

ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN
FOR THE FOR THE RECONSTRUCTION OF THE ROAD FROM
POGRADEEC TOWN TO TUSHEMISHT VILLAGE, LOT 1
POGRADEEC MUNICIPALITY

July 2018, draft

Environmental and social management plan for the reconstruction of the road from Pogradec to
Tushemisht, 3.6 km

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1. INTRODUCTION

The proposed subproject “Reconstruction of the road from Pogradec town to Tushemisht village” is expected to be financed by the Government of Albania through a World Bank loan. This road reconstruction subproject is one of the road segments to be rehabilitated in the frame of the “Local Roads Connectivity Project”- LRCP, which is one of the several large investment projects in infrastructure improvement financed by the World Bank Group.

The Albanian Development Fund (ADF), which will be the Implementing Agency for the project, is a public agency whose mission is to encourage a sustainable, balanced and cohesive socio-economic development at local and regional level.

The aim of this sub-project is the upgrading of the existing road that connects the town of Pogradec to Tushemisht village near the Ohrid Lake. This ESMP is prepared for the first Lot of this segment, located in Pogradec town, 3,6 km in length, in line with the detailed design (Figure 1).

This road provides for the access of vehicles, mostly for tourism and agricultural purposes. The road in its current situation cannot handle freely the increasing flow of tourists visiting the town and the lake.

Currently, in order to visit Drilon natural park, tourist vehicles use the road near/parallel to Ohrid lake.

The Municipality of Pogradec plans to transform this parallel road to a pedestrian walking path and rehabilitate the proposed segment Pogradec-Tushemisht to handle the vehicle traffic. Avoiding the car traffic will create a positive impact on the Lake Front.

Due to the fact that the road will be widened as and where technically necessary to make space for two vehicle lanes, walking paths, as well as a bicycle lane, the project entails some resettlement issues, mostly agricultural land, for which an Abbreviated Resettlement Action Plan is being prepared by ADF in cooperation with Pogradec Municipality.

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Figure 1: Location of the proposed segment

In line with the detailed project design, this subproject foresees upgrading of the existing vehicle road Pogradec-Tushemisht, including the improvement of:

- Access to inhabited quarters through intervention in the existing access points and crossings, including two small secondary segments towards the lake
- Placement of sidewalks with trees
- Reconstruction of all infrastructure elements such as (culverts, drainage canals, etc)
- Bicycle lane on the lake side

Pogradec town is located in the southeast of Albania and is part of the district of Korça. The city has a surface of 13 km² and is located on the shore of Lake Ohrid. Pogradec lies 700 meters above sea level in a valley, which is surrounded by the mountains to the west and from the low hills to the south and east.

The Pogradec Beach is located in the city along the "1 Maji" promenade. It is a sandy beach, with clean water and entertainment opportunities (Figure 2). In Pogradec there are several other private and public beaches, with sand and small pebble. Outside the city are the crystal-clear waters of Lin and Tushemisht.

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Figure 2: Pogradec town

Pogradec has a rather favorable geographic position because it connects many cities between them, but also a border crossings for the Republic of Macedonia and in reverse. In the municipality of Pogradec, the national road Tirana - Korça is part of the VIII corridor, the new road Qafë Thanë - Qafë Pllocë, and the railway line Pogradec - Elbasan. In the municipality of Pogradec there are two border crossings for the Republic of Macedonia, that of Tushemisht and Qaf Thana. On the territory of the municipality there are strong territorial elements; artificial and natural like: Ohrid Lake, Driloni Park, Pogradec Fortress, Shkumbin River, Mokrat Mountains etc. Pogradec city and its suburbs before the territorial division were part of the Municipality of Pogradec, with comprising the population of 38653 inhabitants, while after the territorial division this city has undergone changes in the territory, making part of the municipality and other administrative units such as: Udenisht, Bucimas, Proptisht, Trebinje, Velcan, Çerrave and Dardhas.

Pogradec has a museum rich in antiquity and wartime evidence, has the old Orthodox church, called St. Mary's Church, and is located in the old Pogradec neighborhood, as well as a new church, with a very special architecture. The city also has two mosques. One is located in the city center and the other in the neighborhood called Gorica.

