these will be removed. One large rock block is poised above a frequently used pedestrian tunnel which runs below the castle. These last two interventions are necessary for life safety of the residents and visitor to Gjirokastra. There will be some netting visible upon close inspection, and while aesthetically not pleasing, it will over time acquiring a patina and plant growth. The removal of several large rock blocks which pose life threatening risks will not impact OUV.

TOWER A

Seismic assessment has deemed Tower A as unsafe against seismic loading in its current condition.

Deteriorated masonry and excessive slenderness of some of the walls need addressing. Intervention strategy includes geological stabilization, masonry consolidation, monitoring and additional retrofitting, if necessary. Further finite element analysis of tower A incorporating the effect of masonry consolidation will provide results about the efficiency of masonry consolidation as only intervention, and will determinethe need to provide any additional retrofitting interventions (either masonry buttress or wooden structure).

There are several aspects that need to be ad dressed in Tower A in order to improve the safety of the structure and guarantee an extension of its life

expectancy. The most important aspect for guaranteeing the stability of the tower is the stabilization of the conglomerates below, followed by consolidation of deteriorated masonry and retrofitting of excessively slender walls. The intervention will be carried out following minimum intervention criteria, which exact extent will be determined in the following task involving detailed design.

Figure 39. Aerial views of the model. Interior thinner walls are the original defensive walls and the thicker exterior walls

The tower presents high variability in the properties of the different wall sections, some of them being of very poor quality caused by masonry decay. In order to stop the decay, a very needed aspect to address is the water filtration within the masonry walls and voids. Also, walls currently show poor connection between different sections due to the existence of wall-through cracks or poor interlocking at corners, undermining their capacity as a whole. Providing good interlocking between them is important for the structural stability of the Tower. These issues will be addressed by consolidating the masonry with compatible materials matching the existing in kind. Some of the existing masonry walls have insufficient capacity against imposed displacements as a result of application of lateral loads, resulting in brittle behavior allowing only for minor displacements. Improving that behavior in order to withstand higher target displacements is a key aspect to increase their capacity. Masonry consolidation also aims to address

this issue, and if numerical analysis deems it insufficient on its own, a wooden ring beam could be installed at the top of the wall. If necessary, an external wooden structure could additionally be installed at the interior of the tower in order to laterally brace the walls against horizontal loads. Especially the rear wall (RW) is a vulnerable point of the structure in case of seismic loading and its retrofitting is therefore key for improving the overall stability of the structure. Two different options for increasing its capacity in case of a seismic event are being considered: wall thickening or the aforementioned wooden structure.

Extensive vegetation covers large sections of the walls, damaging their integrity and blocking their inspection. Vegetation clearance is much needed both around tower A and elsewhere.

All these interventions in Tower A are necessary for life safety of the residents and visitors to Gjirokastra.

VAULTS A6-7

At the rear of the castle toward the Southwest there are numerous vaults. The project proposes to conserve two of the nearest vaults to provide visitor access and, more importantly, explore the conservation aspects of these structures – currently unknown. These vaults are currently closed to the public and they contribute to the castle as a whole representing an expansion of the castle in the 19th century to fortify the entire hill top and protect the source of water coming from the aqueduct at the southwest. Thus it is important to provide access and raise awareness of this hidden and closed portion of the castle. One aspect critical to this conservation is that there are several bat species living in the castle at the extreme southwest. This proposed intervention would only cover the first two vaults and a bat expert has been engaged and stated that these works would not disturb the bats. It is also planned to place infrared cameras to monitor the bats and these would remain after the works to inform visitors of the other inhabitants of the castle.

INTERPRETATION CENTER/TOILETS

The current toilets are not connected to the city sewer system below and add significant amounts of water to the conglomerate below contributing to geological instability. Thus, the project proposes to discontinue the existing toilets and install new toilets near the current entry. These toilets will be connected to the city sewer system and not contribute to the water load under the castle. In addition, a small reception or visitor interpretation center will be constructed adjacent to the toilets to provide more information to visitor. The current small wooden space for taking tickets will be removed and this function will be added to the interpretation center. This action will enhance the entry to the castle and

increase awareness of the importance of this structure and its contribution to the history of Albania and the region.

MUSEUM ROOF

The scope is this intervention is rather small and only includes the installation of a new bitumen built-up roof over the museum. This action is necessary because the existing roof has failed and was blown off in a storm. This has exposed the concrete structure and permitted water infiltration into the museum. Water has caused some oxidation of the steel reinforcing concrete bars and put the collection within the Museum at risk. The proposal is a new roof until major changes are planned in a possible separate project specifically for the Museum.

VISITOR'S PATH

The number of visitors to Gjirokastra and the castle have been increasing in past years. Currently there is little control over where the visitors go within the castle with the exception of some locked gates. In addition, there are many unstable and sensitive archaeological areas, loose wall caps, exposed electrical connections, and areas of height where visitors could be in danger. The sheer size of the castle and limited budget necessitated a prioritization of the intervention. Therefore, this aspect of the project was to design a defined visitor path with the necessary safety interventions designed along this path. These interventions include the addition of a path (material yet to be determined), securing coping stones and lights, and the installation of guardrails and warning signs.

Accessibility for persons with disabilities was also included into the project. The castle has very rough surfaces, many historic, over a large area. However, for the most part 80% of the castle is on the same level, thus a proposal was made to provide an all-terrain wheelchair, a dedicated parking space at the castle entrance, and training for the staff for any visitors with disabilities.

DRAINAGE & OVERALL SPACES

The scope is address the drainage and other elements on a sitewide basis. The objective of the hydrological intervention is better manage the water at the Castle of Gjirokastra. This is critical given the propensity of the underlying geological conglomerate to erosion. Erosion over time is one most damaging factors to the castle causing instability in not only the geology and foundations but in the built heritage fabric. The water also nourishes vegetation which, while seemingly innocuous, is very damaging. Tree roots severely damage the conglomerate,

foundations, and walls slowly forcing their way into cracks and mortar joints and allowing more water to enter. The removal of water quickly from the site prevents, in part, the growth of trees. Considerations are made for the sensitive cultural heritage and archaeological resources as well as use of the castle and cost vs. benefits. While all the water cannot be completely controlled an overall strategy and pragmatic interventions will significantly reduce the negative impacts of water. There are two main sources of water in the castle: a) rainfall on the castle and b) water brought into the site. This water management section addresses overall interventions to remove this threat from the castle. When at all possible the natural drainage and existing drainage channels are used but improved. When these constructed channels are terminated short of the public right-of-way they are extended to ensure there is no erosion at the base of the walls or stone. In large earthen areas the strategy is to stabilize the soil with a lime slurry with a surface swale toward a drain. Large catchment areas will be directed into downspouts mounted on the curtain wall. While not ideal, it better controls the water from height. In small areas a newly enlarge scupper will be installed and the surface prepared beneath to prevent damage. The goal is to prevent too many surface downspouts.

Other elements related to the overall space intervention are to remove redundant electrical elements, additional plumbing, repair the infrastructure of the cistern systems, and the installation of lightning rods

4.3.2. Needs for interventions in Tower A

There are several aspects that need to be addressed in Tower A in order to improve the safety of the structure and guarantee an extension of its life expectancy:

- Masonry decay: the tower presents high variability in the properties of the different wall sections, some of them being of very poor quality. In order to stop the decay, a very needed aspect to address is the water filtration within the masonry walls and voids.
  - Water filtration through masonry: lack of masonry units and mortar in joints, deficient wall capping, loss of large masonry sections and cracks are allowing for easy water percolation within the walls.
  - Water filtration through soil: water currently runs freely inside the tower and adjacent areas.
- Brittle behavior allowing minor displacements: as per the numerical simulations results (see 2.S1 to 2.S3) some of the existing masonry walls have insufficient capacity against imposed displacements as a result of

application of lateral loads. Improving that behavior in order to withstand higher target displacements is a key aspect to increase their capacity.

- ❒ Recover connection between walls: the walls currently show poor connection between different sections due to the existence of wall-through cracks or poor interlocking at corners, undermining their capacity as a whole. Providing good interlocking between them is important for the structural stability of the Tower.
- ❒ Wall instability: numerical analysis has shown that the rear wall (RW) is a vulnerable point of the structure in case of seismic loading. It's early failure due to its length and slenderness affects the overall stability of the structure and its retrofitting is therefore key for improving the overall stability of the structure.
- ❒ Geological stabilization: the most important aspect for guaranteeing the stability of the tower is the stabilization of the conglomerates below. See Geological section of this deliverable for additional information.
- ❒ Vegetation: extensive vegetation covers large sections of the walls, damaging their integrity and blocking their inspection. Vegetation clearance is much needed both around tower A and elsewhere.
- ❒ Further inspections: after the removal of vegetation and the installation of scaffolding, additional inspection is needed in order to identify any additional issues not observed from below the cliff or at the bucket lift inspection. Also, archaeological excavations will be carried out in the following months in order to determine, among others, the real foundation level of vulnerable walls such as the rear wall (RW). The findings might have influence in the estimated capacity, and thus the assumptions will need to be revised once the archaeological excavations are completed, with the intention of calibrating the intervention to the minimum necessary.

Incremental intervention procedure

The first step to achieve a higher capacity that meets the seismic demands of the region is improving the masonry mechanical properties, which can be done by means of masonry consolidation, such as lime-based grout injections and crack stitching.

Masonry consolidation is a widely accepted retrofitting technique for historic masonry, proven by many technical publications addressing both practical cases and research. It can greatly improve the capacity of masonry structures, but the non-standardized nature of historic masonry makes it difficult to quantify the exact level of additional capacity provided by masonry consolidation works until they are carried out. Ideally, once they have been implemented, additional sonic

and dynamic testing would be carried out in order to portray the upgraded structural properties, and further verify the capacity of the injected structure. This would allow to structure the intervention as a two-phases incremental approach. Phase 1 would be the consolidation of the masonry walls and further monitoring of their behavior for quality and performance control. Phase 2 would be the installation of additional reinforcement in case the monitoring results are unfavorable.

This would be the ideal approach in order to make sure that the minimum intervention is guaranteed, which is good both in terms of conservation philosophy and economic efficiency. However, the client's need of foreseeing, logistically and economically, all potential interventions that might be required to be implemented is understood. For this reason, the structural team will work with forecasts based on conservation engineering practice in order to predict the efficiency of lime-based grout injections while keeping in mind the possibility that additional reinforcing might be needed.

4.3.3. Structural Interventions Criteria

1. Minimum intervention

As it corresponds for a World Heritage Site like Gjirokastra, it is important to work under the premise of minimum intervention, in order to protect the integrity and authenticity of the historic sites and respect its outstanding universal values.

Maximizing the authenticity of the structure is only possible by doing as much as necessary and as little as possible, as recommended by the Burra Charter (2013) in its article 3: Cautious approach.

2. Sustainability and km0 suppliers

Climate change, the importance of emissions reductions, 2030 Agenda and Sustainable Development Goals, the future European strategy of the Green Deal and many other cues are pointing to the importance of integrating sustainable practices in every aspect of built heritage, including the restoration and consolidation of heritage structures.

Choosing locally sourced and zero-to-low emissions materials, such as traditional ones, is key to meeting worldwide sustainable goals and assuming our responsibility.

3. Traditional material and skills

Recovering or continuing the use of traditional materials and craftspeople is key for keeping alive the knowledge of how to work with them for future generations.

The aim of the project is to provide solutions based on traditional retrofitting techniques that can be carried out by local craftspeople and used as training experience for their teams.

4. Monitoring

Short- and medium-term monitoring is important for observing the progression of the structure before and during an intervention. This allows to quickly identify: (a) any alteration in the trends of the monitored parameters; (b) the effect on the structure of any consolidation works, whether in the structure or adjacent to it; (c) the progression of the structure immediately after carrying out interventions, in order to validate their efficiency.

Long term monitoring is useful for detecting any future potential damages in early stages of their development

5. Retreatability

Interventions should be reversible, when technically feasible. When not possible, or in conflict with preserving the outstanding universal values of the structure, interventions should be at least retreatable and should not prejudice future interventions when these become necessary.

6. Compatibility

When the choice of materials to be used in a structural intervention is made, it is important to take into account the compatibility between the existing material and the proposed one.

Stone and lime mortar (of similar characteristics to the existing ones), as well as wood, are a good choice for masonry retrofitting, as proved by the historic use of these materials together since centuries ago. Wood can absorb the tensile stresses that masonry cannot, while masonry can protect from environmental agents.

7. Cost efficiency

The purpose of the proposed retrofitting solutions is to address only the needed interventions, using efficient technical solutions while avoiding unnecessarily expensive materials.

An incremental procedure can help calibrate the exact level of intervention that is needed, as well as taking advantage of the need of using auxiliary means for addressing other issues in otherwise inaccessible locations of the castle.

8. Ease of maintenance

Very much linked to cost efficiency, providing solutions keeping in mind maintenance works helps guarantee the durability of the interventions.

Structural maintenance, especially in extensive sites built over cliffed terrains, can often be a difficulty. Proposing solutions demanding high maintenance (e.g.

periodical painting of steel or annual vegetation cleaning) can sometimes result in long-term neglect. For this reason, all aspects of the proposed solution will be designed in order to minimize the need for maintenance.

4.3.4. Short –term intervention on the project area

Types of damages

- Failure of hidro-insulation of the roof
- Wall capping unstable
- Overgrown vegetation
- Moss
- Missing floor
- Damaged floor
- Loss of masonary
- Cracks
- Loss infill
- Missing timber ties
- Missing timber floors
- Infill with cement

Description of damages:

Spacies H8-H14

Soft capping covering of the vaults have lost hydro isolation properties. Due to this, mortar joints have been weakened and are allowing the filtration of water through a vaults cross section. The result of this is water dripping from the ceiling for days and weeks after the rainfall. In the inner vaults elevations longitudinal openings of the joints are observed throughout the whole space. All the structure bellow the vaults, including arches, walls and vaults is completely wet after rain, and especially during fall/winter/spring periods, new layers of moss are created over entire sections, adding to already existing layers. Walls seem sturdy and with many building additions which all appear historical. Floor is missing and is uneven. Only space H14 has a cobble stone floor that is sinking. Moss is present in walls and vaults.

Spacies A5-A7

All sections of the space are the remains of former settlement. The structures need a full archaeological examination, interpretation and treatment. There are

remains of the existing floor but in small section. Most of the floor is missing and uneven. The hydro insulation layers of the roof have failed causing also loss of infill in most of the surface of the vaults. The joints of the vault in the section A6 are partially filled with cement. The masonry of the spaces are of different typologies/periods. A5 is the main path leading to sections A13-17 and A19-29, the sections with archaeological interest. The floor of the path is missing and the whole surface in uneven. The floor need to be treated as to secure the visitors walking there. Railing also should be placed to secure the visitors path.

Spacies A30-A32 & A33

All sections of the space are the remains of former settlement. The structures need a full archaeological examination, interpretation and treatment. There are remains of the existing floor but in small section. Most of the floor is missing and uneven. The hydro insulation layers of the roof have failed causing also loss of infill in most of the surface of the vaults. The joints of the vault in the section A6 are partially filled with cement. The masonry of the spaces are of different typologies/periods. A5 is the main path leading to sections A13-17 and A19-29, the sections with archaeological interest. The floor of the path is missing and the whole surface in uneven. The floor need to be treated as to secure the visitors walking there. Railing also should be placed to secure the visitors path.

Spacies M4-M26

Faulty hydro isolation is causing sever leaking into all the interior spaces of prison and arms museum. The internal areas are affected; as evident through a loss of internal rendering, humidity stains, corrosion et. Especially the rooms of the prison are important since the walls are full of inscriptions and carry the memory of both imprisonment through state managed oppression, but also the memory of individually oppressed and who served their time in the prison. Furthermore, the faulty roof is also causing significant damage to arms museum which is housing artefacts of arms, sculptures and scripts from different periods.

Spacies GR1-GR4 & A18

Ceiling vaults are saturated with water leaking from a faulty concrete roof constructed in 70s; the water drips down the walls and the division arches. The masonry is suffering overall infill loss; and sections of the wall suffered loss of masonry. The sections above openings showcase traces of the possible timber ties; There used to be a timber floor and space was used for living given the presence of open fire place. The chimney is not any longer existing. Floor is uneven and appears to be broken across the whole surface.

Spaces 21

All sections of the space are the remains of former settlement.all the structures need a full archaeological examination, interpretation and treatment. A 21 will be opened as a path for the visitors to able to see the spaces but not

going through them until a full archaeological examination is taking place. There is no floor in the whole path and the surface is uneven. The vegetation is growing uncontrolled. The top of the walls of the ruined structures next to the path are unstable. Railing is proposed to be places as for visitors not to enter in the spaces but only to see those by passing

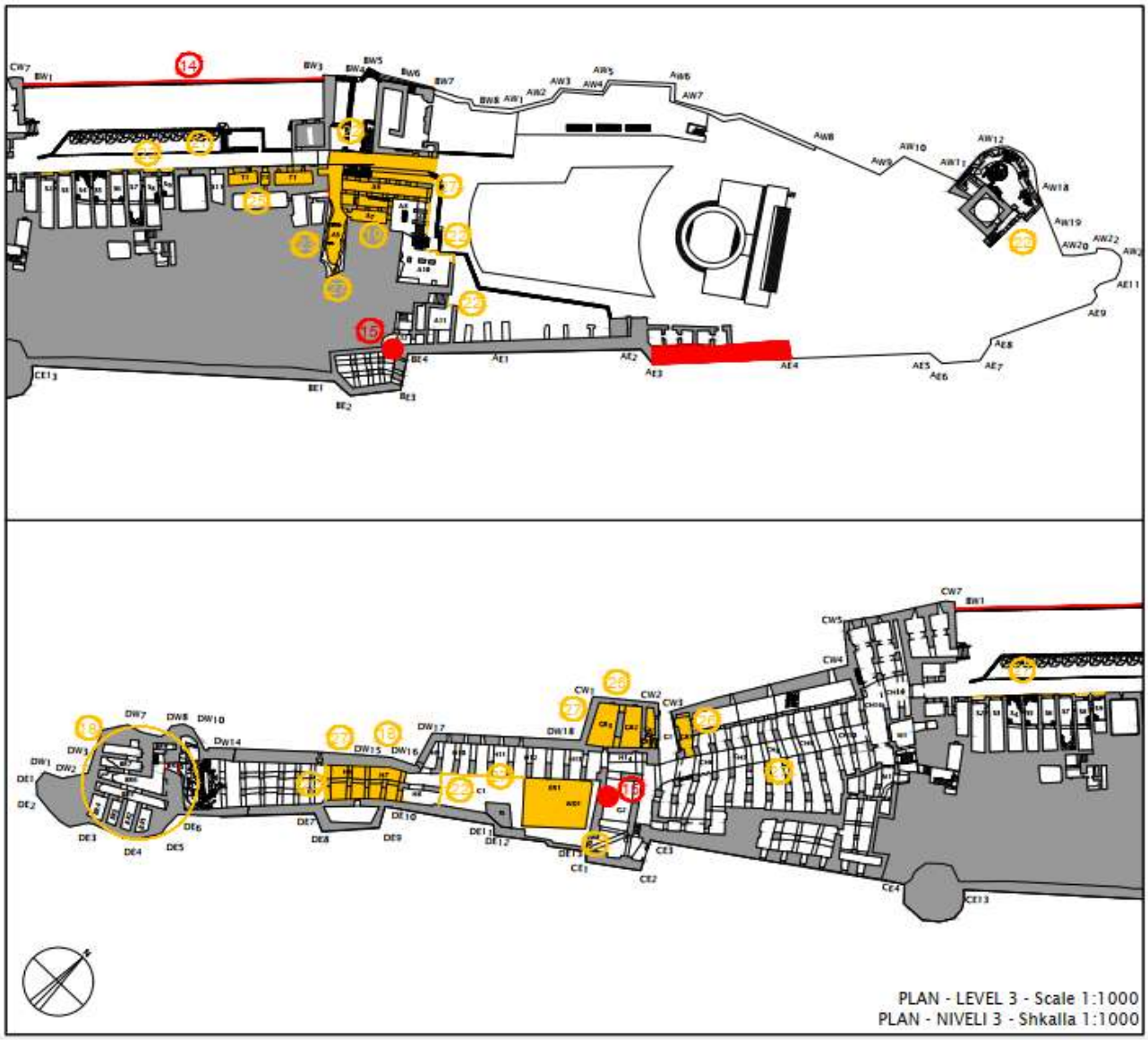


Figure 40. Plan of project level 3

After we identify the damages, we need to determine the type of intervention needed. It is depended by damages. Below we can see some kind of intervention:

1. Concret reinforcement and anchors to prevent rock/ soil fall SW
2. Concret reinforcement and anchors to prevent rock/soil fall NW
3. Concret reinforcement and anchors to prevent rock/soil fall NE
4. Concret reinforcement and anchors to prevent rock/soil fall N

5. Anchors to prevent rock/soil fall butres
6. Net to prevent rock/soil fall SE
7. Net to prevent rock/soil fall NE
8. Net to prevent rock/soil fall N
9. Net to prevent rock/soil fall butress
10. Consolidation of B4 bastion
11. Emergency stabilization of A18 structure
12. Consolidation of section of curtain wall AE3-5
13. Consolidation section of curtain wall AE8-9
14. Securing projecting elements in public areas
15. Instaling lintels
16. Securing bulged masonary walls
17. Consolidation H1-14 section
18. Opening H6 and H7 space
19. Conservation of A6-7
20. Conservation of A30-33
21. Roof repair M4-M26
22. Creating a safe visitors path
23. Conservation A5
24. Conservation A21
25. Refurbishment of Toillettes
26. Refurbishment of Ticket office
27. New electrical and water installations
28. Removing unused electrical cables and water pipes
29. Additional archeological escavations A13-17
30. Maintenance schedule and monitoring

4.3.5. Schedule of medium term

Different intervention which are necessary about medium term scheduler are separated in category. In this section we have category 2, 3 and 4.

CATEGORY 2 - High structural/geological risk; Possible danger to visitors/ pedestrians; Direct loss of heritage value; enhancing usage potential.

CATEGORY 3 - Medium structural/geological risk; Possible danger to visitors/ pedestrians; Possible loss of heritage value; enhancing usage potential.

CATEGORY 4 - No/low structural/geological risk; No danger to visitors/ pedestrians; Maintaining heritage value; enhancing usage potentia.

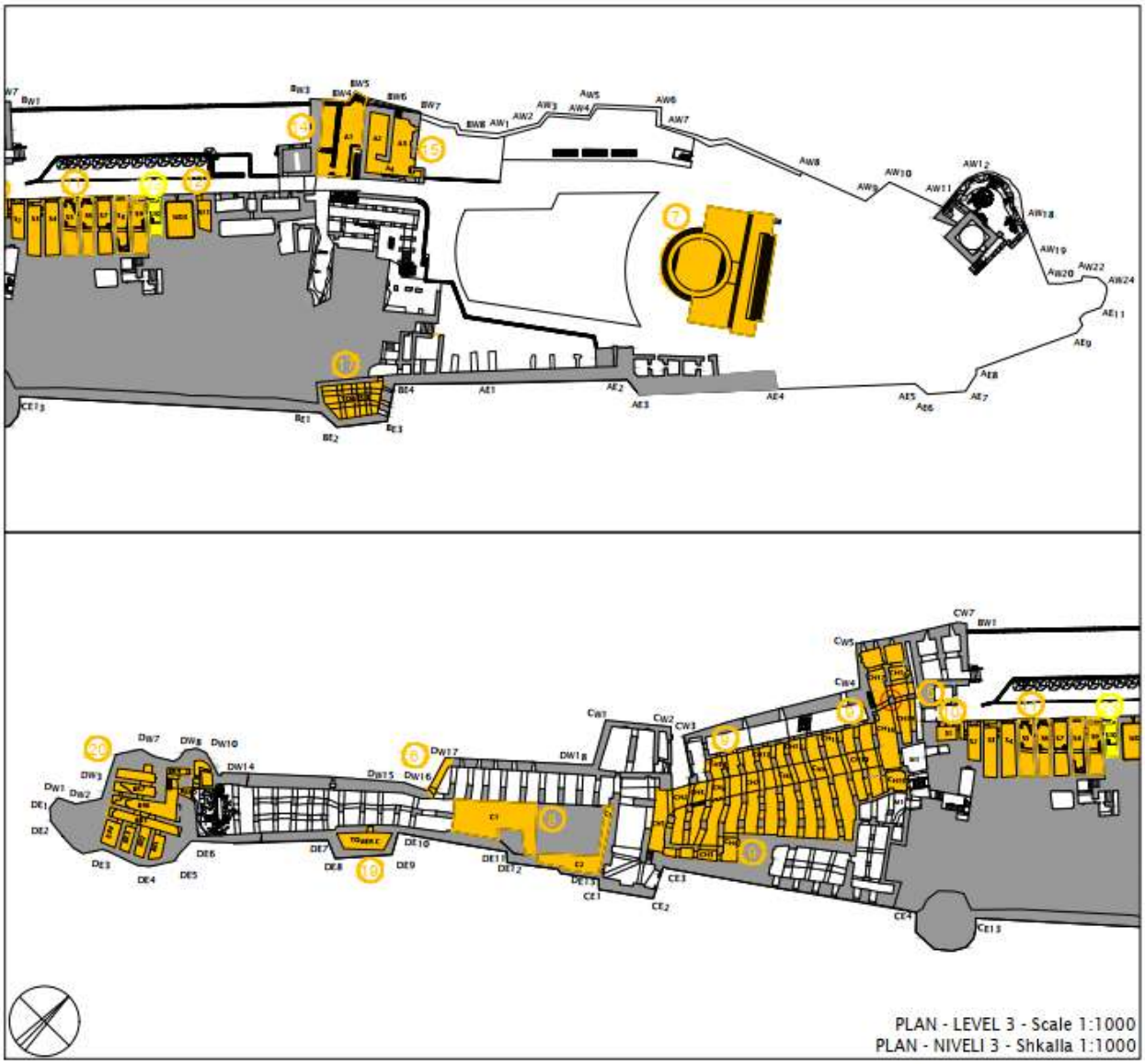


Figure 41. Plan of medium term

Table 9. Intervention of medium term

Category 2	Type of intervention
1	Concret reinforcement and anchors to prevent rock/soil fall S
2	Concret reinforcement and anchors to prevent rock/soil fall SW
3	Concret reinforcement and anchors to prevent rock/soil fall S A/B
4	Concret reinforcement and anchors to prevent rock/soil fall NE
5	Compression cracking in localized masonry pears
6	Repointing and consolidation of section of curtain wall DW16-17
7	Repair of bendstand
8	Conservation C1-C3
9	Local repointing CH1-CH19 phase 1
10	Conservation S1
11	Conservation S2-S9
12	Conservation S11
13	Conservation of A 30-32
13	Conservation of A1
15	Conservation of A2-4
16	Conservation of B5 Bastion
17	Conservation of B3 Bastion
18	Conservation of B2 Bastion
19	Conservation of B1 Bastion
20	Conservation of BR Bastion
21	Interior conservation of M4-21
Category 3	
22	Additional archeological escavations SE area-aquaduct
23	Additional archeological escavations S10
24	Additional archeological escavations A19-29
Category 4	
25	Naintenance schedule and monitoring

4.3.6. Schedule of long term

Different intervention which are necessary about long term scheduler are separated in category. In this section we have category 1, 2, 3 and 4.

CATEGORY 1 – Extreme structural/geological risk; Danger to visitors/ pedestrians; Imminent loss of heritage value; securing usage potential

CATEGORY 2 - High structural/geological risk; Possible danger to visitors/ pedestrians; Direct loss of heritage value; enhancing usage potentia.

CATEGORY 3 - Medium structural/geological risk; Possible danger to visitors/ pedestrians; Possible loss of heritage value; enhancing usage potential.

CATEGORY 4 - No/low structural/geological risk; No danger to visitors/ pedestrians; Maintaining heritage value; enhancing usage potentia.

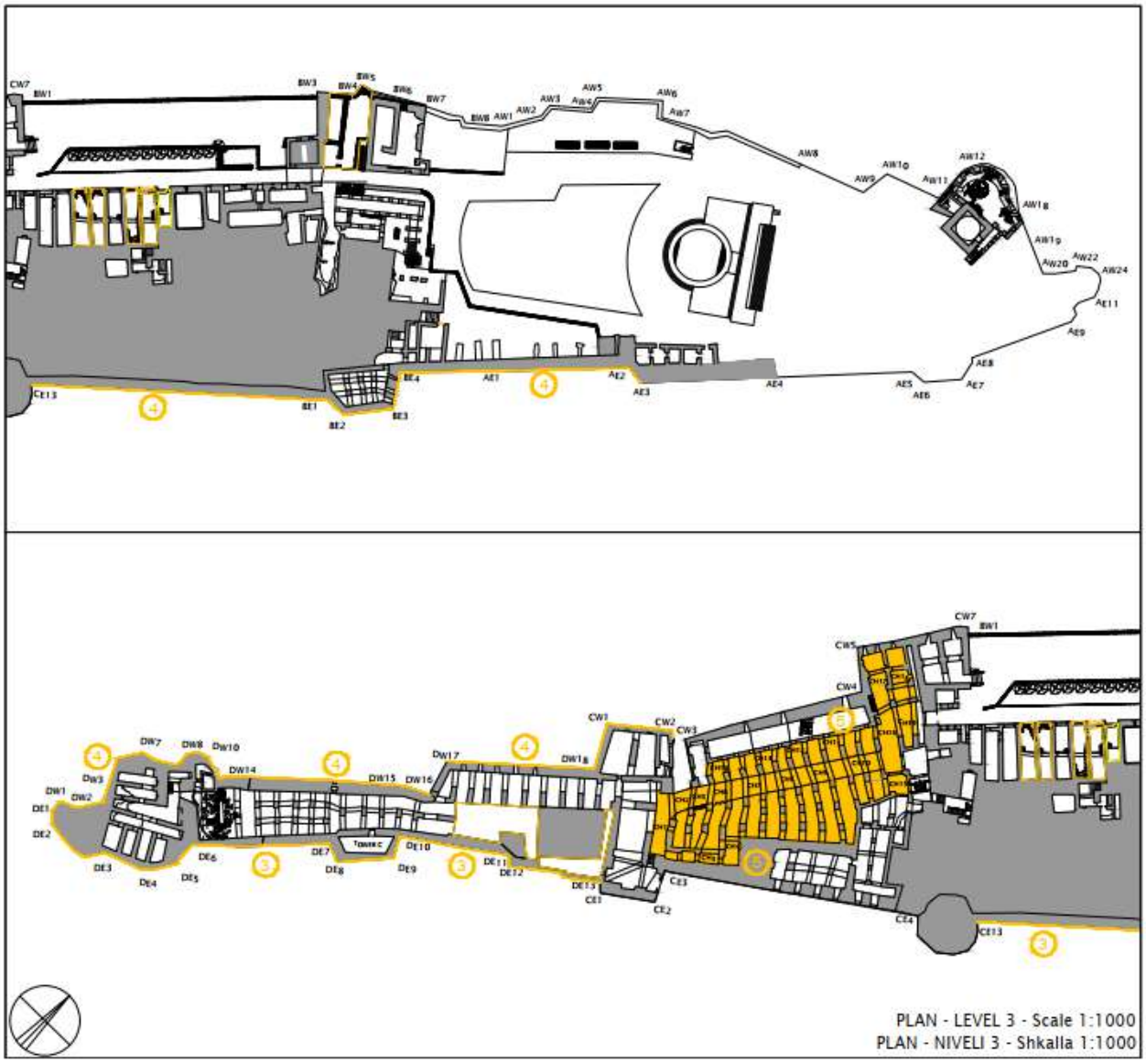


Figure 42. Plan of long terms

Type of intervention

1- Concrete reinforcement and anchors toprevent rock/soil fallwest A/B.
2- Floor refurbishment/hydroisolation A34-35.
3- Curtain wall consolidation East
4- Curtain wall consolidation West
5- Local repointing CH1-CH19 phase 2
6- Maintenance schedule and monitoring

V. METHODOLOGY FOR IMPACT IDENTIFICATION AND ANALYSIS

5.1. METHODOLOGY FOR ENVIRONMENTAL IMPACT ASSESSMENT AND ANALYSIS

5.1.1. Impact Significance

Impact significance is determined from an impact significance matrix (Table 10) which compares severity of the impact with probability of its occurrence. Impact significance criteria are as follows:

- Very High (VH) and High (H): These denote that the impact is unacceptable and further mitigation measures must be implemented to reduce the significance. Shaded red in Table 10.
- Medium (M): Impacts in this region are considered tolerable but efforts must be made to reduce the impact to levels that are as low as reasonably practical. Shaded yellow in the impact significance matrix.
- Low (L): Impacts are considered acceptable. Shaded light violet.
- Negligible (N): Impacts are very low or no impact at all. Shaded green.

Table 10. Determination of impact severity

			Sensitivity of receptor			
			Very low	Low	Medium	Very High & High
			1	2	3	4
Intensity of impact	Very low	1	1 Negligible	2 Minor	3 Minor	4 Minor
	Low	2	2 Minor	4 Minor	6 Moderate	8 Moderate
	Medium	3	3 Minor	6 Moderate	9 Moderate	12 Major
	Very High and High	4	4 Minor	8 Moderate	12 Major	16 Major

Cumulative Impacts

Cumulative effects manifest when socio-environmental conditions are already or will be affected by past or reasonably probable future development or activities. The ESIA identified current, past and probable future similar activities that compound social and environmental conditions in the project area.

Mitigation of Environmental Impacts

Mitigation measures are designed in order to avoid, reduce, mitigate, or compensate for adverse environmental and social impacts and inform the Environmental Management Plan (EMP).

5.1.2. Impact Description

Describing a potential impact involved an appraisal of its characteristics, together with the attributes of the receiving environment. Relevant impact characteristics included whether the impact is:

- Adverse or beneficial;
- Direct or indirect;
- Short, medium, or long-term in duration; and permanent or temporary;
- Affecting a local, regional or global scale; including trans-boundary; and
- Cumulative (such an impact results from the aggregated effect of more than one project occurring at the same time, or the aggregated effect of sequential projects. A cumulative impact is "the impact on the environment which results from the incremental impact of the action when added to other past, present and reasonably foreseeable future actions").

Each of these characteristics is addressed for each impact. Consideration of the above gives a sense of the relative intensity of the impact. The sensitivity of the receiving environment was determined by specialists based on the baseline data collected during the study.

5.1.3. Impact Evaluation

Each impact is evaluated using the criteria listed in Table 11. To provide a relative illustration of impact severity, it is useful to assign numerical or relative descriptors to the impact intensity and receptor sensitivity for each potential impact. Each is assigned a numerical descriptor of 1, 2, 3, or 4, equivalent to very low, low, medium or high. The severity of impact was then indicated by the product of the two numerical descriptors, with severity being described as negligible, minor, moderate or major, as illustrated in Table 11. This is a qualitative method designed to provide a broad ranking of the different impacts of a project. Illustrations of the types of impact that were assigned the different grades of severity are given in Table 11.

Table 11. Classification of impact evaluation

	Classification	Description
1	Extent:	Evaluation of the area of occurrence/influence by the impact on the subject environment; whether the impact will occur on site, in a limited area (within 2 km radius of the site); locally (within 5 km radius of the site); regionally (district wide, nationally or internationally).
2	Persistence/ Duration:	Evaluation of the duration of impact on the subject environment, whether the impact was temporary (<1 year); short term (1 – 5 years); medium term (5 – 10 years); long term (>10); or permanent.
3	Social Context/ Sensitivity or Potential for Stakeholder Conflict:	Assessment of the impacts for sensitive receptors in terms of ecological, social sensitivity and such things as rare and endangered species, unusual and vulnerable environments, architecture, social or cultural setting, major potential for stakeholder conflicts. The sensitivity classification is shown below: *High sensitivity:* Entire community displacement, destruction of world heritage and important cultural sites, large scale stakeholder conflict, etc. *Medium sensitivity:* Displacement of some households, moderate level of stakeholder concern *Low sensitivity:* No displacements, no potential for stakeholder conflict.
4	Regulatory and Legal Compliance:	Evaluation of the impact against Local and International legislative requirements. *High:* Prohibition terms for specific activities/emissions. Major breach of regulatory requirements resulting in potential prosecution or significant project approval delays. *Medium:* Potential breach of specific regulatory consent limits resulting in non-compliance. *Low:* No breach of specific regulatory consent limits anticipated.
5	Overall Impact rating (Severity):	Using a combination of the above criteria, the overall severity of the impact was assigned a rating Severe, Substantial, Moderate, Minor and negligible. Refer to Table 10 for broad categories of impact for each rating.

Note: These are only guidelines that will lead the professional judgment required for every case.

5.2. METHODOLOGY FOR SOCIAL IMPACT ASSESSMENT AND ANALYSIS

The purpose of the assessment of social influences is to assess the temporary and permanent impacts of the proposed project. It should emphasize the need to create positive effects and benefits for the community, not just for investors.

In the assessment of possible social impacts, the following topics were considered:

- Impact on Cultural Heritage
- Potential Landscape and Visual Impact
- Changes in the health and safety of the community
- Changes in housing and infrastructure
- Work force and working conditions
- Income to material/ equipment suppliers and contractors:
- Impact on private property, and common property used by individuals

The Social Impact Assessment Approach (SIA) follows the standard procedure of the established international practice for assessing social impacts: a description of the current social / social environment (taken as a starting point), reviewing the changes in that social environment caused by the Project, determining the significance of those impacts and address appropriate mitigation measures.

The objective of the SIA process is to create a situation where the project will have no major residual impacts (impacts that will remain despite the application of mitigation measures); especially those that are long-lasting or that cover a larger area. However, it is possible for some aspects to have residual impacts, although all practical measures for reducing impacts have been exhausted.

The SIA identifies the social impacts arising from the realization of the project at its various stages: pre-construction, construction and operational phase. The pre-construction phase is the phase preceding the construction activities and includes the preparation of the necessary plans, tender procedures, planning activities and project organization. The construction phase encompasses the preparation of the construction site and the construction activities themselves. The operational phase follows the activities undertaken in the life cycle of the project.

Criteria for assessing possible social impacts of the project are given in the following table.

Table 12. Criteria for Impact Assessment

Criteria	Score	Description

Nature	Positive	Impact that creates an improvement in the current situation or introduces a positive change
	Negative	Impact creates negative changes in the existing situation or introduces unwanted elements in the same
Type	Immediate (Direct)	Impacts are the result of direct (immediate) interaction between project activity and resources / receivers
	Indirectly	Impacts that are the result of non-project activities that occur as a result of the project
	Cumulative	A product of multiple environmental / social impacts on a single receiver or effects that result as a combined effect of various development projects
Area	On the spot	Impact effects limited to 1 km from the project area
	Local	Effects of impact in width 1-20 km from the project area
	Regional	Effects of impact, 20-50 km from the project area
	National	Effects of impact over 50 km from the project area
Duration	Short term	Impacts predicted to last for a short time, usually only during construction
	Mid-term	Impacts foreseen to last a mid-term until the completion of the construction / realization of the entire construction part of the project
	Long term	Impact and its effects will continue or will last throughout the operational phase of the project
	Permanently	The impact and its effects will continue or will last even after the life cycle of the project
Probability	Surely	The impact will occur under normal operating conditions
	Probably	Influence may appear in some time, under normal operating conditions
	Not likely	Impact is not expected to occur, but may occur under normal operating conditions
Reversibility	Reversible	Potential impact is occasionally and reversible
	Nonreversible	Potential impact is permanent and irreversible
Magnitude	Negligible	There is no noticeable change in the assessed situation
	Low	A noticeable, but slight change in the assessed state
	Medium	A noticeable change in the assessed state, which does not result in a fundamental temporary or permanent change

	High	A fundamental change in a given assessed condition resulting in a long or permanent change, typically spread in nature, and requiring substantial intervention to return to the original state, exceeding national standards and limitations
Significance	Negligible	Impact of negligible meaning exists when the resource or receiver is not affected in any way by the activity given, or the intended effect is inconspicuous or background levels inseparable
	Small	Influence with little significance, when the effect is felt, but the magnitude is small enough and quite within the permissible limits and / or the receiver is of low sensitivity
	Moderate	The impact of moderate significance is within the permissible limits and standards. The emphasis of moderate influence is placed on the display that the impact is reduced to a level of reasonably acceptable limits. This does not mean that moderate impacts should be reduced to small ones, but that moderate consequences are properly and effectively managed.
	Large	Impact of great importance is what exceeds the permissible limits and standards, or an impact with great significance occurs in highly valued / sensitive resources / resources

Determining the significance of impacts relies on a reasonable argument, a professional judgment, and consideration of the views and considerations of the respective organizations.