Four kilometers east of Pogradec is the tourist spot of Drilon, a natural monument, (Figure 3), where the proposed road segment ends. Drilon is a karstic source that consists of three water lines flowing to be shed on the south-eastern shore of the lake. One of them, the most important one, creates a large water basin where you can stroll, ride a boat, enjoy the beauties of rich flora and fauna. Spruce, plane, poplar, willow or stubble trees make the air fresher and cleaner.



Figure 3: Drilon touristic site

2. DESCRIPTION OF THE PROJECT

The road segment to be reconstructed, Pogradec – Tushemisht, starts from the intersection of Tushemisht's road with the national road of Pogradec-Korce (at the gas station) and extends almost parallel with the line of the lake, at a distance of about 300 m from it. According to the local denomination are involved: Sul Starovari St., Nehemia St. and Driloni St.

This axis has a length of 3.6 km. In addition to the main axis, there are also two ramps towards the lake respectively 380 m axle and 240 m (Figure 1).

The road in its current situation cannot handle freely the increasing flow of tourists visiting the town and the lake (Figure 2). Furthermore, community safety issues are in question due to difficulties in using the road at its current width, including difficulties of access in emergency situations, downgraded engineering networks, safety issues due to lack of sidewalks and other elements.

1.2. Description of the existing road

The first segment of the road (Nehemia street) is the segment that exits the town of Pogradec, at a length of 2.5 km and goes through a flat terrain. Its current width varies from 11-12 m. The segment goes through an urban area with villas and houses on both sides of the road.

Surface waters have been partially managed, but there are areas where there are canals in front of the houses and locals have built over them in order to access their houses. These improvised culverts have been constructed by the locals at different diameters, which causes slowing of drainage water flow and even blocking of water flow.

Along the most part, the road has no walking paths, creating difficulties of movement of vehicles and inhabitants.

This segment is planned to have a lane of 7 m width, with added shoulders of 50 cm on both sides, with curbs for removing water from the road surface. There will be lighting on one side and a bicycle lane on the other side, several culverts in parallel and across the road. The lighting has been designed to sufficiently provide lighting for the whole proposed segment.

Along this segment there will be two connecting roads: one to the school and the other to the fire station. Where feasible, there will be also parking lots in parallel to the road.

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The road, upon construction, may be used by the following vehicles:

- Motorcycles
- Private cars
- Buses
- Trucks
- Articulated vehicles

The road starts at the crossing between the road to Korca city and the road to Drilon (Figure 4).



Figura 4: Road start

The existing road track varies from approximately 9 m to 12 meters wide, including side drainage canals.

The first km the road runs through an urbanized area of Pogradec town, while the remaining part of the segment runs along agricultural fields and scattered villas (Figure 5).

There is a drainage canal along the whole length of the road, which is underneath the road layers in the urbanized area (Figure 6) and alongside the road in the agricultural land (Figure 7,8). The typical cross-sections differ along different sections of the road, while from km 2+500 onwards, there are trees on both sides of the road, which will not be removed (Figure 9).

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Figure 5: Existing situation of the urbanized section of the road