On some topics, possible impacts are evaluated by quantitative thresholds and scaling in determining significance. In determining any impact in one of the four categories of significance, it allows different topics to be set on the same scale, which allows direct comparison.

Significance is considered as a function of the magnitude of the impact and the likelihood of its occurrence. The significance matrix is described in the following table.

Table 13. Matrix for determination of significance

SIGNIFICANCE **=Magnitude x Probability**		PROBABILITY		
		Not likely	Probably	Surely
MAGNITUDE	Negligible	Negligible	Negligible	Negligible
	Low	Negligible	Small	Small
	Moderate	Small	Moderate	Moderate
	Large	Moderate	Large	Large

In *Chapter 7, m*itigation measures were defined. The effectiveness of proposed measures in attenuating the impact was then evaluated and residual impacts were identified. The statement made with regard to the certainty of the assessed significance is valid and all measures that are not based on sound knowledge of affected environmental and social resources will have to be updated.

In Chapter 8, as part of the *Environmental & Social Management Plan,* mitigation measures, associated targets and timelines, as well as institutions responsible to meet these targets, have been defined for each resource / receptor. In addition, monitoring location/parameters, frequency and period of monitoring, as well as responsible institution, have been set.

In Chapter 9, the monitoring of the proposed mitigation are discussed. The monitoring will verify whether the predicted impacts have actually occurred and check whether the mitigation actions recommended in the ESIA and ESMP, accordingly, have been implemented in total and what their effectiveness is. Monitoring will also identify unforeseen impacts that may arise from project implementation.

VI. IDENTIFICATION OF POTENTIAL ENVIRONMENTAL AND SOCIAL IMPACTS

6.1. ENVIRONMENTAL IMPACTS

6.1.1. Impact on vegetation and fauna

Construction Phase

The Castle, although doesn't have a rich flora, contains several trees and other perennial plants. The water nourishes vegetation which, while seemingly innocuous, is very damaging. Tree roots has sometimes severely damage the conglomerate, foundations, and walls slowly forcing their way into cracks and mortar joints and allowing more water to enter. The removal of water quickly from the site prevents, in part, the growth of trees.

To ensure geological stability, selective tree and higher plant (vines) removal on the conglomerates joints and rocky surfaces is imperative. Rock falls and rocks toppling/tilting observed around the Castle is in many cases in relation to mechanical action of the roots of the trees in existing joints and fractures or with dissolution processes affecting central and west part of the cliff. In the other hand, this trees and dense vegetation (vines) does not allow a detailed aerial or terrestrial analysis of the whole slopes. All trees growing inside this joints and fractures must be removed, but only after an effective herbicide application.

It must be noted that this task can be a hazardous process involving machinery and potentially dangerous substances.

Based on the set criteria, this impact can be defined as: negative, *direct, local, long-term*, with the possibility of occurrence - *surely, irreversible, with high magnitude* and moderate significance (impact can be partly mitigated and managed).

Operational Phase

During the operational phase no negative important impacts are expected on the vegetation of the area.

The impacts during the operational phase are likely to be ***local***. The magnitude is therefore considered to be ***small***.

6.1.2. Impacts on Bat colonies

The castle of Gjirokaster is home to several colonies of bats (*Myotis myotis).* The castle was explored for the first time in 1991 when only one specimen was recorded, while in 1995 some 800 specimens were identified, reaching to 3500

specimens in 2014, possibly thanks to the transfer from former colonies in the area around Gjirokastër.

During construction activities no negative impact is expected on bat colonies, despite conserving and opening limited sections H6-7.

Also the works for Installing infra-red cameras and portable screen for viewing and understanding life of bats is not expected to have any negative impact.

No negative impact on Bat colonies are expected during the operation phase

6.1.3. Impact on Geology

Construction Phase

Intervention in the framework of this project include several activities which will impact the geology of the area. This intervention consists of drilling and pinning the rock to solid substrate and the introduction of special mortar or concrete into the fissures, joints (diaclases) and cavities below the castle. In addition to these interventions, there will be netting secured to the rock to prevent rock falls to the road below. Several smaller rocks which cannot be secured and have already fallen these will be removed. One large rock block is poised above a frequently used pedestrian tunnel which runs below the castle.

Based on the set criteria, this impact can be defined as*: negative, direct, local, long-term, with the possibility of occurrence - surely, irreversible, with high magnitude and moderate significance* (impact can be partly mitigated and managed).

Operational Phase

During the operational phase the impact on the geology can be considered as neglectable.

6.1.4. Impact on Hydrology and Hydrogeology

Construction Phase

The phenomenon of water percolation is very intense so that there is an abundant presence of water in all parts of the Castle. Along all the slopes of the Castle, including the access roads, collection and disposal systems are not in place to prevent the water from degrading and disrupting the walls and the slopes. The absence of a water collection has facilitated the formation of "landslide niches" on the slopes which, as they progressed, have disrupted roads. According to the report, to address these risks, designing a system for collecting and disposing of water from the inner parts of the Castle and along all slopes and roads is a high priority.

During the construction phase there will be no significant impacts on terms of hydrology and hydrogeology. The works to be carried out, will be small size interventions and mainly above the ground. The project does not involve opening of significant cuts in hilly or mountainous terrain or tunnel openings.

There will not be potential changes in siltation patterns as a result of construction activities.

Based on the set criteria, this impact can be defined as*: negative, direct, local, short-term, with the possibility of occurrence - likely, irreversible, with low magnitude and moderate significance* (impact can be partly mitigated and managed).

Operational Phase

During the Operational phase, impacts are anticipated to be less significant. The Project area, will not be changed the destination of use.

6.1.5. Soil and Erosion

Construction Phase

The objective of the hydrological intervention is better manage the water at the Castle of Gjirokastra. This is critical given the propensity of the underlying geological conglomerate to erosion. Erosion over time is one most damaging factors to the castle causing instability in not only the geology and foundations but in the built heritage fabric. The water also nourishes vegetation which, while seemingly innocuous, is very damaging. The construction will not destabilize soils potentially leading to soil erosion during heavy rainfall and sedimentation in drainage canals and irrigation canals of the area.

Based on the set criteria, this impact can be defined as*: negative, direct, local, long-term, with the possibility of occurrence - likely, irreversible, with low magnitude and low significance* (impact can be partly mitigated and managed).

6.1.6. Increase in waste amounts

Construction Phase

Geological Stabilization (considering the whole castle); work on Tower A, Vaults H6-7 (to the southwest), Interpretation Centre/Toilets – GR Vaults (at current entry), repairing the Museum Roof, improving the visitor's Path and repairing the Drainage & Overall Spaces in the castle area and other operations will be associated with the generation of solid (inert) waste.

Remnants can be made up, inter alia, of wood pieces or metal cuttings, various plastic materials, paper /cement bags, etc. Some of the waste materials such as

paint, cement, adhesives and cleaning solvents contain hazardous substances, while some of the waste materials, including metal or plastic pieces, are not biodegradable and may have long-term and cumulative effects on the environment. These affect the environment by blocking drainage systems and at the same time have negative impacts on human health. Other wastes that may arise from non-construction activities due to the presence of workers in the construction site and these include food waste, contaminated water from washing and cleaning of construction equipment or tools.

Based on the set criteria, this impact can be defined as*: negative, direct, local, long-term, with the possibility of occurrence - surely, irreversible, with low magnitude and moderate significance* (impact can be partly mitigated and managed).

Operation Phase

The project activities aim to address safety concerns and prevent loss of heritage structures in the castle of Gjirokastra area. During the operation phase an increase in the number of visitors, domestic and foreign. As a results waste is expected to be generated.

These residues will mainly be of the character of household waste, without risk. Unsuitable collection, treatment and disposal of these wastes can cause public health hazards due to environmental pollution: air pollution, water contamination, and infections when people or children require wastes. The potential risk from uncontrolled waste is also pollution of riversides as the project is implemented not very far from the watercourses.

The impact will *be long-term* that can last throughout the project's lifespan. The impact intensity is *low* if the Municipality and community take the necessary measures to address them. The sensitivity to the receptors will be *low*, giving little impact to the effect

6.1.7. Impact on air quality

Construction phase

During the construction phase, temporary impacts will be caused on the air quality of the under-study area. These impacts are caused by the following:

- Excavations & trenching / filling & backfilling
- Masonry consolidation, geological stabilization
- Transport of materials related to the construction phase
- Operation of machinery and worksites.

Air pollutants emitted during the construction phase can be classified into two categories. The first category is related to the dust emissions, due to construction works. The second category includes the emissions caused by the operation of the engines of machinery and vehicles. Dust emissions can cause a serious problem, especially when the project is located close to residential areas. However due to the landscape of the city it is not possible for heavy cars to approach the castle. So the use of heavy cars will be very limited. In this case proper mitigation measures are needed in order to minimize these environmental impacts.

During the movement of diesel vehicles, the most significant air pollutants emitted are the following: CO_2 from the combustion, CO from inadequate combustion, hydrocarbons (HC or VOC) which are created also by the inadequate combustion and NOx which are produced in high combustion temperatures.

The pollution from the combustion products of the engines of vehicles and machinery is not expected to be significant, mostly due to the small quantities of emissions, which will be produced by a limited number of machineries. A small increase is expected on the concentrations of the pollutants from the increase in the traffic during the construction of the project.

The increase in concentrations of certain pollutants will be local and temporary during construction works.

To sum up, the impacts on the air quality during the construction phase are considered to be local, temporary, with a **medium negative** magnitude of impact, and with a **medium** sensitivity. The air impacts can be minimized to minor with the application of the relevant working standards and measures referring to machinery emissions and worksite vehicles.

Operational Phase

During the operation, it is expected to have an increase on the air pollutant emissions caused mainly by the increase numbers of visitors and tourist cars. Consequently, in the operational phase of the project, the impacts on the air quality will be **minor negative** considering the operation of the parking areas before the arrival at the bazaar of Gjirokastra from where the tourists usually walk to the sites, and further mitigated by the application of the appropriate mitigation measures, partially reversible and long-term.

6.1.8. Impact on the acoustic environment - Vibrations

Construction Phase

Noise from the construction activities may be significant for a limited period of time. The noise levels caused by the construction activities (equipment, tools,

machinery, etc.) can vary widely, depending on the phase of construction and specific tasks being performed. All noise emitting equipment will be properly maintained to minimize the noise impact on the area. Noise emitting equipment will comply with the applicable EU noise standards for such equipment as found in EU Directive 2000/14/EC of the European Parliament and of the Council of 8 May 2000, on the approximation of the laws of the Member States, relating to the noise emissions in the environment by equipment for use outdoors.

During the construction phase, locally medium negative impacts are expected in the area adjacent to the Castle. The noise produced during the construction phase, will derive mainly from the operation of the construction tools/ equipment/machineries. The noise can become a problem depending on the distance of the project area from the receiver/receptors, the sound reflection, the existence or not of natural and artificial obstacles, from the meteorological conditions and the type of surface between the worksite area and the receiver.

As there are no houses within the Castle (unlike most of the other Castles in Albania), the only receptors that can be considered are visitors and tourists.

The negative impacts from the emission of noise during the construction phase will be caused during the working days and hours and especially during the combined operation of the machinery.

The increased noise levels due to the construction works will be *short-term and fully reversible* after the completion of the construction works. With proper mitigation measures to be taken, the noise impacts can be reduced to a minor level.

Operational Phase

During the operational phase (after the above-mentioned interventions at the Castle), it is expected to have an increased noise disturbance by an increasing visit of visitors. Consequently, in the operational phase of the project, the impacts on the noise environment will be **minor negative**. With proper mitigation measures, the noise impacts can result in minor negative to insignificant levels

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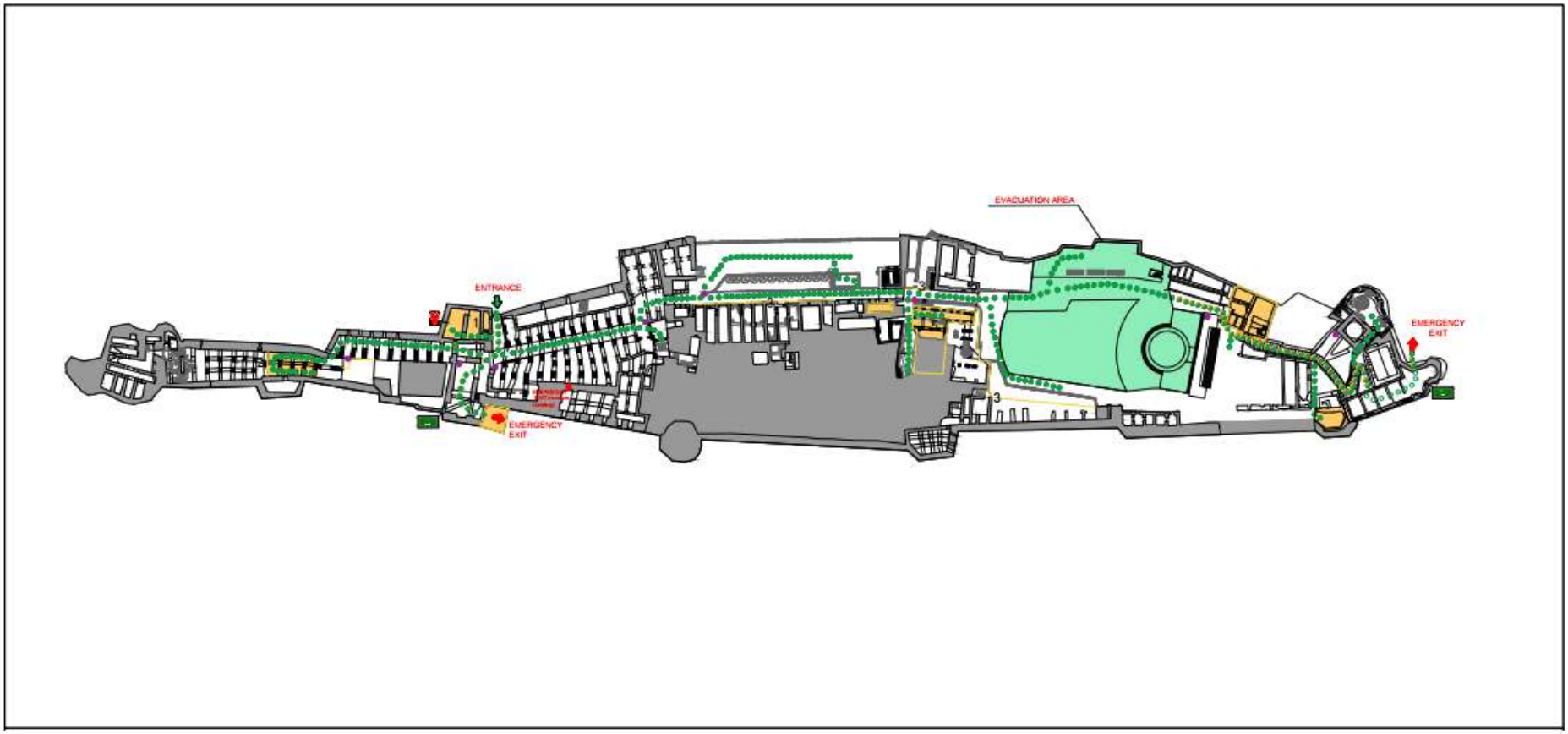

Figure 43. General structure of project area

6.2. SOCIAL IMPACTS

6.2.1. Risk of annoyance due to the low Stakeholder Engagement and Information Dissemination activities

Construction Phase

Local population will directly experience this project activities in three sub-domains: economy (some will find find employment and business opportunites), traffic and access to property and health and safety.

All these sub-domains are of crucial meaning for the local population and if any of these domains are affected by the project, and local population is not being consulted, it will find a way to express its opinion on the project.

Therefore, it is very important, during the construction phase, ADF, along with the Contractor and the Municipality of Gjirokastra to conduct proper stakeholder engagement and disseminate relevant information that affects the daily life and routine of the local residents in Gjirokastra.

Based on the set criteria, this impact can be defined as: *negative, direct, local, short-term* (it will be manifested only in the construction phase), *with the possibility of occurrence - probably, reversible, with low magnitude and small* significance (impact can be mitigated and managed).

6.2.2. Income to material suppliers and contractors:

Construction Phase

Development of the project will entail civil works requiring materials such as gravel, stones, timber, steel materials and cement. This is ***a positive*** but ***short-term*** and ***reversible*** impact. Considering that construction labour would be local or national but some equipment procured internationally, this impact has local, national and international spatial extent.

Operational Phase

No impacts are expected during the operational phase.

6.2.3. Employment

Construction Phase

Construction will avail skilled and unskilled job opportunities. This would be ***a positive*** but ***short-term*** and ***reversible*** impact, lasting only during the construction period. Wherever feasible, local people should be considered for job opportunities commensurate with their level of skills. Adequate occupational health and safety standards should be provided to ensure the work environment is conducive.

Operational Phase

Opportunities for opening small businesses (i.e. coffee shop, accommodation) along the itineraries.

6.2.4. Contract mobilization

The project is complicated therefore the scope/limits are also outlined in this document as well as clearly delineated on the drawings. Should there be ANY questions before, during, or after the work concerning scope the ADF office must be contacted.

It is the contractor's or bidder's responsibility to become familiar with these documents and contact the ADF office or CHwB / Proskene should there be any questions, concerns, or discrepancies. It is also the contractor's or bidder's responsibility to visit the site and become familiar with the unique situations present at the Castle before placing a bid or beginning work on the project.

The required inspections, tests, and reports made by the Contractor, subcontractors, specially trained technicians, equipment manufacturers, and others as required shall be at the Contractor's expense. Special facilities, devices, equipment, clothing, and similar items used by the Contractor in the execution of work shall comply with the applicable regulations.

The Contractor shall bring to the attention of the ADF any material suspected of being hazardous which he encounters during execution of the work. A determination will be made by the ADF as to whether the Contractor shall perform tests to determine if the material is hazardous. If the ADF directs the Contractor to Perform tests, and/or if the material is found hazardous and additional protective measures are needed, a contract change may be required, subject to "Differing Site Conditions" clause

6.2.5. Impact on Access to Private and Public Property

~~The Castle, while in the center of Gjirokastra may not have easily accessible access to utilities. There is currently electricity at the site, however access~~

~~must be arranged with the castle management or the municipality before there is access to power~~

~~There are also water and toilets on the site. Water can be obtained in several places in the castle; but, the contractor must provide a means for access, acquisition and transportation. Toilets are often locked and the contractor must obtain keys from the management~~.

Construction Phase

Access of the southwest part of the city to the Old Bazar and administration center of the settlement that is located next to the Castle, will be impeded, particularly during the restauration works on the Tower A. Namely, the road Gjin Bue Shpata must be closed while conducting the civil works and all of the traffic passing through this road will have to be redirected through other smaller intertwined narrow roads that are shaped in accordance with the housing objects constructed onto the steep terrain. The closure of this road that passes next to the castle will cause slight burden of the traffic on roads such as Evli Celebi, Bule Naipi and others that count longer mileage and are located in the lower parts of the city.

Therefore, the traveling time will be prolonged and, consequently, due to the narrow roads in the steep terrain, the health and safety risk of the pedestrian will increase. Some local roads will experience higher rate of use which in a long turn can shortened their period of exploitation.

This is a negative and direct impact, with very limited and local area of influence and mid-term duration. It is expected surely to occur, but it is reversible. It will have low magnitude and Small significance.

Mitigation measures are expected.

6.2.6. Vehicular Access and Parking

There must be no vehicular entry to the site except authorized by the Conservation Architect. No parking of cars or trucks within the castle is possible. There is a small parking lot on the outside of the main gate to the north facing Gjirokastra but the use of this area is limited as it is used for visitors and staff. There is also access to the south of the site however this road is rough and unimproved, however this could serve as an alternative access point. The north gate can also be an access point, but no trucks ARE PERMITTED UP this narrow entry.

6.2.7. Impact on Cultural Heritage

Construction phase

Conservation of the Castle includes, structural stabilization, installation of structural members, geological interventions, repointing of mortar, grouting of walls and underlying geology, vaults and cracks, stitching of cracks and stone replacement, etc. This also includes the installation of a new roof and moisture protection on the roof of the museum and drainage around the site. It also includes installation of toilets, an entry desk, and small interpretation center at the entry.

During the construction phase, the impact of project on cultural heritage could be direct or indirect:

The direct impacts include:

- Damages to the authentic material, for both tangible and intangible Cultural Heritage, during excavations and restoration works
- Alteration of their historical Character

The indirect impacts include:

- Limited access to cultural and archaeological heritage assets (general for the community and the visitors)
- Decrease of incomes for the Castle management during the works implementation phase

The proposed intervention have been compiled in accordance with the Albanian laws on Cultural Heritage, World Bank OP 4.11 and International charters (i.e. UNSECO) and will follow all the procedures of approvals and monitoring of the works as foreseen in the laws.

The risk to any undiscovered archaeological assets that might be damaged during the implementation of the works is also very little possible as the works do not propose large excavation works.

In this context, the magnitude of the impacts on cultural heritage is considered moderate and the sensitivity of the area is considered high due to the nearly archaeological /cultural heritage in the project area. Overall, the significance of the impact is considered –**moderate** without mitigation, but can be reduced to **minor** with proper application of mitigation measures.

Operational Phase

The intervention takes place in an Archaeological Historical area, part of the UNESCO protected site. The increased presence of tourists / visitors in the area will increase the risk of damage to cultural assets.

The magnitude is considered **minor** and the sensitivity of the area is considered **high**. The overall significance of the impacts is considered **moderate**, without mitigation, but can be reduced from **minor to insignificant** with proper application of mitigation measures.

6.2.8. Visual Impacts and Aesthetics

Construction Phase

Construction activities will require material, equipment and cordons at the site. An important part of the geological works is to be performed near a public thoroughfare such as a road. When the exposure to heavy falling rock exists and especially during slopes stabilization works, a protection system must be previously installed. A dynamic rockfall barriers installed below the works area is to be used. Since the intervention area (the Castle) will remain open for access by local community, presence of these activities and materials thereof will cause temporary visual blight at the construction site. Presence of construction activities will alter visual impressions accustomed too.

Duration of visual impact will be *short-term* only lasting through the construction phase. The impact intensity will be *very low* considering the dilapidated state of all existing facilities; therefore, sensitivity on receptors will be low, hence *minor* impact significance.

Operational Phase

The project will have a positive impact on the landscape and visuality. The effect will be *long-term, moderate*.

6.2.9. Occupational health and safety (OHS)

Construction Phase

Construction activities have potential to pose occupational risks some of which could be life- threatening, for example, fatal falls if workers do not use safety latches when working at heights. In addition, falling debris could injure workers if personal protective equipment (PPE) is not provided or properly used. Back injury could occur if workers lift heavy objects using inappropriate body posture.

Other potential hazards might be: inadequate lighting during the evening working hours or limited level of visibility during rainstorms creating difficulty for staff driving heavy equipment, driving equipment with improper brake system, lack of concentration while working and exposure to hazardous wastes such as paints, cement, adhesives and cleaning solvents.

Duration of the impact will be *short-term* occurring only during the construction phase. Extent of the impact will be *local or national* depending on origin of construction workers. The likelihood of the impact occurring will be medium considering the level of safety at construction sites in Albania. Intensity of the impact will be *medium* given that some accidents could be minor and not life threatening while others can be grave leading to permanent disability or loss of life of construction workers. Sensitivity of the receptor is *medium* resulting in a *moderate* impact significance.

6.2.10. Community health and safety (CHS)

Safety Impact 1: Housing risks for those living next to the Castle

The houses located below the Tower A, during conducting works on the same tower, will be under significant risk of damage if unexpected event occur, and part of the wall collapse on them or falling fractions cause damage on the parts of the dwelling object and other property.

Figure: Location of houses beneath the road and Tower A.

This also represents significant health and safety risk for the residents who live in these several houses beneath the road passing in the foot of the castle wall and Tower A, during construction period.

The project foresees removal of loose rock in slopes and rocky cliff. Prior to any slope stabilization task the crest area and the slope face should be prepared. The crest should be cleared of all loose material or dense vegetation to promote easy and safe access and to enable simple manipulation and placement of mesh, rock bolts, cables, etc.

Following the crest preparation, the slope face must be cleared by the process of “de-scaling”. This will typically include removal of loose rocks, soil and excessive vegetation growth from the slope face using hand tools such as mattocks, rakes and pry-bars. This work must be overseen by the Conservation Architect and Civil Engineer. Sometimes more robust methods of de-scaling may be required including mechanical methods, pneumatic or

hydraulic jacking or controlled blasting. Safe methods of working must be developed and approved before the start of works and all necessary safety precautions must be taken. ~~Install a temporary dynamic rockfall barriers installed below the works area is to be used~~.

Before any works begins the permission and observation of the conservation architect is required and an inspection must be conducted.

This impact can be assessed as negative and it is unlikely to occur, but if it occurs it will be indirect, on the spot with short duration, non-reversible with low magnitude and negligible significance for the society.

Safety Impact 2: Problems related to workers' behavior towards the local environment

Often, the Contractor is not part of the project's development process, and therefore there is no complete picture of the sensitivity of the project area, because its approach, more or less, is mechanical without paying too much attention to the local human environment. Contractors' employees, if they do not come from local populations, most often have less understanding of the needs and values of the local population, especially if they are about neighborhoods that are in close proximity to construction activities. There are cases where workers are subject to conflict between the developer and the local community.

These conflicts arise due to anxiety over property loss, endangered home security, robberies and disruption of domestic peace of the local population.

The narrow distance between the houses and the construction site, in settlements, can become a source of frustration that will problematize the relationship between the contractor and the local residents / property owners. The presence of workers, unknown persons, close to homes / property has a great impact on the fear of the Project and the nervous reaction of the local population.

Based on the set criteria, this impact can be defined as: *negative, indirect, local, short-term* (it will be manifested only in the construction phase), with the possibility of occurrence-*probably, reversible,* with *low magnitude* and *low significance* (impact can be mitigated and managed).

Safety Impact 2: Traffic related risks

With an increase in number of vehicles during transportation of construction materials and equipment, there will be an increase of community risk of traffic-related accidents or injuries. Pedestrians will be among those who will be impacted most, since some of the traffic will be redirected through the

Traffic accidents have become one of the most significant causes of injuries and fatalities among members of the public worldwide. Traffic safety should be promoted by all project personnel during displacement to and from the workplace, and during operation of project equipment on private or public roads. Prevention and control of traffic related injuries and fatalities should include the adoption of safety measures that are protective of project workers and of road users, including those who are most vulnerable to road traffic accidents.

Based on the set criteria, this impact can be defined as: negative, indirect, of a local character, short-term (it will be manifested only in the pre-construction phase), with little possibility of occurrence - unlikely, irreversible, high magnitude and moderate significance (mitigation measures can partially help to recover from the impact).

Health 1: Spread of COVID -19

Outbreak of COVID 19, has caused loss of hundred thousand people lives around the world. The virus possess a very high risk of being spread from the workforce to the surrounding communities. Some of the important issues to be considered include:

- Due to COVID-19 circumstances, it may not be possible to conduct stakeholder engagement as they would under normal circumstances.
- Due to COVID-19 circumstances, it might not be possible to have the whole crew in the project area.
- There is an increase on the probability of spreading the virus from the workers to the community

Based on the set criteria, this impact can be defined as: negative, direct, national, long-term with high significance (impacts are hard to be mitigated and managed).

Health 2: Spread of communicable diseases

Project-related activities may directly, indirectly or cumulatively change community exposure to hazards. A significant concern with major development projects is the spread of communicable diseases from the workforce to the surrounding communities. Some of the significant risks to be considered include:

- Possible pressure and/or additional demand on community health services associated with the influx of workers from outside the project area;

- Possible pressure and/or additional demand on utility services including water and wastewater treatment plant associated with the influx of workers from outside the project area;
- Possible pressure and/or additional demand for social services as a result of an increased family stress and violence;
- Possible pressure on traffic and transportation network associated with construction and operations activities; and
- Possible change in water and air quality associated with construction and operations activities.

Based on the set criteria, this impact can be defined as: *negative, direct, local, short-term* (it will be manifested only in the construction phase), with the possibility of occurrence - *probably, reversible*, with low magnitude and small significance (impact can be mitigated and managed).

Health 3: Disturbance from noise and vibration due to construction activities

Noise and vibration will undoubtedly be the main problems in the construction phase. Apart from earthworks and cobblestones, the increased volume of traffic of people, vehicles and materials on local roads through historic quarter and other directly affected populated areas will contribute significantly to the anxiety of the population in these settlements.

Based on the set criteria, this impact can be defined as: *negative, direct, on the spot, short-term* (it will be manifested only in the construction phase), *with the possibility of occurrence - probably, reversible, with medium magnitude and moderate* significance (impact can be mitigated and managed).

6.3. POSSIBLE IMPACT ON TRANSBOUNDARY ENVIRONMENT

The proposed project will not have negative impacts on the transboundary environment. The Municipality of Gjirokastër share the border with Republic of Greece but project area is located around 31 km (aerial distance) from the border. One of the Drinos river's branch has it sources in the section located in the Republic of Greece, while the project area is downstream of the river flow. As noted above, the impact on the environment is very small and within the territorial waters of Republic of Albania without any impact on international waters.

6.4. CUMULATIVE IMPACTS ASSESSMENT

Cumulative impacts result from the successive, incremental and/or combined effects of a project or activity, when added to other past, existing, planned and/or reasonably anticipated future ones. They may occur because, for example, several projects of the same type are being developed in close spatial or temporal proximity.

World Bank ESIA procedures require for the ESIA process to consider cumulative impacts of the project in combination with impacts from other relevant past, present and reasonably foreseeable developments as well as unplanned but predictable activities enabled by the project that may occur later or at a different location.

The spatial area of influence (AOI) is the geographical area impacted by the project and cumulative impacts. The "Identification, Design or Prioritized Measures to Address Safety Concerns and Prevent Loss of Heritage Structures in the Castle of Gjirokastra" project AOI was defined as the spatial area affected by:

- ❒ the project footprint and the adjoining areas within the city of Gjirokaster
- ❒ the zone of influence (including direct and indirect project-related impacts)
- ❒ cumulative impacts, as defined based on the valued environmental components impacted upon by the project.

The spatial scope of the cumulative assessment focuses on potential developments within the Gjirokastra city area that may interact with impacts (both positive and negative) arising from the project.

The temporal AOI is the timescale over which a project is likely to have impacts. The temporal boundaries of the CIA are also limited by the extent of

current knowledge of other sources of cumulative impact, particularly non-project related activities. Different development projects within the area are likely to occur at different stages. The temporal scope of the analysis can also be defined as the period of time during which the proposed mitigation measures and post construction monitoring and management practices will be implemented.

Based on review of General Local Plan and consultation with Local government representatives, the following known and foreseeable developments in the Gjirokaster Municipality are considered:

- ❒ "Design and Supervision Gjirokastra System of Museums - Municipality of Gjirokastra (ADF)(Project1)
- ❒ Lighting of historical centre of Gjirokastra (ADF) (Project 2)
- ❒ Gjirokastra Castle Sustainable Management and Tourism Valorization Masterplan (ADF) (Project 3)
- ❒ Mobility plan and detailed design of project investment for integrated urban upgrading of Gjirokastra (ADF) (Project 4)
- ❒ Rehabilitation of Ali Pasha Trail (ADF) (Project 5)
- ❒ Construction of water supply pipeline (Phase II) including the historical quarter (KfW) (Project 6)
- ❒ Construction of underground parking at Cerciz's square (AADF)(Project 7)

Potential environmental and social impacts caused by a combination of planned projects and the actual "Identification, design or prioritized measures to address safety concerns and prevent loss of heritage structures in the castle of Gjirokastra" project have been assessed and results are set out in Table 14 below, where an "+" denotes a potential adverse cumulative impact; a "-" denotes that no potential cumulative impact is expected, while " * " denotes a positive cumulative impact.

Table 14. Cumulative Impacts Assessment Matrix

Development Name	Air Quality	Biodiversity	Soils	Water Resources	Noise and Vibration	Visual	Waste	Traffic	Population Influx	Employment	Livelihoods	Community Health and Safety	Cultural Heritage
Project 1	x	-	-	x	x	-	x	x	-	*	*	x	-

Project 2	x	-	x	-	x	x	-	x	-	*	-	x	-
Project 3	-	-	-	-	-	*	-	-	-	*	*	-	*
Project 4	x	x	x	x	x	x	x	x	-	*	-	x	-
Project 5	x	x	x	-	x	x	x	x	x	*	-	x	-
Project 6	x	x	x	x	x	-	-	x	-	*	-	x	-
Project 7	x	-	-	x	x	-	x	x	-	*	-	x	-

VII. MITIGATION MEASURES

This Chapter highlights the necessary mitigation measures that will be adopted to prevent or minimize significant negative environmental, health and safety impacts associated with the activities of the project during its construction, operation and decommissioning phases.

Allocation of responsibilities, time-frame and estimated costs for implementation of these measures are presented in the ESMP in Chapter 8.

Table 15. Negative Impacts and proposed mitigation measures

Impacts on or due to	Anticipated Impacts / Remarks	Proposed Mitigation during the Design and Construction phases	Proposed Mitigation during the Operation phases
ENVIRONMENTAL IMPACTS			
Loss of vegetation, flora and fauna	♦ Loss of vegetation through clearance to pave way for construction	♦ Develop a pre-construction survey prior to the commencement of construction works ♦ Vegetation clearing shall be limited to areas where it is absolutely necessary; ♦ Demarcate work areas clearly for construction workers to ensure that the disruption of vegetation does not occur outside of designated areas; ♦ Protection of all existing trees and ground coverings, or other types of protection necessary to prevent damage to existing elements not indicated to be removed, and any elements on adjoining properties or adjacent to the project. This includes the Aqueduct, surrounding wall, fountain and especially the historic olive trees or any other element not indicated within the scope. ♦ Provide temporary fences, barricades or guards as required to protect trees and vegetation to be left standing.	♦

Impacts on or due to	Anticipated Impacts / Remarks	Proposed Mitigation during the Design and Construction phases	Proposed Mitigation during the Operation phases
	♦	♦ Protect existing trees and other vegetation indicated to remain in place against cutting, breaking, or skinning of roots, skinning and bruising of bark, smothering of trees by stockpiling construction materials or excavated materials within drip line, excess foot or vehicular traffic, or parking of vehicles within drip line. ♦ Application of the hack-and-squirt technique for control of large trees that cannot be managed with basal applications. This method of application is advantageous because it is highly selective and injury to surrounding species is not common. ♦ Before any works begins the permission and observation of the Conservation Architect is required and an inspection must be conducted. ♦ Site clearing should only be undertaken by suitably experienced and qualified persons using all appropriate personal protective equipment and the correct tools and machinery to the approval of the Conservation Architect and in accordance with any prevailing local or national laws or standards/codes of practice	♦

Impacts on or due to	Anticipated Impacts / Remarks	Proposed Mitigation during the Design and Construction phases	Proposed Mitigation during the Operation phases
Bat Colonies	♦ Decrease of Bat individuals in the colony	♦ No interference with the colonies ♦ Maximal care not to disturbe them durin screen installation	♦
♦ Residual impact: The implementation of the mitigation measures will result in minor residual effect on vegetation, flora and fauna			
Geology and soil	♦ Protection of Geological stability and soil	♦ When the exposure to heavy falling rock exists and especially during slopes stabilization works, a protection system must be previously installed. ♦ A dynamic rockfall barriers installed below the works area is to be used. ♦ At least HE140 beams (driven or anchored) each 4 m is to be used. ♦ Installation should only be undertaken by suitably experienced and qualified persons using all appropriate personal protective equipment and the correct tools and machinery to the approval of the Conservation Architect and in accordance with any prevailing local or national laws or standards/codes of practice. ♦ Negative impacts on soil erosion will be mitigated by proper landscaping, replanting or reforesting and specific erosion control measures. ♦ Proper soil management (separation of top and sub soils etc.) during soil stripping will ensure appropriate restoration standards are achieved. Proper waste management practices including of hazardous materials and pollution prevention measures will avoid and minimize soil contamination.	♦ Implement good environmental working practices; ♦ Follow the adequate international guidelines and requirements, develop and follow a site-specific Emergency Preparedness and Response Plan (EPRP).