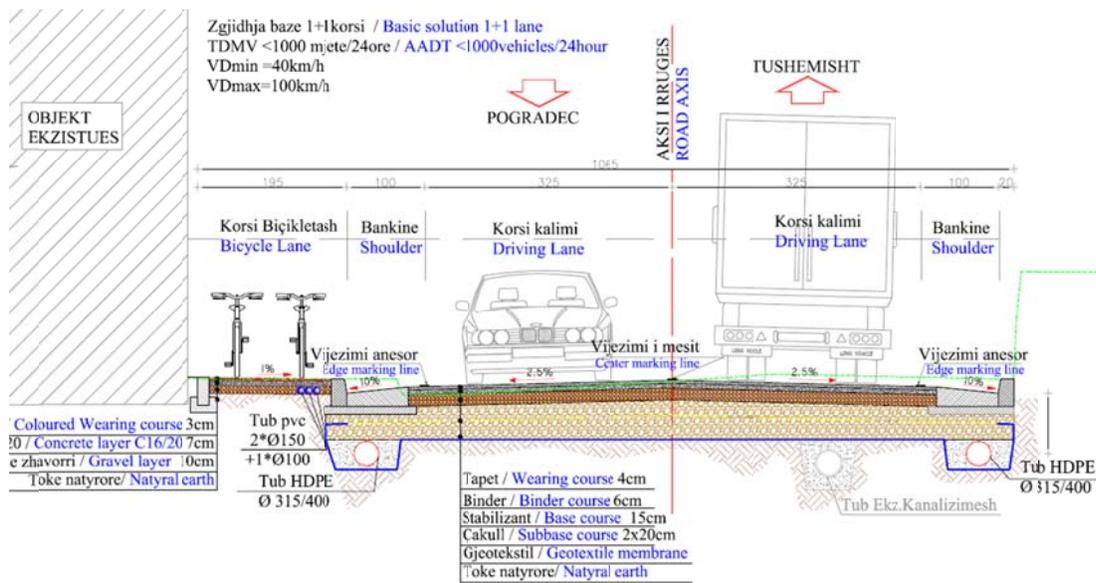


Figure 6: Existing infrastructure in urban parts of the road and proposed cross section

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Figure 7: Existing situation of the road section located near the agricultural land

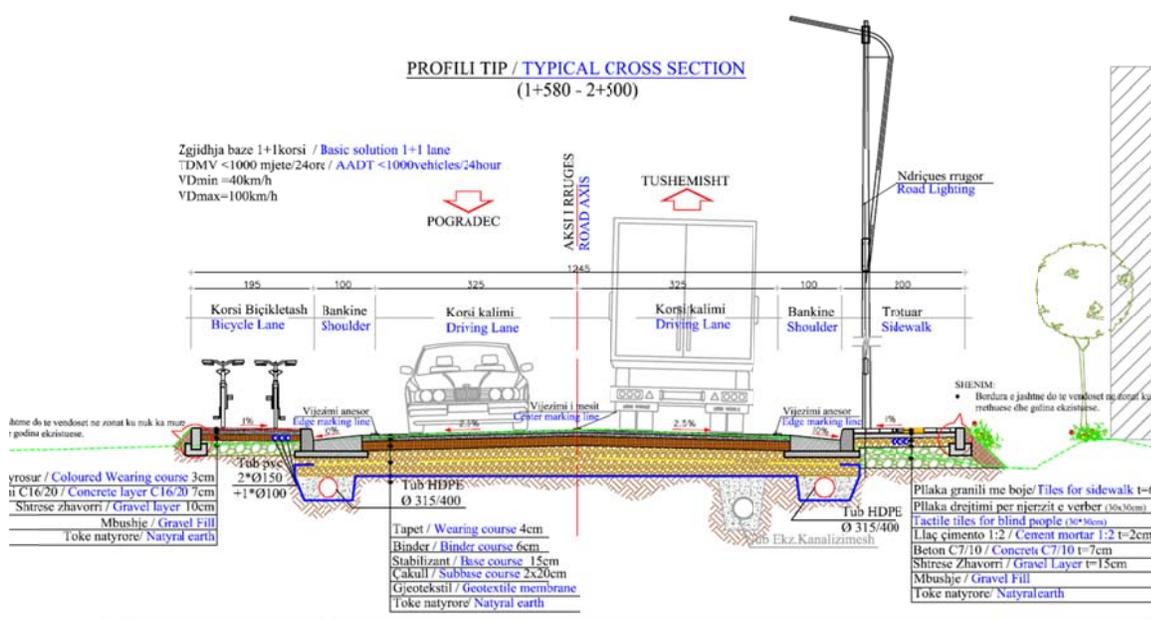


Figure 8: Existing infrastructure situation in non-urban area of the segment and proposed cross-section

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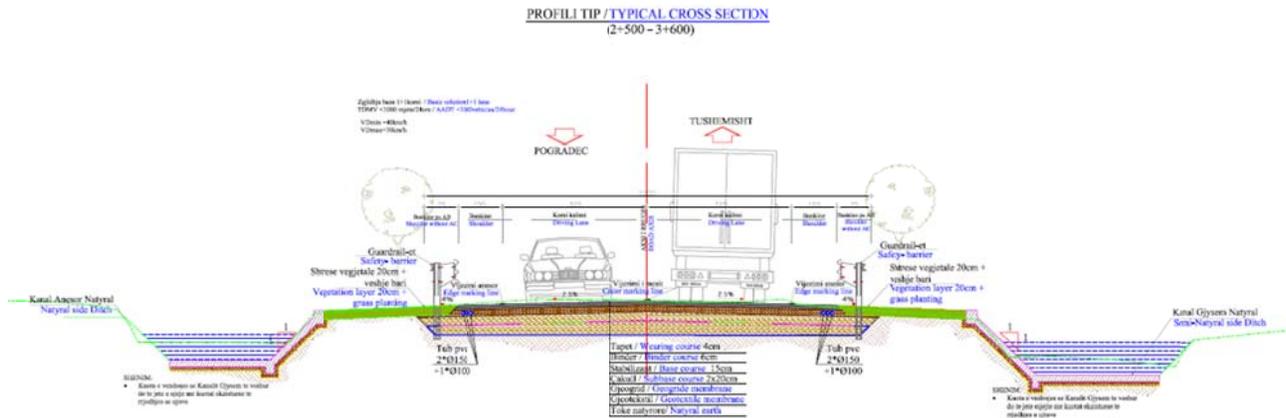


Figure _9 : Existing infrastructure /cross section from km 2+500 onwards, where the tree alley starts

The design has proposed the upgrading of all infrastructure networks, including :

- Upgrade of the culverts, retaining walls
- Upgrade of the existing layers
- Upgrade of the segment with elements such as bicycle lane, walking paths, lighting, greenery, etc.
- Rehabilitation of existing surface and underground infrastructure, such as rainwater drainage, telephone, optic fibers, manholes for waste water.
- Traffic signage
- Planting of trees and grass

Drainage canals will be enforced with concrete on the side of the road from km 2.5 up to the end.

The underground infrastructure that will be rehabilitated and upgraded, will be connected to the main town infrastructure. For instance, waste water pipes that will be newly replaced, will be connected to the main town waste water treatment network which end up in the waste water treatment plant just outside Pogradec town, in Gurras village (Figure 10). This treatment plant is located at 1.5 km from the proposed road segment. The treatment facility serves a population of 50,000, while the water flow at the entrance of the plant is on average 38 l / s and occupies a total area of 15 ha.

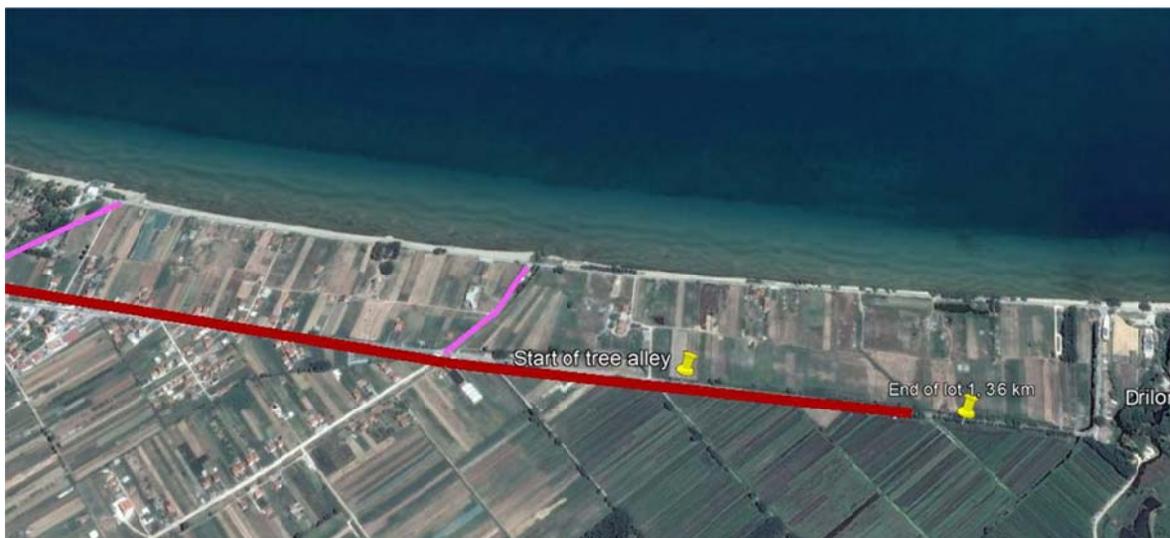
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Figure 10: Waste water treatment plant for Pogradec town

Lighting is foreseen to be placed on one side of the road, while decorative trees (*Ligustrum* sp.) will be planted along the walking path, where there are no existing trees on the side of the road.