Impacts on or due to	Anticipated Impacts / Remarks	Proposed Mitigation during the Design and Construction phases	Proposed Mitigation during the Operation phases
♦ Residual impact: The implementation of the mitigation measures will result in no residual effect os geology and soils of the project area			
Hydrology and hydrogeology	♦ Protection of hydrological network and hydrogeology of the area	♦ To address these risks, designing a system for collecting and disposing of water from the inner parts of the Castle and along all slopes and roads is a high priority. ♦ While all the water cannot be completely controlled an overall strategy and pragmatic interventions will significantly reduce the negative impacts of water.	♦
Solid Waste	♦ Potential solid waste generated from Geological Stabilization of the castle and other work ♦ Solid waste generated from operation of the facilities by tourist and visitors e.g. plastics, paper, etc	♦ Contractor to establish a solid waste management plan for solid disposal of debris/ garbage at the construction site to be approved by the Project Engineer ♦ All construction waste shall be removed from site when the contractor complete the works ♦ Contractors should do the waste separation and encourage the recycling of appropriate waste ♦ Contractors must make the separation of waste to separate hazardous and non-hazardous waste ♦ Waste should be taken from the Castle at least once every 24 hours and when temporarily kept in place should be covered to minimize unpleasant odors and parasites. ♦ The Contractor and the Municipality shall work together to facilitate proper disposal and disposal of waste from the project area. All waste should be disposed of in approved dumpsites.	♦ Provision of disposal bins at designated areas at certain place within the Castle ♦ Regular collection and disposal of garbage by the municipality ♦ Clean storm water drains to minimize clogging

Impacts on or due to	Anticipated Impacts / Remarks	Proposed Mitigation during the Design and Construction phases	Proposed Mitigation during the Operation phases
♦ Residual impact: The implementation of the mitigation measures will result in no residual effect of solid waste			
Air quality, dust and traffic borne emission	♦ Degradation of Air through dust emissions ♦ Air pollution from emissions by construction vehicles and other equipment during their operations ♦ Increased dust and air pollution levels could impact on public health	♦ Regular watering of access roads and work sites to reduce dust emissions ♦ Vehicles and machinery engines should always be switched off when not in use ♦ Vehicles and equipment should be well maintained to minimize unnecessary emissions and leaks. ♦ Established vehicle tracks and roads should be used to minimize habitat destruction from off-road travel. ♦ Emergency response plans will be in place to mitigate any accidental event. ♦ Adequate materials and product storage and handling practices should be followed to reduce uncontrolled releases. ♦ Use, to the extent possible, of inert materials produced from excavations, to avoid transportation of aggregates from distant-off points. ♦ Project planning preparation so that soil materials from excavations are taken within the shortest possible period of time at embankments positions. ♦ The stored quantities of inert materials for the needs of the project should be limited to necessary and where possible be covered ♦ All materials with the potential to lead to dust emissions shall be transported in sheeted trucks;	

Impacts on or due to	Anticipated Impacts / Remarks	Proposed Mitigation during the Design and Construction phases	Proposed Mitigation during the Operation phases
Noise Pollution	♦ Noise generated during construction activities such as operation of construction equipment, excavations, etc ♦ Increased noise pollution levels could impact on public health.	♦ Construction activities should be carried out only during the day to minimize noise levels to the visitors of the Castle ♦ Contractor will be careful when selecting equipment to avoid use of old or damaged machinery with high level of noise emissions. ♦ Contractor will ensure that equipment is properly serviced and efficient. ♦ When possible, contractors will cordon off construction site with noise absorbing materials, for example, plywood rather than iron sheets. ♦ Construction workers will be aware of the sensitive nature of workplaces they are operating in and advised to limit verbal noise or other forms of noise. ♦ The contractor shall ensure that noise levels emanating from machinery, vehicles and noisy construction activities are kept at a minimum for the safety, health and protection of Castle visitors. ♦ Noise and vibration will be minimized at the project site and surrounding areas through sensitization of construction truck drivers to switch off vehicle engines while offloading materials. ♦ All generators will be insulated or placed in enclosures to minimize disrupting ambient noise levels	♦ Sensitize operators on hooting unnecessarily
♦ Residual impact: With the implementation of the mitigation measures, no residual impact are expected because of noise vibration			

Impacts on or due to	Anticipated Impacts / Remarks	Proposed Mitigation during the Design and Construction phases	Proposed Mitigation during the Operation phases
Social impacts			
Contract mobilization	♦ Fullfiling the requirements for contract mobilization and preparation for contract signing.	♦ The contractor or bidder should become familiar with these documents and contact the ADF office or CHwB / Proskene should there be any questions, concerns, or discrepancies. ♦ The contractor or bidder should visit the site to become familiar with the unique situations present at the Castle before placing a bid or beginning work on the project. ♦ The contractor should obtain all the necessary permissions to conduct the work outlined in Technical Specification and Drawings. ♦ No work shall commence until these permissions are obtained and a copy submitted to ADF. ♦ If the permissions have a time requirement this must also be respected and if reapplication is required, this is also the contractor's responsibility.	♦
♦ Residual impacts: With the implementation of the mitigation measures, no residual impacts are expected			

Impacts on or due to	Anticipated Impacts / Remarks	Proposed Mitigation during the Design and Construction phases	Proposed Mitigation during the Operation phases
Organization of labour	♦ Employee information to prevent certain specific types of behaviour	♦ The investor (ADF), as well as the contractor, are obliged to follow the national regulations for safety and health at the workplace ♦ A company code of conduct shall be prepared for employees of a company to inform the employees of the company's expectations. ♦ Codes of Conduct or Codes of Behaviour will be considered as guidelines to prevent certain specific types of behaviour (e.g. conflict of interest, self-dealing, bribery, and inappropriate action). ♦ The code of conduct shall be developed based on the following key points: • Loyalty (following codes of conducts, commitment to work, commitment to environmental and social, health and safety measures) • Prohibited behaviours like gambling, drunkenness, and irregular and immoral habits. ♦ This environment and social incidents response toolkit (ESIRT) will be used in case such incidents occur during the implementation of the project.	♦
♦ Residual impacts: With the implementation of the mitigation measures, no residual impacts are expected			

Impacts on or due to	Anticipated Impacts / Remarks	Proposed Mitigation during the Design and Construction phases	Proposed Mitigation during the Operation phases
Vehicular access and parking	No parking of cars or trucks within the castle is possible. There is a small parking lot on the outside of the main gate to the north facing Gjirokastra but the use of this area is limited as it is used for visitors and staff.	♦ The north gate can also be an access point, but no trucks ARE PERMITTED UP this narrow entry. ♦ The access to the south of the site could serve as an alternative access point, BUT only under special permission from the Conservation Architects; ♦ Prior to construction activities, the Contractor will install all signs, barriers and control devices needed to ensure the safe use of the road by traffic and pedestrians, as required by the traffic control plan;	♦
♦ Residual impacts: With the implementation of the mitigation measures, no residual impacts are expected			
Access to Facilities, Controls and Utilities	♦ Contractor to generate utility management plan ♦ Contractor to minimize damage to public utilities	♦ There are NO TEMPORARY storage facilities for the collection so the pieces (artwork, sculptures, military artifacts, canon) must be PROTECTED IN PLACE. ♦ The contractor is not responsible for the protection but must accommodate the work of the museum professionals.	♦

Impacts on or due to	Anticipated Impacts / Remarks	Proposed Mitigation during the Design and Construction phases	Proposed Mitigation during the Operation phases
Occupational Health and Safety	♦ Construction workers will be exposed to risks of accidents and injuries as a result of construction activities including use of machines, use of scaffolding among others	♦ Contractor shall provide an Occupational Health and Safety Policy and OHS Plan for the work to be performed at the sites ♦ Provide medical and insurance cover for all workers ♦ In collaboration with local health authorities, ensuring that medical staff, first aid facilities are available at all times at the site ♦ Appoint an Occupational Health and Safety (OHS) officer at the site, with necessary authority and resources to manage OHS issues ♦ Provision of adequate and right safety tools and personal protective equipments (PPEs) to protect and prevent possible injuries to the workers ♦ The site shall be fenced off and provided with security at the access gates to reduce potential accidents and injuries to the public	♦

Occupational Health and Safety	♦ Construction workers will be exposed to risks of accidents and injuries as a result of construction activities including use of machines and use of scaffolding among others	♦ The working areas must surrounded by warning tapes and signal panels will be positioned at the entrances within the perimeter of the site ♦ The pedestrian circulation plan will be drawn up at the beginning of the works for each point of work by the supervisor on the line of safety and health at work, together with the representatives of the beneficiary and the contractor and will be improved over the work with the indications of the constructors. ♦ The circulation paths, must be calculated, placed and arranged so that they can be used easily, in accordance with their intended purpose. ♦ The circulation paths used by the workers in order to execute the works assigned to them must be maintained free, without irregularities, stable and solid so that the works to be carried out in a safe manner. ♦ During the night the circulation paths, ways of emergency and workstations must be artificially lit properly and sufficiently. ♦ When on the circulation paths risky manoeuvres are executed (turns, lever back etc.) the vehicles or machines will be routed. The persons who are doing this should be placed in areas where they may be seen by the driver of the vehicle and can view the manoeuvring zone in such a way as to prevent access in the area of persons or other equipment. In the case of observation of a danger they will immediately signal and stop the handling / machine. The driver of the vehicle will start/resume manoeuvres only after having received a signal from the person who controls the operation. ♦ It is expressly forbidden to handle motor vehicles or machinery by unqualified people.	♦

Impacts on or due to	Anticipated Impacts / Remarks	Proposed Mitigation during the Design and Construction phases	Proposed Mitigation during the Operation phases
Occupational Health and Safety	♦ Construction workers will be exposed to risks of accidents and injuries as a result of construction activities including use of machines and use of scaffolding.	♦ Access to the site is from the main access to the north of the Castle and to be determined by the Conservation Architect. ♦ There will be no heavy vehicle or truck access within the center of Gjirokastra or within castle or on the historic entry to the south or north of the castle. ♦ The emergency routes and exits must be clear at all times and lead by the most direct means possible to a safe area ♦ In the event of danger, all work stations should be able to be discharged quickly and as safely as possible for the workers. ♦ The number, distribution and size of the emergency routes and exits are determined according to the use, equipment and dimensions of the site and the maximum number of persons that may be present. ♦ Implementing administrative controls into work processes.	♦
♦ Residual impacts: With the implementation of the mitigation measures, no residual impacts are expected			

Impacts on or due to	Anticipated Impacts / Remarks	Proposed Mitigation during the Design and Construction phases	Proposed Mitigation during the Operation phases
Community Health and Safety	♦ Risk of COVID-19 outbreak among workers and transmission to the community at work requires first assessing the risks, and then implementing the hierarchy of controls.	♦ The contractor should carry out only essential work for the time being; it may be possible to postpone some work to when the risk is lower. ♦ Ensure that only workers who are essential to the job are present at the workplace and minimise the presence of third parties. ♦ The contractor should reduce, as far as possible, physical contact between workers (e.g. during meetings or during breaks). ♦ Isolate workers who can carry out their tasks alone safely and who do not require specialised equipment or machinery that cannot be moved. ♦ The contractor should place an impervious barrier between workers, especially if they are not able to keep a two-metre distance from each other. Barriers can be purpose-made or improvised using items such as plastic sheeting, partitions, mobile drawers, or storage units. ♦ If close contact is unavoidable, keep it to less than 15 minutes. ♦ Soap and water or appropriate hand sanitiser should be supplied at convenient places. Clean your premises frequently, especially counters, door handles, tools and other surfaces that people touch often and provide good ventilation if possible.	♦

Impacts on or due to	Anticipated Impacts / Remarks	Proposed Mitigation during the Design and Construction phases	Proposed Mitigation during the Operation phases
Community Health and Safety	♦ Housing risks for those living next to the Castle	♦ Install a temporary dynamic rockfall barriers installed below the works area is to be used ♦ Provide, with the Municipality, a temporary dwelling location (a month at most) to the residents of the houses that are below the Tower A, during the main construction activities on the Tower. ♦ Provide 24/7 physical security for houses whose residents will be accommodated in other dwelling objects during civil works on the Tower A. ♦ Contractor to prepare Traffic Management Plan during construction phase in cooperation with relevant local authorities and disclose it at the ADF and Municipality's websites. ♦	♦
♦ Residual impacts: With the implementation of the mitigation measures, no residual impacts are expected			

Impacts on or due to	Anticipated Impacts / Remarks	Proposed Mitigation during the Design and Construction phases	Proposed Mitigation during the Operation phases
Stakeholder Engagement	♦ Disclosed information and stakeholders engaged in the process	♦ ADF and the Municipality of Gjirokastra to disclose and make accessable to the public the Stakeholder Engagement Plan for this Sub-project. ♦ Contractor should regularly disseminate information to the public and affected parts of the city about the working schedule that affects free movement of people and stocks. ♦ Contractor will prepare Awareness Raising campaign for the traffic safety in the parts of the city that will experience traffic change due to the project activities. Main focus should be set on children. ♦ Design alternative approaches to engagement that: i) enables two-way communication; ii) prioritizes engagement activities; iii) communicates timely updates; ♦ Prioritize critical engagement activities ♦ Consider virtual and remote alternatives that best meet the objectives of the planned activities; ♦ Based on the analysis of factors such as access to and quality of connectivity, use the social media platforms, mobile phone coverage, internet access, mobile network providers and alternate nonelectronic engagement channels to provide a range of options to meet different stakeholders' needs ♦ Providing alternate secure channels for grievances to protect complainants against potential retaliation. These options should consider factors such as accessibility, confidentiality, privacy, anonymity, digital protections, and secure communication through electronic and nonelectronic methods.	♦

Impacts on or due to	Anticipated Impacts / Remarks	Proposed Mitigation during the Design and Construction phases	Proposed Mitigation during the Operation phases
♦ Residual impacts: With the implementation of the mitigation measures, no residual impacts are expected			
Accidents	♦ Construction workers will be exposed to risks of accidents and injuries as a result of construction activities	♦ Traffic routes, including stairs, fixed ladders and loading bays and ramps, must be calculated, placed and arranged and be accessible so that they can be used easily, in complete safety and in accordance with their intended purpose and the workers employed in the vicinity of these traffic routes are not exposed to any risk. ♦ Project will require contractors to regularly maintain vehicles to minimize potentially serious accidents such as those caused by brake failure commonly associated with loaded construction trucks. ♦ The site shall be fenced and signs put in place with security personnel to stop unauthorized people from accessing the site.	♦
♦ Residual impacts: With the implementation of the mitigation measures, no residual impacts are expected			

Impacts on or due to	Anticipated Impacts / Remarks	Proposed Mitigation during the Design and Construction phases	Proposed Mitigation during the Operation phases
Cultural Heritage	♦ During the construction phase, chance find of cultural heritage objects may occur	♦ In the event of the accidental discovery of new artifacts and archaeological sites; works will be stopped and will only be resumed after the site has been archaeological discharged by authorized archaeologists. ♦ The proposed intervention should be compiled in accordance with the Albanian laws on Cultural Heritage, World Bank OP 4.11 and International charters (i.e. UNSECO) and will follow all the procedures of approvals and monitoring of the works as foreseen in the laws. ♦ To avoid the risk to any undiscovered archaeological assets being damaged during the implementation of the works large excavation works will be forbidden. ♦ The Contractor must engage at least 1 Archeologist, for the whole period of Constrcution Phase, and who shall be supporting civil engineers and team leaders on site during excavating activities, and who will maintain daily communication with the relevant local institutions responsible for protection of cultural heritage. ♦ Cultural Heritage Management Plan must be fully implemented by the contractor and involved stakeholders.	♦
♦ Residual impacts: With the implementation of the mitigation measures, no residual impacts are expected			

VIII. ENVIRONMENTAL AND SOCIAL MANAGEMENT

8.1. THE ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

The Environmental and Social Management Plan (ESMP) will be implemented by the Contractor in cooperation with ADF and Municipality. The Contractor will also be responsible for developing and implementing a site- specific induction for all construction workers. The Contractor will ensure that all construction workers are trained and competent and hold the appropriate certification for the tasks that they will be undertaking.

In the operational phase, EMSP will be implemented by Municipality with all its structural units.

8.2. SIGNIFICANCE OF ESMP

The purpose of the Environmental and Social Management Plan is to initiate a mechanism for implementing mitigation measures for the potential negative environmental impacts and monitor the efficiency of these mitigation measures based on relevant environmental indicators. The ESMP assigns responsibilities of actions to various actors and provides a timeframe within which mitigation measures can be implemented, supervised and monitored. Further, it provides a checklist for project monitoring and evaluation. The objectives of the ESMP are:

- ❒ To provide evidence of practical and achievable plans for the management of the proposed project.
- ❒ To provide the Proponent and the relevant Agencies with a framework to confirm compliance with relevant laws and regulations.
- ❒ To provide community with evidence of the management of the project in an environmentally acceptable manner.

The ESMP outlined below will address the identified potential negative impacts and mitigation measures on the following project stages:

I. Pre-construction

II. Construction Phases

III. Operation Phase

Table 16 below presents the necessary measurements for mitigation of adverse impact on environment, while Table 17 presents the necessary measurements for mitigation of adverse social impacts.

Table 16. Environmental Management Plan
~~Table 17. Environmental Management Plan~~

Areas/ aspects of the environment	Proposed mitigation measures	Objective	Competent institution	Timetable	Costs for implementation
BIODIVERSITY-PLANT SPECIES					
Pre-construction					
Vegetation and Flora	♦ **Develop a pre-construction survey prior to the commencement of construction works** ♦	**Protection of biodiversity, i.e. plant species with conservation significance and increasing the green areas**	**Independent expert engaged by the contractor of construction work**	**Pre-Constructio n**	**Costs for preparation of project documentati on**
Construction					
	♦ Vegetation clearing shall be limited to areas where it is absolutely necessary; ♦ Demarcate work areas clearly for construction workers to ensure that the disruption of vegetation does not occur outside of designated areas;	Protection of biodiversity, i.e. plant species with conservation significance and increasing the green areas	Independent expert engaged by the contractor of construction work	Construction	The cost of the measures will be included in the construction costs
	♦ Protection of all existing trees and ground coverings, or other types of protection necessary to prevent damage to existing elements not indicated to be removed, and any elements on adjoining properties or	Protection of biodiversity, i.e. plant species with conservation significance and	Independent expert engaged by the contractor of construction	Construction	The cost of the measures will be included in the

	adjacent to the project. This includes the Aqueduct, surrounding wall, fountain and especially the historic olive trees or any other element not indicated within the scope. • Protect other vegetation indicated to remain in place against cutting, breaking, or skinning of roots, skinning and bruising of bark, smothering of trees by stockpiling construction materials or excavated materials within drip line, excess foot or vehicular traffic, or parking of vehicles within drip line.	increasing the green areas	work		construction costs
Vegetation and Flora	• Application of the hack-and-squirt technique for control of large trees that cannot be managed with basal applications. This method of application is advantageous because it is highly selective and injury to surrounding • Provide temporary fences, barricades or guards as required to protect trees and vegetation to be left standing.species is not common. • Before any works begins the permission and observation of the Conservation Architect is required and an inspection must be conducted. • Site clearing should only be undertaken by suitably experienced and qualified persons using all appropriate personal protective equipment and the correct tools	Protection of biodiversity, i.e. plant species with conservation significance and increasing the green areas	Independent expert engaged by the contractor of construction work	Construction	The cost of the measures will be included in the construction costs

	and machinery to the approval of the Conservation Architect and in accordance with any prevailing local or national laws or standards/codes of practice				
BIODIVERSITY-ANIMAL SPECIES					
Pre-construction					
Biodiversity-animal species	Due to the presence of the Bat colonies (*Myotis myotis)* appropriate measurements are recommended. • Conserving and opening limited sections H6-7 (without disturbing the bats) while allow visitors to explore this other aspect of the castle.	Protection of animal species	Design team & Bat expert from the Faculty of Natural Sciences	Pre-construction	Costs for preparation of project documentation
Construction					
	• Installing infra-red cameras and portable screen for viewing and understanding life of bats	Bats protection	Contractor	Construction	Construction and operating cost
Operation					
Bat Colonies	• Implementation of biomonitoring of bats during spring season and during hipernacula	Determining the need for taking additional measures for the protection of bats	Contractor	Construction	Construction and operating cost
GEOLOGY AND GEOMORPHOLOGY					
Construction					

Geology	• When the exposure to heavy falling rock exists and especially during slopes stabilization works, a protection system must be previously installed. • A dynamic rockfall barriers installed below the works area is to be used. • At least HE140 beams (driven or anchored) each 4 m is to be used. • Installation should only be undertaken by suitably experienced and qualified persons using all appropriate personal protective equipment and the correct tools and machinery to the approval of the Conservation Architect and in accordance with any prevailing local or national laws or standards/codes of practice.	Protection of Geological stability and soil	Contractor	Construction	Included in the construction costs
	• Application of good construction practice and stabilization of steep slopes of the castle	Soil protection (geology and geomorphology), prevention of the emergence of contemporary geological processes	Contractor/ Supervisor	Continuously during the construction phase, as well as in the operational phase if there is a need for additional stabilization of the slopes	Construction and operational costs
Geo- and cultural	• Application of good construction and operational practice, as well as continuous maintenance of the area, in	Protection of the landscape and heritage in accordance with the	Contractor/ Supervisor	Continuously During the	Construction and Operational

heritage	order to maximize the "masking" of completed construction interventions in the area.	legal regulations and strategic documents for nature protection.		construction and operation	costs
Soil	• Negative impacts on soil erosion will be mitigated by proper landscaping, replanting or reforesting and specific erosion control measures. • Proper soil management (separation of top and sub soils etc.) during soil stripping will ensure appropriate restoration standards are achieved. Proper waste management practices including of hazardous materials and pollution prevention measures will avoid and minimize soil contamination.	Protection of Geological stability and soil	Contractor	Construction	Included in the construction costs
HYDROLOGY AND SURFACE WATERS					
Pre-construction					
Hydrology and surface waters	• Designing a system for collecting and disposing of water from the inner parts of the Castle and along all slopes and roads is a high priority. •	Protection of hydrological network and hydrogeology of the area	Design Team	Pre-construction	Costs for preparation of project documentation
Construction					
	• While all the water cannot be completely controlled an overall strategy and pragmatic interventions will significantly reduce the negative impacts of water.	Protection of hydrological network and hydrogeology of the area	Contractor/ Supervision controlled by competent inspection	Continuously during the construction phase	Included in the construction costs

			authorities		
Operation					
Hydrology and surface waters	Regular control and maintenance of the drainage and stormwater systems (channels, culverts, etc.), as well as the application of good operational practice	Protection of waters and other media and areas of the environment, as well as protection of the structures of the castle	Municipality	Continuously during the operational phase	Operating costs
AIR QUALITY					
Construction					
Air quality	• Regular watering of access roads and work sites to reduce dust emissions • Vehicles and machinery engines should always be switched off when not in use • Vehicles and equipment should be well maintained to minimize unnecessary emissions and leaks	Protection of ambient air and fulfillment of legal obligations	Contractor	Construction	Costs are included in construction costs
Air quality	• Emergency response plans will be in place to mitigate any accidental event. ♦ Adequate materials and product storage and handling practices should be followed to reduce uncontrolled releases. ♦ Use, to the extent possible, of inert materials produced from excavations, to	Protection of ambient air and fulfillment of legal obligations	Contractor	Construction	Costs are included in construction costs

	avoid transportation of aggregates from distant-off points.				
Air quality	♦ Project planning preparation so that soil materials from excavations are taken within the shortest possible period of time at embankments positions. ♦ The stored quantities of inert materials for the needs of the project should be limited to necessary and where possible be covered ♦ All materials with the potential to lead to dust emissions shall be transported in sheeted trucks	Protection of ambient air and sensitive receptors	Contractor/ Supervision	Continuously during the construction phase, at sensitive locations	Costs are included in construction costs
NOISE AND VIBRATION					
Construction					
Noise and Vibration	• Contractor will be careful when selecting equipment to avoid use of old or damaged machinery with high level of noise emissions. • Contractor will ensure that equipment is properly serviced and efficient. • When possible, contractors will cordon off construction site with noise absorbing materials, for example, plywood rather than iron sheets.	Protection of sensitive receptors and fulfillment of legal obligations	Contractor	Construction	The cost of the measures that will emerge from the Plan will be included in the construction costs
	• Construction workers will be aware of the sensitive nature of workplaces they are operating in and advised to limit	Protection of sensitive receptors and fulfillment of legal obligations	Contractor	Construction	The cost of measures that will emerge

	verbal noise or other forms of noise. • The contractor shall ensure that noise levels emanating from machinery, vehicles and noisy construction activities are kept at a minimum for the safety, health and protection of Castle visitors. • Noise and vibration will be minimized at the project site and surrounding areas through sensitization of construction truck drivers to switch off vehicle engines while offloading materials. • All generators will be insulated or placed in enclosures to minimize disrupting ambient noise and vibration levels				from the Plan will be included in the construction costs
WASTE					
Construction					
Solid Waste	• Preparation of the Waste Management Program in the construction phase.	Fulfillment of the legal obligations for waste management and protection of the population health	Contractor	Construction	Included in the construction costs
	• Signing agreements with authorized companies for collection, transport and treatment of waste and handing over of waste	Fulfillment of the legal obligations for waste management	Municipality of Gjirokaster/ Contractor	Pre-construction and construction	The price will depend on the offers of the authorized waste handlers
	• Engagement of waste manager expert,	Fulfillment of the legal	Contractor/Su	Pre-	The price will

	which will ensure full implementation of the Program in accordance with the legal obligations	obligations for waste management and protection of the media and areas of the environment.	bcontractor/Supervision	construction and construction	depend on the offer of the waste manager
Operation					
Waste	Placing containers with different colors for disposing of different waste streams,	Protection of the media and areas of the environment and the health of the population	Municipality of Gjirokaster	Operation	Depends on the capacity of the containers
	Signing agreements with authorized companies for collection, transport and treatment of waste and handing over of waste	Fulfillment of the legal obligations for waste management and protection of the media and areas of the environment and the health of the population	Municipality of Gjirokaster	Operation	The price will depend on the offers of the authorized waste handlers
	Preparation of Waste Management Program in accordance Law on Waste Management.	Fulfillment of the legal obligations for waste management and protection of the media and areas of the environment and the health of the population	Municipality of Gjirokaster	Operation	The cost of the measures arising from the Program will be included in the operating costs
VISUAL CHARACTERISTICS					

Construction					
Visual characteristic	Revitalization / rehabilitation of disturbed locations (areas) should be carried out immediately after the completion of the construction work at the specific locations and in accordance with the project documentation prepared for this purpose	Protection of the visual characteristics of the landscape	Contractor/Supervision controlled by competent inspection authorities	Continuously during the construction phase	Included in the construction costs

Areas/ aspects of the environment	**Proposed mitigation measures**	**Objective**	**Competent institution**	**Timetable**	**Costs for implementation**
BIODIVERSITY-PLANT SPECIES					
Pre-construction and construction					
Vegetation and Flora	♦ Develop a pre-construction survey prior to the commencement of construction works ♦ Vegetation clearing shall be limited to areas where it is absolutely necessary; • Demarcate work areas clearly for construction workers to ensure that the disruption of vegetation does not occur outside of designated areas;	Protection of biodiversity, i.e. plant species with conservation significance and increasing the green areas	Independent expert engaged by the contractor of construction work	Construction	The cost of the measures will be included in the construction costs

	♦ Protection of all existing trees and ground coverings, or other types of protection necessary to prevent damage to existing elements not indicated to be removed, and any elements on adjoining properties or adjacent to the project. This includes the Aqueduct, surrounding wall, fountain and especially the historic olive trees or any other element not indicated within the scope. • Protect other vegetation indicated to remain in place against cutting, breaking, or skinning of roots, skinning and bruising of bark, smothering of trees by stockpiling construction materials or excavated materials within drip line, excess foot or vehicular traffic, or parking of vehicles within drip line.	Protection of biodiversity, i.e. plant species with conservation significance and increasing the green areas	Independent expert engaged by the contractor of construction work	Construction	The cost of the measures will be included in the construction costs
Vegetation and Flora	• Application of the hack-and-squirt technique for control of large trees that cannot be managed with basal applications. This method of application is advantageous because it is highly selective and injury to surrounding • Provide temporary fences, barricades or guards as required to protect trees and vegetation to be left standing.species is not common. • Before any works begins the permission and observation of the Conservation Architect is required and an inspection must be conducted. • Site clearing should only be undertaken by suitably experienced and qualified persons	Protection of biodiversity, i.e. plant species with conservation significance and increasing the green areas	Independent expert engaged by the contractor of construction work	Construction	The cost of the measures will be included in the construction costs

	using all appropriate personal protective equipment and the correct tools and machinery to the approval of the Conservation Architect and in accordance with any prevailing local or national laws or standards/codes of practice				
BIODIVERSITY-ANIMAL SPECIES					
Construction					
Biodiversity-animal species	Due to the presence of the Bat colonies (*Myotis myotis)* appropriate measurements are recommended. • Conserving and opening limited sections H6-7 (without disturbing the bats) while allow visitors to explore this other aspect of the castle.	Protection of animal species	Design team	Pre-construction	Costs for preparation of project documentation
	• Installing infra-red cameras and portable screen for viewing and understanding life of bats	Bats protection	Design team	Construction	Construction and operating cost
Operation					
Bat Colonies	• Implementation of biomonitoring of bats during spring season and during hipernacula	Determining the need for taking additional measures for the protection of bats	Contractor	Construction	Construction and operating cost
GEOLOGY AND GEOMORPHOLOGY					
Pre-construction and construction					

Geology	• When the exposure to heavy falling rock exists and especially during slopes stabilization works, a protection system must be previously installed. • A dynamic rockfall barriers installed below the works area is to be used. • At least HE140 beams (driven or anchored) each 4 m is to be used. • Installation should only be undertaken by suitably experienced and qualified persons using all appropriate personal protective equipment and the correct tools and machinery to the approval of the Conservation Architect and in accordance with any prevailing local or national laws or standards/codes of practice.	Protection of Geological stability and soil	Contractor	Pre-construction	Included in the construction costs
	• Application of good construction practice and stabilization of steep slopes of the castle	Soil protection (geology and geomorphology), prevention of the emergence of contemporary geological processes	Contractor/ Supervisor	Continuously during the construction phase, as well as in the operational phase if there is a need for additional stabilization of the slopes	Construction and operational costs in which are included the costs of stabilization and revitalization of the walls of the castle
Geo- and cultural heritage	• Application of good construction and operational practice, as well as continuous maintenance of the area, in order to maximize the "masking" of	Protection of the landscape and heritage in accordance with the legal regulations and	Contractor/ Supervisor	Continuously During the construction and operation	Construction and Operational costs

	completed construction interventions in the area.	strategic documents for nature protection.			
Soil	• Negative impacts on soil erosion will be mitigated by proper landscaping, replanting or reforesting and specific erosion control measures. • Proper soil management (separation of top and sub soils etc.) during soil stripping will ensure appropriate restoration standards are achieved. Proper waste management practices including of hazardous materials and pollution prevention measures will avoid and minimize soil contamination.	Protection of Geological stability and soil	Contractor	Pre-construction	Included in the construction costs
HYDROLOGY AND SURFACE WATERS					
Pre-construction and construction					
Hydrology and surface waters	• Designing a system for collecting and disposing of water from the inner parts of the Castle and along all slopes and roads is a high priority. • While all the water cannot be completely controlled an overall strategy and pragmatic interventions will significantly reduce the negative impacts of water.	Protection of hydrological network and hydrogeology of the area	Contractor/ Supervision controlled by competent inspection authorities	Continuously during the construction phase	Included in the construction costs
Operation					
Hydrology and surface waters	Regular control and maintenance of the drainage and stormwater systems (channels, culverts, etc.), as well as the application of good operational practice	Protection of waters and other media and areas of the environment, as well as protection of the	Municipality	Continuously during the operational phase	Operating costs

		structures of the castle			
AIR QUALITY					
Construction					
Air quality	• Regular watering of access roads and work sites to reduce dust emissions • Vehicles and machinery engines should always be switched off when not in use • Vehicles and equipment should be well maintained to minimize unnecessary emissions and leaks	Protection of ambient air and fulfillment of legal obligations	Contractor	Construction	Costs are included in construction costs
Air quality	• Emergency response plans will be in place to mitigate any accidental event. ♦ Adequate materials and product storage and handling practices should be followed to reduce uncontrolled releases. ♦ Use, to the extent possible, of inert materials produced from excavations, to avoid transportation of aggregates from distant-off points.	Protection of ambient air and fulfillment of legal obligations	Contractor	Construction	Costs are included in construction costs
Air quality	♦ Project planning preparation so that soil materials from excavations are taken within the shortest possible period of time at embankments positions. ♦ The stored quantities of inert materials for the needs of the project should be limited to necessary and where possible be covered	Protection of ambient air and sensitive receptors	Contractor/ Supervision	Continuously during the construction phase, at sensitive locations	Costs are included in construction costs

	♦ All materials with the potential to lead to dust emissions shall be transported in sheeted trucks				
NOISE AND VIBRATION					
Construction					
Noise and Vibration	• Construction activities should be carried out only during the day to minimize noise levels to the visitors of the Castle • Contractor will be careful when selecting equipment to avoid use of old or damaged machinery with high level of noise emissions. • Contractor will ensure that equipment is properly serviced and efficient. • When possible, contractors will cordon off construction site with noise absorbing materials, for example, plywood rather than iron sheets.	Protection of sensitive receptors and fulfillment of legal obligations	Contractor	Pre-construction	The cost of the measures that will emerge from the Plan will be included in the construction costs
	• Construction workers will be aware of the sensitive nature of workplaces they are operating in and advised to limit verbal noise or other forms of noise. • The contractor shall ensure that noise levels emanating from machinery, vehicles and noisy construction activities are kept at a minimum for the safety, health and protection of Castle visitors. • Noise and vibration will be minimized at the project site and surrounding areas through sensitization of construction	Protection of sensitive receptors and fulfillment of legal obligations	Contractor	Pre-construction	The cost of the measures that will emerge from the Plan will be included in the construction costs

	truck drivers to switch off vehicle engines while offloading materials. • All generators will be insulated or placed in enclosures to minimize disrupting ambient noise and vibration levels				
WASTE					
Construction					
Solid Waste	• Preparation of the Waste Management Program in the construction phase.	Fulfillment of the legal obligations for waste management and protection of the environment and the health of the population	Contractor	Pre-construction	Included in the construction costs
	• Signing agreements with authorized companies for collection, transport and treatment of waste and handing over of waste	Fulfillment of the legal obligations for waste management	Municipality of Gjirokaster/ Contractor	Pre-construction and construction	The price will depend on the offers of the authorized waste handlers
	• Engagement of waste manager expert, which will ensure full implementation of the Program in accordance with the legal obligations	Fulfillment of the legal obligations for waste management and protection of the media and areas of the environment.	Contractor/Subcontractor/Supervision	Pre-construction and construction	The price will depend on the offer of the waste manager
Operation					

Waste	Placing containers with different colors for disposing of different waste streams,	Protection of the media and areas of the environment and the health of the population	Municipality of Gjirokaster	Operation	Depends on the capacity of the containers
	Signing agreements with authorized companies for collection, transport and treatment of waste and handing over of waste	Fulfillment of the legal obligations for waste management and protection of the media and areas of the environment and the health of the population	Municipality of Gjirokaster	Operation	The price will depend on the offers of the authorized waste handlers
	Preparation of Waste Management Program in accordance Law on Waste Management.	Fulfillment of the legal obligations for waste management and protection of the media and areas of the environment and the health of the population	Municipality of Gjirokaster	Operation	The cost of the measures arising from the Program will be included in the operating costs
VISUAL CHARACTERISTICS					
Construction					

Visual characteristic	Revitalization / rehabilitation of disturbed locations (areas) should be carried out immediately after the completion of the construction work at the specific locations and in accordance with the project documentation prepared for this purpose	Protection of the visual characteristics of the landscape	Contractor/Supervision controlled by competent inspection authorities	Continuously during the construction phase	Included in the construction costs

Table 18. Social Management Plan

Social Impact/Area/ Issue	Mitigation Measures	Objective	Competent Institution	Timetable	Cost of Implementation
Contract mobilization	♦ The contractor or bidder should become familiar with these documents and contact the ADF office or CHwB / Proskene should there be any questions, concerns, or discrepancies. ♦ The contractor or bidder should visit the site to become familiar with the unique situations present at the Castle before placing a bid or beginning work on the project.	Fullfiling the requirements for contract mobilization and preparation for contract signing	ADF	Pre-construction	Operating costs of the company
	♦ The contractor should obtain all the necessary permissions to conduct the work outlined in Technical Specification and Drawings. ♦ No work shall commence until these permissions are obtained and a copy submitted to ADF. ♦ If the permissions have a time requirement this must also be respected and if reapplication is required, this is also the contractor's responsibility.	Fullfiling the requirements for contract mobilization and preparation for contract signing	ADF	Pre-construction	Operating costs of the company

Social Impact/Area/ Issue	Mitigation Measures	Objective	Competent Institution	Timetable	Cost of Implementation
Organization of labour	• The investor (ADF), as well as the contractor, are obliged to follow the national regulations for safety and health at the workplace • A company code of conduct shall be prepared for employees of a company to inform the employees of the company's expectations. • Codes of Conduct or Codes of Behaviour will be considered as guidelines to prevent certain specific types of behaviour (e.g. conflict of interest, self-dealing, bribery, and inappropriate action).	♦ Employee information to prevent certain specific types of behaviour	ADF	Pre-construction	Operating costs of the company
	• The code of conduct shall be developed based on the following key points: • Loyalty (following codes of conducts, commitment to work, commitment to environmental and social, health and safety measures) • Prohibited behaviours like gambling, drunkenness, and irregular and immoral habits. • This environment and social incidents response toolkit (ESIRT) will be used in case such incidents occur during the implementation of the project.	♦ Employee information to prevent certain specific types of behaviour	ADF	Pre-construction	Operating costs of the company

Social Impact/Area/ Issue	Mitigation Measures	Objective	Competent Institution	Timetable	Cost of Implementation
Vehicular access and parking	• The north gate can also be an access point, but no trucks ARE PERMITTED UP this narrow entry. • The access to the south of the site could serve as an alternative access point, BUT only under special permission from the Conservation Architects; • Prior to construction activities, the Contractor will install all signs, barriers and control devices needed to ensure the safe use of the road by traffic and pedestrians, as required by the traffic control plan	Provide access for vehicles	ADF/ Contractor	Construction	Operating costs of the company
Access to Facilities, Controls and Utilities	♦ Contractor to generate utility management plan • Contractor to minimize damage to public utilities	Provide temporary storage facilities	ADF/ Contractor	Pre-construction	Operating costs of the company
Visual characteristic	• Revitalization / rehabilitation of disturbed locations (areas) should be carried out immediately after the completion of the construction work at the specific locations and in accordance with the project documentation prepared for this purpose	Protection of the visual characteristics of the landscape	Contractor/Supervision controlled by competent inspection authorities	Continuously during the construction phase	Included in the construction costs

Social Impact/Area/ Issue	Mitigation Measures	Objective	Competent Institution	Timetable	Cost of Implementation
Occupational Health and Safety	• The developer must implement the Occupational Safety and Health Management System (OHSMS). • Occupational Safety and Health Plan (OSHP) of temporary and mobile construction sites with implemented grievance mechanism for workers, as well as a statement of safety with risk assessment for construction site workplaces • Establish Workers Grievance Mechanism	Minimizing the negative risks to the health and safety of workers, as well as the society	ADF Contractor	Pre-construction. Construction	Operating costs of the company
Occupational Health and Safety	• Proper training of employees for using, servicing and integrity of PPE (personal protection equipment). Use of anti-fall devices.	Minimizing the risks to the safety and health of workers	Contractor	Construction	Operating costs of the company
Occupational Health and Safety	• Training and licensing of industrial vehicle operators for safe handling of specialized vehicles such as forklifts, including safe (un)loading, load limits, and regular control of their health, in accordance with the Law.	Minimizing the risks to the safety and health of workers	Contractor	Construction	Operating costs of the company

Social Impact/Area/ Issue	Mitigation Measures	Objective	Competent Institution	Timetable	Cost of Implementation
Occupational Health and Safety	• Appropriate training on the use, servicing and integrity of PPE (Personal Protective Equipment). • Appropriate use of scales and scaffolds must be left to trained employees. • Use of anti-fall devices, including a safety belt and rope movement limiter, to prevent access to potential points at risk of collapse, or anti-fall protection devices that are fully fastened to the body used in conjunction with shock absorption wires or devices for self-pulling and blocking of an inert fall, attached to a fixed stopping point or horizontal "safety lines". • Prevention from falling and implementing protective measures is required when the worker is exposed to danger of falling over two meters in a working machine, in water or other liquids, in dangerous substances or through an opening in the working surface. • Must comply with local labor 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 the Law	Minimizing the risks to the safety and health of workers	Contractor	Construction	Operating costs of the company

Social Impact/Area/ Issue	Mitigation Measures	Objective	Competent Institution	Timetable	Cost of Implementation
Occupational Health and Safety	• Provide special training for workers for handling flammable materials and protection and fire prevention.	Minimizing the risks to the safety and health of workers	Contractor	Construction	Operating costs of the company
Occupational Health and Safety	• Proper training of employees for using, servicing and integrity of PPE (personal protection equipment). Use of anti-fall devices.	Minimizing the risks to the safety and health of workers	Contractor	Construction	Operating costs of the company
Occupational Health and Safety	• The use of specially designed machines that eliminate the danger of a trap (when workers are nearby or work with rotating and moving equipment), as well as ensuring that the limbs are secured from danger of injury under normal operating conditions.	Minimizing the risks to the safety and health of workers	Contractor	Construction	Operating costs of the company
Occupational Health and Safety	• Training and licensing of industrial vehicle operators for safe handling of specialized vehicles such as forklifts, including safe (un)loading, load limits, and regular control of their health, in accordance with the Law.	Minimizing the risks to the safety and health of workers	Contractor	Construction	Operating costs of the company
Community Health and Safety	• Install a temporary dynamic rockfall barriers installed below the works area is to be used	Minimizing the risks to the safety and health of local residents	Contractor	Construction	Operating costs of the company
Community Health and Safety	• Provide, with the Municipality, a temporary dwelling location (a month at most) to the residents of the houses that are below the Tower A, during the main construction activities on the Tower.	Minimizing the risks to the safety and health of local residents	Contractor	Construction	Operating costs of the company

Social Impact/Area/ Issue	Mitigation Measures	Objective	Competent Institution	Timetable	Cost of Implementation
	• Provide 24/7 physical security for houses whose residents will be accommodated in other dwelling objects during civil works on the Tower A.				
Community Health and Safety	• Prepare Traffic Management Plan during construction phase in cooperation with relevant local authorities and disclose it at the ADF and Municipality's websites.	Reducing the harmful consequences to the local population	Contractor	Construction	Operating costs of the company
Community Safety and Health	• Public availability of the timeframes of construction activities, especially for each Sub-projects, to reduce the impact that stems from the lack of availability of desired destinations. • 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.	Informed local community	Contractor	Construction	Operating costs of the company
Stakeholder Engagement	• A communication and information channel must be established between the contractor and the local authorities and the affected communities, at the very beginning of the construction phase. It should be maintained until the very completion of the construction activities. • Regularly disseminate information to the public and affected parts of the city about the working schedule that affects free movement of people and stocks.	Reducing the harmful consequences to the local population	Contractor	Construction	Operating costs of the company

Social Impact/Area/ Issue	Mitigation Measures	Objective	Competent Institution	Timetable	Cost of Implementation
Stakeholder Engagement	• Disclose and make accessable to the public the Stakeholder Engagement Plan for this Sub-project.	Informed local community	ADF and the Municipality of Gjirokastra	Construction	Operating costs of the company
Stakeholder Engagement	• Prepare and conduct Awareness Raising campaign for the traffic safety in the parts of the city that will experience traffic change due to the project activities. Main focus should be set on children.	Reducing the harmful consequences to the local population	Contractor	Construction	Operating costs of the company
Cultural Heritage	• Workers should undergo basic training on the procedure for a randomly discovered archaeological site.	Minimizing the possibility of damage to archaeological/ cultural sites and objects	Contractor	Construction	Operating costs of the company
Cultural Heritage	• Engage at least 1 Archeologist, for the whole period of Constrcution Phase, and who shall be supporting civil engineers and team leaders on site during excavating activities, and who will maintain daily communication with the relevant local institutions responsible for protection of cultural heritage	Minimizing the possibility of damage to archaeological/ cultural sites and objects	Contractor	Construction	Operating costs of the company

Social Impact/Area/ Issue	Mitigation Measures	Objective	Competent Institution	Timetable	Cost of Implementation
Cultural Heritage	♦ In the event of the accidental discovery of new artifacts and archaeological sites; works will be stopped and will only be resumed after the site has been archaeological discharged by authorized archaeologists. ♦ The proposed intervention should be compiled in accordance with the Albanian laws on Cultural Heritage, World Bank OP 4.11 and International charters (i.e. UNSECO) and will follow all the procedures of approvals and monitoring of the works as foreseen in the laws. ♦ To avoid the risk to any undiscovered archaeological assets being damaged during the implementation of the works large excavation works will be forbidden.	Protection of cultural and archaeological heritage	ADF	Pre-construction	Operating costs of the company Additional costs related to resettlement, not known at this stage

IX. CONCLUSION

Gjirokastra, is inscribed on the World Heritage List in 2005, as a city that "bears outstanding testimony to the diversity of urban societies in the Balkans and longstanding ways of life which have today almost vanished"

A recent effort, the Project for Integrated Urban and Tourism Development (PIUTD), has been funded by the World Bank to support the Government of Albania in developing the economy while improving living conditions. This overall project focuses mainly on urban centers that are of cultural and natural interest to strengthen tourism - thus Gjirokastra. Previous elements of this project have addressed urban upgrading, street improvements, pedestrian trails, museums, and lighting. This project is to specifically address the fortifications given their significance, prominence as an attraction, and current poor condition. The Ministry of Culture and the Municipality of Gjirokastra, have explicitly requested support given the emergency situation and stability of the castle.

A vision for the future of the castle, its uses, visitation, and conservation is sorely needed. This current project, understandably, is focused on the short-term emergency structural and geological interventions required for stabilization. But this scope is insufficient without an exploration of how residents and visitors view and wish to use the castle.

Key significant negative impacts will arise from structural and geological stabilisation of Tower A and intervention on the Vault GR and H. Other negative Impact will be on the acoustic environment, mainly caused from vibrations and dust from earthwork and demolition of some of the existing structures.

In order to avert such impacts during construction and operation of the castle, several mitigation measures are proposed. All potential adverse impacts are litigable when measures proposed (Chapter 6) are implemented, in which case benefits of this project to the nation would by far outweigh potential negative effects.

ANNEX

ANNEX 1: STAKEHOLDER ENGAGEMENT

1. OBJECTIVES OF STAKEHOLDER ENGAGEMENT PLAN

The overall objective of this Stakeholder Engagement Plan (SEP) is to define a program for stakeholder engagement, including public information disclosure and consultation, throughout the entire project cycle. The SEP outlines the ways in which Municipality and *JV Proscene + CHWB* (project team) will communicate with stakeholders and includes a mechanism by which people can raise concerns, provide feedback, or make complaints about the project "*Identification, Design or Prioritized Measures to Address Safety Concerns and Prevent Loss of Heritage Structures in the Castle of Gjirokastra*" and any activities related to the project.

The involvement of the local population is essential to the success of the project(s) in order to ensure smooth collaboration between project staff and local communities and to minimize and mitigate environmental and social risks related to the proposed project activities.

The Key Objectives of the SEP can be summarized as follows:

- Provide guidance for stakeholder engagement such that it meets the standards of International Best Practice;
- Identify key stakeholders that are affected, and/or able to influence the Project and its activities;
- Identify the most effective methods, timing and structures through which to share project information, and to ensure regular, accessible, transparent and appropriate consultation;
- Develops a stakeholders engagement process that provides stakeholders with an opportunity to influence project planning and design;
- Establish formal grievance/resolution mechanisms;
- Define roles and responsibilities for the implementation of the SEP;
- Define reporting and monitoring measures to ensure the effectiveness of the SEP and periodical reviews of the SEP based on findings.

2. REQUIREMENTS FOR STAKEHOLDER ENGAGEMENT

2.1. National requirements for stakeholder engagement

The Project will be implemented in accordance with the laws and regulations of the Republic of Albania, which are largely aligned with EU standards. These are summarized below.

Law No 119/2014 "On the Right to Information" regulates the right of access to information being produced or held by public sector bodies. The rules contained in this law are designated to ensure the public access to information, in the framework of assuming the rights and freedoms of the individual in practice, as well as establishing views on the state and society situation. This law aims also at encouraging integrity, transparency and accountability of the public sector bodies

Law No. 8672, dated 26.10.2000, "On the Aarhus Convention Ratification on public right to information, to participate in decision-making and to have access to justice in environmental matters". The international agreements ratified by the Republic of Albania, pursuant to the Constitution, occupy a privileged rank at the domestic legal order. An international agreement ratified by law of the parliament prevails over the laws of the country that are incompatible with it, and it is directly applicable, except the case when it is not self-executing and its application requires the adoption of a law. In the field of environment, the major part of the international treaties is not self-executing and require positive measures in order to be properly implemented at the domestic level.

Law 107/2014 on Territorial and Development Planning (amended by Law No 288/2017) regulates consultations and organization of public meetings during the development or relevant urban plans. The Planning Authority notifies the public and interested parties of the location, date and time of each public meeting and makes available the draft planning document, at least 30 days prior to the meeting. The announcement is made through the publication of the information in the register and in two major circulation papers or other media. Comments and suggestions on the draft plan, received during the publication process, are considered in the finalization of the plan.

2.2. World Bank requirements for stakeholder engagement

For all Category A and B projects proposed for financing, during the EA process, the borrower consults project-affected groups and local nongovernmental organizations (NGOs) about the project's environmental

aspects and takes their views into account. The borrower initiates such consultations as early as possible.

For meaningful consultations between the borrower and project-affected groups and local NGOs on all Category A and B projects proposed for financing, the borrower provides relevant material in a timely manner prior to consultation and in a form and language that are understandable and accessible to the groups being consulted.

Due to the aim for achievement of standards that promote Good International Industry Practice, as well as objectives of good governance, the WB promotes its new policy for stakeholder engagement described in the Environmental and Social Framework [2018], for all new and active projects to be financed, that are still in preparatory phase.

The World Bank's Environmental and Social Framework (ESF) came into effect on October 1, 2018. The Framework includes Environmental and Social Standard (ESS) 10, "Stakeholder Engagement and Information Disclosure", which recognizes "the importance of open and transparent engagement between the Borrower and project stakeholders as an essential element of good international practice". ESS10 emphasizes that effective stakeholder engagement can significantly improve the environmental and social sustainability of projects, enhance project acceptance, and make a significant contribution to successful project design and implementation.

As defined by the 2018 ESF and ESS10, stakeholder engagement is an inclusive process conducted throughout the project life cycle. Where properly designed and implemented, it supports the development of strong, constructive and responsive relationships that are important for successful management of a project's environmental and social risks. Key elements of ESS10 include:

- "Stakeholder engagement is most effective when initiated at an early stage of the project development process, and is an integral part of early project decisions and the assessment, management and monitoring of the project."

- "Borrowers will engage with stakeholders throughout the project life cycle, commencing such engagement as early as possible in the project development process and in a timeframe that enables meaningful consultations with stakeholders on project design. The nature, scope and frequency of stakeholder engagement will be proportionate to the nature and scale of the project and its potential risks and impacts.

- Borrowers will engage in meaningful consultations with all stakeholders. Borrowers will provide stakeholders with timely, relevant, understandable and accessible information, and consult with them in a

culturally appropriate manner, which is free of manipulation, interference, coercion, discrimination and intimidation.

- The process of stakeholder engagement will involve the following, as set out in further detail in this ESS: (i) stakeholder identification and analysis; (ii) planning how the engagement with stakeholders will take place; (iii) disclosure of information; (iv) consultation with stakeholders; (v) addressing and responding to grievances; and (vi) reporting to stakeholders.

- The Borrower will maintain and disclose as part of the environmental and social assessment, a documented record of stakeholder engagement, including a description of the stakeholders consulted, a summary of the feedback received and a brief explanation of how the feedback was taken into account, or the reasons why it was not."

Borrowers are required to develop a Stakeholder Engagement Plan (SEP) proportionate to the nature and scale of the project and its potential risks and impacts (paragraph 13). Stakeholders have to be identified and the SEP has to be disclosed for public review and comment as early as possible, before the project is appraised by the World Bank. ESS10 also requires the development and implementation of a grievance redress mechanism that allows project-affected parties and others to raise concerns and provide feedback related to the environmental and social performance of the project and to have those concerns addressed in a timely manner.The World Bank's Environmental and Social Framework (ESF) came into effect on October 1, 2018. The Framework includes Environmental and Social Standard (ESS) 10, "Stakeholder Engagement and Information Disclosure", which recognizes "the importance of open and transparent engagement between the Borrower and project stakeholders as an essential element of good international practice". ESS10 emphasizes that effective stakeholder engagement can significantly improve the environmental and social sustainability of projects, enhance project acceptance, and make a significant contribution to successful project design and implementation.

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commencing such engagement as early as possible in the project development process and in a timeframe that enables meaningful consultations with stakeholders on project design. The nature, scope and frequency of stakeholder engagement will be proportionate to the nature and scale of the project and its potential risks and impacts.

- Borrowers will engage in meaningful consultations with all stakeholders. Borrowers will provide stakeholders with timely, relevant, understandable and accessible information, and consult with them in a culturally appropriate manner, which is free of manipulation, interference, coercion, discrimination and intimidation.
- The process of stakeholder engagement will involve the following, as set out in further detail in this ESS: (i) stakeholder identification and analysis; (ii) planning how the engagement with stakeholders will take place; (iii) disclosure of information; (iv) consultation with stakeholders; (v) addressing and responding to grievances; and (vi) reporting to stakeholders.
- The Borrower will maintain and disclose as part of the environmental and social assessment, a documented record of stakeholder engagement, including a description of the stakeholders consulted, a summary of the feedback received and a brief explanation of how the feedback was taken into account, or the reasons why it was not."

Borrowers are required to develop a Stakeholder Engagement Plan (SEP) proportionate to the nature and scale of the project and its potential risks and impacts (paragraph 13). Stakeholders have to be identified and the SEP has to be disclosed for public review and comment as early as possible, before the project is appraised by the World Bank. ESS10 also requires the development and implementation of a grievance redress mechanism that allows project-affected parties and others to raise concerns and provide feedback related to the environmental and social performance of the project and to have those concerns addressed in a timely manner.

3. STAKEHOLDER IDENTIFICATION, ANALYSIS AND COMMUNICATION METHODS

3.1. Project stakeholders

Project stakeholders are 'people who have a role in the Project, or could be affected by the Project, or who are interested in the Project'. Project stakeholders can be grouped into primary stakeholders who are "…individuals, groups or local communities that may be affected by the

Project, positively or negatively, and directly or indirectly"… especially… "those who are directly affected, including those who are disadvantaged or vulnerable" and secondary stakeholders, who are "…broader stakeholders who may be able to influence the outcome of the Project because of their knowledge about the affected communities or political influence over them".

Thus, Project stakeholders are defined as individuals, groups or other entities who:

(i) are impacted or likely to be impacted directly or indirectly, positively or adversely, by the Project (also known as 'affected parties'); and

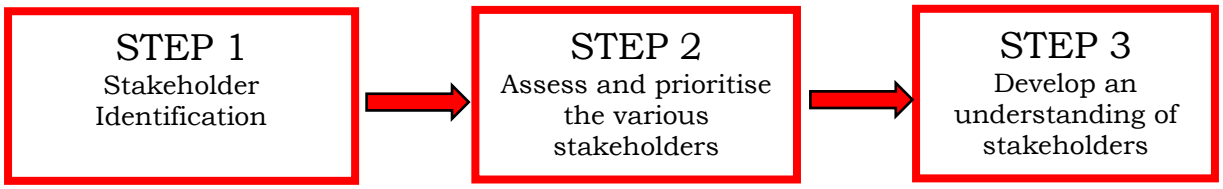
(ii) may have an interest in the Project ('interested parties'). They include individuals or groups whose interests may be affected by the Project and who have the potential to influence the Project outcomes in any way.

Step 1: Stakeholder Identification

The Project Team has started a process of identification and mapping of all relevant stakeholders considered to have an impact or may affect the project but also the ones that may have an interest to the project. During the process of stakeholder's selection, the team has taken into consideration different groups or sectors that are relevant to the assignment of this project and as per their roles or functions. Specific stakeholders are identified from the following sectors: citizens and residents, private sector groups, professional associations, informally organized neighbourhood coalitions, international donors, nongovernmental organizations and Community-Based Organization, government institutions and agencies, etc.

The stakeholder list will be consulted and finally established in agreement with the Client.

However, the stakeholder identification process will be reassessed throughout the project as to be ensured that all relevant actors are identified and been engaged.



Step 2: Assess and prioritise the various stakeholders in respect to:

- The level of influence: the quantity and type of resources (human, financial, technological, political) and power the stakeholder can marshal to promote its position on the project.

- The level of interest: the priority and importance the stakeholder attaches to the project.

- The level of impact: to which extent the stakeholder will be affected by the implementation of the planned activities;

- Alliances: organizations that collaborate with the stakeholder to support or oppose the project.

- Particular information or knowledge base: information or knowledge that will lead to a comprehensive understanding of the problem or issue. A group composed of people with different training, data and perspectives can develop a much more complete picture of an issue that if they each considered the issue individually.

- Party to an actual or potential conflict: a stakeholder process offers an informal and flexible forum for bringing participants together to try to resolve their differences.

Step 3: Develop an understanding of stakeholders

Based on the results of the first two steps, and the consultation with the Client, the Project Team will establish a plan where they will be identified:

- the role, level of the requirement engagement and timing for each of the groups of stakeholders

- the methods of engagement to be adopted for each group of stakeholders.

3.2. Stakeholder Identification and Analysis

Stakeholder engagement process for the PIUTD in Gjirokaster will start from identification, mapping and analysis. It is anticipated that this Stakeholder Engagement Plan (SEP) will help clarify the stakeholder identification procedure at the national level for the forthcoming stages. This will guide the Municipality of Gjirokaster and JV Proscene + CHWB team and allow complying with above cited commitments (national and international).

A general list of stakeholder groups identified is presented in Table 1 below.

Table 1. Stakeholder groups and interest in engagement

Stakeholder group	Reason to Involve	Interests/Benefits
Key Stakeholders		
ADF, WB, UNESCO	• The authorisation and funding source of the project. • The bodies that define the goals of the project • The bodies to whom the results of each project milestone will be presented for approval	• Compilation of a project with highest standards and the best possible proposals within the allocated budget.
National & Local Authorities and Agencies	• Provision of access to the sites involved in this assignment • Provision of access to the data required for the project analysis • Ensure usefulness & relevance of project outputs Contribution to the project through their expertize experienced employees • Evaluation and approval body • Promotion of the project results	• Final users • Improvement of the tourism package • Increase of tourism • Funding opportunities for necessary projects • Revenue growth
citizens, residents, monument owners, administration staff of the museums	• Ensure project outcomes are accepted • Contribution to the project through their expertise and knowledge • Replication of Project Outputs • Contribution for the enrichment of the museums collections	• Final users • Economic benefit •
International donors/ private sector groups	• Further funding opportunities • Replication of Project Outputs • Collaboration to coordinate all possible initiatives as to have better outcomes	• Funding opportunities for necessary projects
Other Stakeholders		

professional associations	• Ensure project outcomes are accepted • Contribution to the project through their expertise	• Project implementation with highest standards
Nongovernmental organizations and Community - Based Organization	• Ensure project outcomes are accepted • Contribution to the project through their expertise	• Funding opportunities
private sector groups	• Further funding opportunities • Replication of Project Outputs • Promotion of the project results • Feeding the project with new ideas based on their own expertise	• Final users • Enrichment of tourism offer • Networking • Funding opportunities
General Public in the project area	• Providing timely information on Project benefits and risks	• Improvement of conditions of life in the area

4. CONSULTATION HELD DURING THE DESIGN PHASE

Municipality and Proscene + CHWB and ADF has used a range of techniques to fulfill the main purpose of its consultation activities aimed at raising the community's and stakeholder awareness about the planned and current activities undertaken by the project, as well as to solicit public feedback that can subsequently be input into the project's mitigation and enhancement measures. As discussed above, due consideration has been given to the cultural appropriateness and inclusiveness of the consultation settings as well as gender and other sensitivities that may prevail in the local communities. Knowledge and advice of the community representatives and local NGOs are invaluable to ensure that these aspects are fully observed.

Before beginning and throughout the project numerous stakeholders have been consulted. This includes the local Gjirokastra Municipality, the local office of the Ministry of Culture, the national central office of the Ministry of Culture, and the Albanian Development Fund. Two other key stakeholder groups consulted was the management of the castle and museum as well as the community of Gjirokastra. The team has encouraged the State Party through the Ministry to share any information with the World Heritage Centre UNESCO and remains available for any questions. It is the understanding that the next, more complete package, Task 4, will be delivered to the World Heritage Centre sometime in early 2021 and at that time the team can fully describe the interventions. Although every attempt was made to meet frequently with stakeholders, during the Task 3 preparations, the global COVID-19 pandemic did hamper efforts. To counter this, numerous on-line meetings were held, and a video was produced to illustrate the studies underway at the castle. All these materials and meeting minutes are available from ADF.

Most of the earlier meetings pre-COVID were conducted on site and face to face. However after March, 2020 meetings were often held through video conferences, telephone, or via Whataspp. A full list of meeting minutes and management reports is available from ADF. Below is a list of the stakeholders consulted:

Date	**Type of meeting**
13/01/2020	ADF staff, management, consultants, PCU, National Institute of Cultural Heritage
14/01/2020	Mayor and Deputy Mayor of Gjirokastra, others at the municipality
14/01/2020	Team, ADF Gjirokastra, DRKK, Regional Directorate of National Culture Gjirokastra
15/01/2020	Castle management, maintenance personnel

24/02/2020	Meeting at ADF offices in Tirana with CHwB / Proskene engineers
02/03/2020	Castle personnel during inventory
04/03/2020	Castle personnel during geological, hydrological and structural studies including local engineers who worked on the castle in the past
23/03/2020	Meeting with ADF concerning global Corona Virus pandemic
19/05/2020	Comments addressed on Task 2
27/05/2020	call with ADF and municipality to discuss management plan and stakeholder outreach
27/05/2020	Informal call with ADF concerning expanding scope of work to include management plan
04/06/2020	on line meeting with ADF, World Bank, external consultants. Etc.
04/06/2020	Formal call with ADF, World Bank about three questions following the answers to the last Task 2 deliverable
08/06/2020	Submission of answers and entire set of Task 2 deliverable to ADF
14/06/2020	Submission of immediate emergency plan for the castle. Meetings were held between the team and the castle management for an emergency plan, this was also a topic with the municipality to direct them to advise transportation on the road below the castle.
19/06/2020	communication concerning the immediate emergency measures requested from the last meeting
28/07/2020	Stakeholder meeting informal meeting with ADF. There was also an in person meeting held in Gjirokastra, with the municipality and relevant stakeholders, but with limited numbers due to COVID legal restrictions.
11/09/2020	Questions concerning the progress of interim safety measures at the castle
17/09/2020	Submission of safety pamphlets and discussions with castle management, and municipality for warning road signs
08/10/2020	Update Task III Approval DRAFT Virtual
05/11/2020	communication with ADF concerning the idea to have a presentation to ADF and the World Bank in early December to avoid any delays after the submission of Task 4. This particularly concerns the conservation approach for Tower A. This will give the expert at the World Bank any opportunity to ask between tasks and become more familiar with the project.
06/11/2020	Communication with ADF concerning the progress on Task IV, the final deadline, submission of the documents

	to the Ministry and UNESCO. As per the Operational Guidelines of the World Heritage Convention, the World Heritage Centre should be notified of any major projects within the World Heritage property.
03/12/2020	Video conference between ADF, World Bank, and the team. This was a very brief presentation of the project with the idea that there are new members on the WB team that are unfamiliar with Gjirokastra, the castle, team, and approach. Thus, it was an introduction with the goal of shortening time of approval after submission of the final Task IV.
12/01/2021	video meeting, stakeholder meeting with ADF, MoC, World Bank

- ❒ VIDEO was produced for wider distribution of the initial findings. This was also delivered to the Ministry of Culture and the office of the Prime Minister. It was then posted on line social media platforms.
- ❒ ALL reports, officially submitted tasks were first sent to ADF then sent by ADF to the Ministry of Culture in Tirana and also in Gjirokastra, as well as the Municipality

4.1.2 Description of Information Disclosure Methods

As a standard practice, the Project materials (ESIA, ESMP, SEP, CHMP) released for disclosure are accompanied by making available the registers of comments and suggestions from the public that are subsequently documented by the project developer in a formal manner.

The project developer will continue applying the similar approach to disclosure for any additional E&S appraisal materials that will be prepared as part of the project development.

The ESIA report (together with the associated environmental and social management plan – ESMP) in Albanian and English will be made available for public review for the period of 14 days in accordance with the international requirements. Subject to the disclosure will also this Stakeholder Engagement Plan. The SEP will be released in the public domain simultaneously with the ESIA and ESMP reports and will be available for stakeholder review during the same period of time, i.e. 14 days.

Distribution of the disclosure materials will be through making them available at venues and locations frequented by the community and places to which public have unhindered access. Free printed copies of the ESIA/ESMPs and the SEP in Albanian will be made accessible for the general public at the following locations:

- Municipality of Gjirokaster
- Gjirokaster District Council

4.1.3 *Timetable for Disclosure*

The disclosure process associated with the release of project E&S appraisal documentation, as well as the accompanying SEP will be implemented within a timeframe that shall be agreed upon :

- Placement of the ESIA (including ESMP and RPF), and SEP in public domain – Dates to be confirmed in final SEP.
- 30-day disclosure period – Dates to be confirmed later in final SEP.
- Public consultation meetings in project affected communities and with other stakeholders to present and discuss findings of the ESIA and measures proposed in the ESMP - Dates to be confirmed in final SEP.
- Addressing stakeholder feedback received on the entire disclosure package - Dates to be confirmed in final SEP.

The SEP will remain in the public domain for the entire period of project development and will be updated on a regular basis as the project progresses through its various phases, in order to ensure timely identification of any new stakeholders and interested parties and their involvement in the process of collaboration with the project. The methods of engagement will also be revised periodically to maintain their effectiveness and relevance to the project's evolving environment.

The outline presented in the table below summarizes the main stakeholders of the project, types of information to be shared with stakeholder groups, as well as specific means of communication and methods of notification. Table 3 below provides a description of stakeholder engagement and disclosure methods recommended to be implemented during stakeholder engagement process.

Table 3 Stakeholder Engagement and Disclosure Methods

Stakeholder Group	Project Information Shared	Means of communication/ disclosure

Local population in the Project Area of Influence	International ESIA/ ESMP, and Stakeholder Engagement Plan; Public Grievance Procedure; Regular updates on Project development. Cultural Heritage Plan	Public notices. Electronic publications and press releases on the Project web-site. Dissemination of hard copies at designated public locations. Press releases in the local media. Consultation meetings. Information leaflets and brochures. Separate focus group meetings with vulnerable groups, as appropriate.
Non-governmental and community-based organizations	ESIA, ESMP, and Stakeholder Engagement Plan; Public Grievance Procedure; Regular updates on Project development.	Public notices. Electronic publications and press releases on the project web-site. Dissemination of hard copies at designated public locations. Press releases in the local media. Consultation meetings. Information leaflets and brochures.
Government Ministries/ authorities and agencies	ESIA, ESMP, Executive Summary, and Stakeholder Engagement Plan; Regular updates on Project development; Additional types of Project's information if required for the purposes of regulation and permitting.	Dissemination of hard copies of the ESIA, ESMP, RFP package, and SEP at municipal administrations. Project status reports. Meetings and round tables.
Related businesses and enterprises	Stakeholder Engagement Plan; Public Grievance Procedure; Updates on Project Development and tender/ procurement announcements	Electronic publications and press releases on the Project web-site. Information leaflets and brochures. Procurement notifications
Project Employees	Employee Grievance Procedure; Updates on Project development.	Staff handbook. Email updates covering the Project staff and personnel. Regular meetings with the staff. Posts on information boards in the offices and on site. Reports, leaflets

5. RESOURCES AND RESPONSIBILITIES FOR IMPLEMENTING STAKEHOLDER ENGAGEMENT ACTIVITIES

The management, coordination and implementation of the SEP and its integral tasks will be the responsibility of ADF during pre-construction and construction phase, and dedicated team members within Regional Directorate of Cultural Heritage of Gjirokastra, representing the Ministry of Culture, during operational phase. The roles and responsibilities of the organization are inter alia to:

- Approve the content of the draft SEP (and any further revisions);
- Approve prior to release, all materials used to provide information associated with the Gjirokasra Castle ESIA (such as introductory letters, question and answer sheets, PowerPoint materials, posters, leaflets and brochures explaining the project and ESIA process);
- Approve and facilitate all stakeholder engagement events and disclosure of material to support stakeholder engagement events;
- Participate during all face-to-face stakeholder meetings
- Promptly and in a culturally acceptable manner respond to the grievances raised
- Maintain records of raised Grievances, along with its follow-up.
- Review and sign-off minutes of all engagement events; and
- Maintain the stakeholder database.

6. MONITORING AND REPORTING

Monitoring and evaluation of the stakeholder process is considered vital to ensure that both, Project Developer and later Project beneficiary the Regional Directorate of Cultural Heritage of Gjirokastra (representing the Ministry of Culture) are able to respond to identified issues and alter the schedule and nature of engagement activities to make them more effective. Adherence to the following characteristics/commitments/activities will assist in achieving successful engagement:

- ❒ Sufficient resources to undertake the engagement;
- ❒ Inclusivity (inclusion of key groups) of interactions with stakeholders;
- ❒ Promotion of stakeholder involvement;
- ❒ Sense of trust in RDCH shown by all stakeholders;
- ❒ Clearly defined approaches; and
- ❒ Transparency in all activities.

In order to summarize stakeholder engagement process, PIU of ADF will prepare separate monitoring report (Stakeholder Engagement Activities Report) whereas the first report should be produced 3 months upon start of the Project construction activities and will be continued on a semiannual basis until competition of construction works. After Project completion Regional Directorate of Cultural Heritage of Gjirokastra will develop annual Monitoring report during the operation phase.

Monitoring reports should contain information about:

- ❒ Consultation meetings with stakeholders (place, time, issues discussed, mitigation measures provided by ADF)
- ❒ Issues and management responses linked to minutes of meetings;
- ❒ Feedback from primary stakeholder groups (through interviews with sample of affected people);
- ❒ Commitment and concerns register, and
- ❒ Grievances identified in the reporting period (and all detailed information about it)

PIU or ADF will also report on stakeholder engagement activities (on annual basis), to the WB.

Each Stakeholder Engagement Activities Report for this Project will be published on the ADF web site for public review and further comments.

(ADF/Municipality/RDCH) will invite external monitoring by interested NGO/CSO in the local area to monitor implementation of SEP activities. More on this issue can be found at World Bank Good Practice Note on Third-Party Monitoring.

The following indicators will be used for evaluation:

- ❒ Level of understanding of the project stakeholders;
- ❒ Grievances received and how they have been addressed; and
- ❒ Level of involvement of affected people in committees and joint activities and in the project itself.
- ❒ Dissemination of information – availability and accessibility of Project documents; frequency of distribution of information, reached stakeholders;
- ❒ Realization of planned engagement activities – the number and level of participation by specific stakeholder groups;
- ❒ Number of vulnerable groups identified and communicated
- ❒ Minutes of meetings created;
- ❒ Correction actions delivered;
- ❒ Numbers and type of grievances.
- ❒ Compliance with the grievance mechanism – Completed records in grievance log
- ❒ Number of repeated grievances.

7. GRIEVANCE MECHANISM

This section describes avenues for affected persons to lodge a complaint or express a grievance against the project, its staff or contractors during project implementation. It also describes the procedures, roles and responsibilities for addressing grievances and resolving disputes in line with ESMF and RPF procedures and principles.

Every aggrieved person shall be able to trigger this mechanism to quickly resolve their complaints. The objectives of the grievance process are:

i) Ensure that appropriate and mutually acceptable corrective actions are identified and implemented to address complaints;

ii) Verify that complaints are satisfied with outcomes of corrective actions;

iii) Avoid the need to resort to judicial proceedings.

The grievance mechanism at the project site will be fed from three main sources:

- Community residents.
- Supervising engineer, clerk of works or contractor.
- Monitoring team who will forward issues/concerns identified in the field.

The project will have a Specific Grievance Mechanism applicable for all sub-projects. Central Grievance Desk (CGD) will be with the ADF as the main implementing entity. The CGD shall serve as both Project level information center and a grievance mechanism, available to those affected by implementation of all Project sub-components. The CGD will be responsible to address grievance received from Gjirokastra residents living in the affected municipalities and persons who believe are directly or indirectly affected by the project.

The CGD shall be established prior to commencement of any activities under the Project. The ADF will be responsible that there is a transparent disclosure of information of the grievance mechanism by communicating the role and existence of the CGD and its function, the contact persons and the procedures to submit a complaint in the affected areas. The ADF shall inform local communities during the preparation of specific investments of the role and existence of the CGD, its function, the contact persons and the procedures to submit a complaint in the affected areas through the following means:

- distribution of brochures to affected communities, and
- distribution of notices to be placed at notice boards and frequently visited places of the project areas on the notice boards and website of Gjirokastra municipality.

Efforts will be made to adequately inform any vulnerable group or persons ensuring the CGD if needed is easily accessible to such persons.

The CGD shall be designed to be accessible, without cost to the complaint, effective, efficient and not precluding any official administrative or judicial legal remedy available under the law.

Any grievance can be brought to the attention of the CGD anonymously, personally or by telephone or in writing by filling in the grievance form by phone, e-mail, post, fax or personal delivery to the address of the ADF. The Grievance registration form is provided in Figure 42.

ANNEX: Grievance Application Form

Reference No: _____

Full Name: _____

Note: you can remain anonymous if you prefer, or request not to disclose your identity to the third parties without your consent. In case of anonymous grievances, the decision will be disclosed at the Projects website

First name _____

Last name _____

❒ I wish to raise my grievance anonymously

❒ I request not to disclose my identity without my consent

Contact Information: *(Please mark how you wish to be contacted: email, telephone).*

❒ By Post (please provide mailing address): _____

_____

_____

❒ By Telephone: _____

❒ By E-mail _____

❒ I will follow up the resolution at the website as I want to remain anonymous

Preferred Language for communication:

- ❒ Albanian
- ❒ Other *(indicate)*

Description of Incident or Grievance (*What happened? Where did it happen? Who did it happen to? What is the result of the problem? Date of Incident/ Grievance)*

_____

_____

_____

_____

_____

_____

_____

- ❒ One-time incident/grievance (date___)
- ❒ Happened more than once (how many times? _____)
- ❒ On-going (*currently experiencing problem*)

- ❒ What would you like to see happen to resolve the problem?

  _____

  _____

  _____

Signature:_____ Date: _____

Please return this form to:

Mr. Dritan Pistoli

Albanian Development Fond

Rr. "Sami Frasheri", Nr 10 Tirane, Albania

Tel: +355 4 2235 597/8

Tel/Fax: +355 4 2234 885

Email: adf@albaniandf.org

Figure 44. Grievance Application Form

5.1. Grievance Administration by the Project

Any grievance shall follow the path of the following mandatory 6 steps: Receive, Assess and assign, Acknowledge, Investigate, Respond, follow up and close out.

Once logged the CGD shall conduct a rapid assessment to verify the nature of grievances and determine on the severity. Within 3 days from logging it will acknowledge that the case is registered and provide the complainant with the basic next step information. It will then investigate by trying to understand the issue from the perspective of the complainant and understand what action he/she requires. The CGD will investigate by looking into the facts and circumstances through interviews with all parties involved and confer with relevant stakeholders. Once investigated, and depending on the severity and type of grievance, the provisional decision shall be discussed with the complainant in the timeframe of 10 days after logging the grievance. Reaching and issuing a

decision without conferring with the grievant shall be an exception. The final agreement, once reached through consultation with grievant, should be issued and grievant be informed about the final decision not later than 20 days after the logging of the grievance.

Closing out the grievance occurs after the implementation of the resolution has been verified. Even when an agreement is not reached, or the grievance was rejected it is important to document the result, actions and effort put into the resolution, close out the case. If the grievance could not be resolved in amicable endeavor, the grievant can resort to the formal judicial procedures, as made available under the Albanian national legal framework. Any grievance can be taken to the authority of the judicial bodies at any time after logging. Logging a grievance with the CGD does not preclude or prevent seeking resolution from an official authority, judicial or other, as provided by the Albanian legal framework.

In case of anonymous grievance, after acknowledgment of the grievance within three days from logging, the CGD will investigate the grievance and within 20 days from logging the grievance, issue final decision that will be disclosed on the website of the Ministry of Infrastructure and Environment. Closing out the grievance occurs after the implementation of the resolution has been verified.

The CGD shall keep a grievance register log that will have all necessary elements to disaggregate the grievance by gender of the person logging it as well as by type of grievance. Each grievance will be recorded in the register with the following information at minimum:

- description of grievance,
- date of receipt acknowledgement returned to the complainant,
- description of actions taken (investigation, corrective measures), and
- date of resolution and closure / provision of feedback to the complainant

The role of the CGD, in addition to addressing grievances, shall be to keep and store comments/grievances received and keep the Central grievance log administered by the ADF.

The flow chart below describes the process that will use to resolve the grievances (Figure 41).

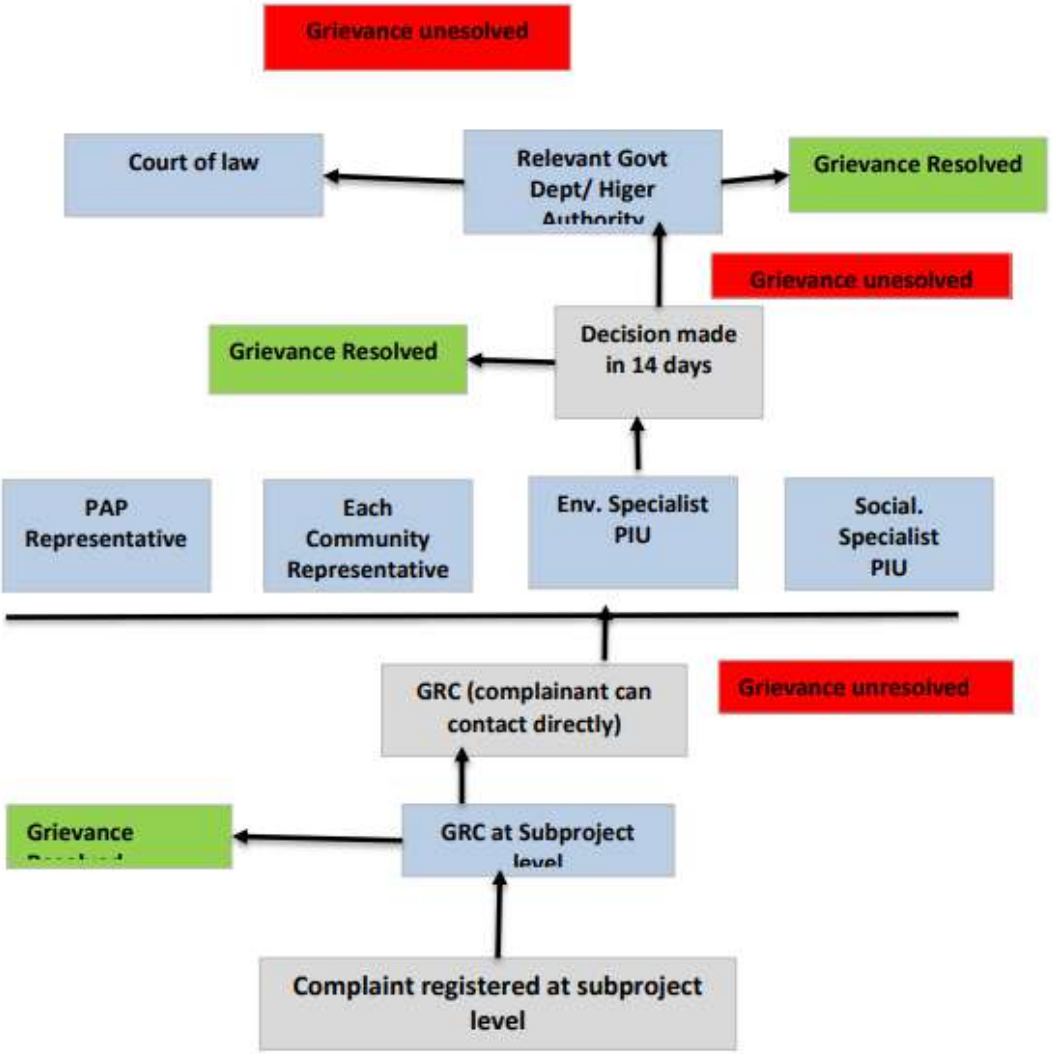


Figure 45. Grievance Mechanism Procedure

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