Along the end of the proposed segment, at around km 2.5 mark, there are decorative poplar trees (*Populus* sp.) planted by the Municipality during years 2001-2002, so they are approximately 20 years old trees. They have not yet reached their maximum age (which is 30 years) (Figure 11).



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Figure 11: Tree alley location on the map and view of the existing poplar trees

The project does not foresee any cutting of trees. The decorative trees will be planted in the walking path where there are no existing trees on the sides.

The bicycle lane along the road ends at the second intersection with the secondary roads that end up in the lake front (the two parallel roads in pink color, Figure 1). Both secondary roads to the lake include a bike lane (Figure 12)

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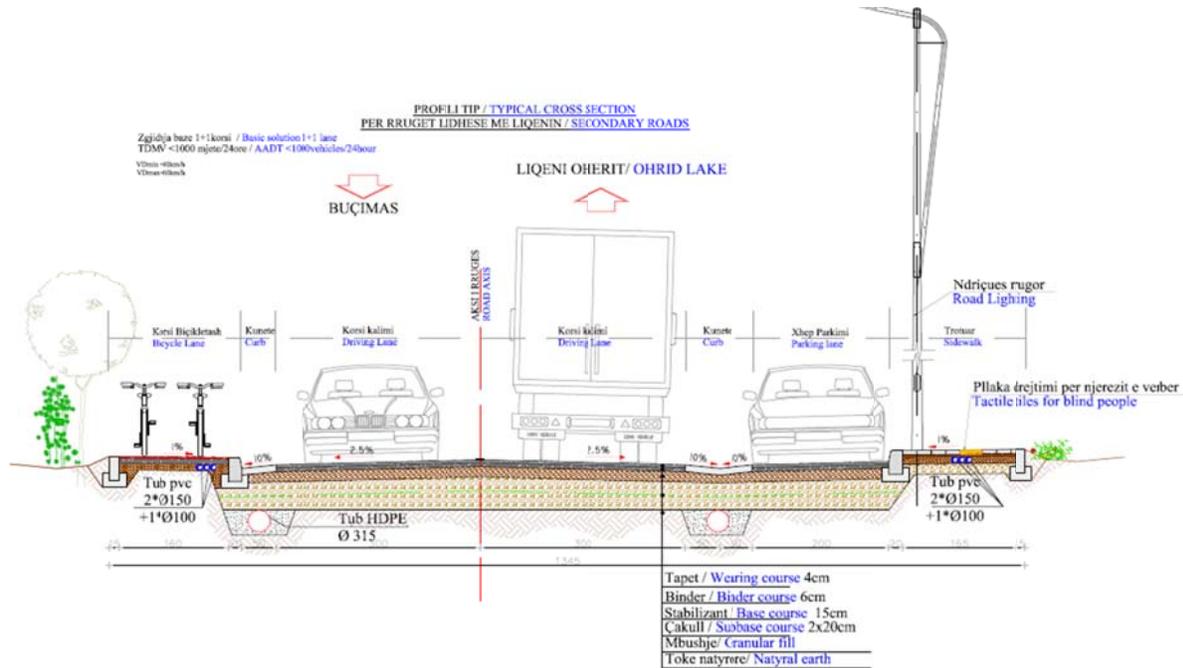


Figure 12: Typical cross-section of secondary roads connecting the main road with the lake front

3. Environmental and social baseline information

Sub-Project location, terrain and landscape

The sub-project is located in the town of Pogradec. The existing environmental components of the project site are characteristic of an urban town with a Mediterranean climate. Pogradec is situated in the East of Albania, in the border with FYROM. The terrain is diverse: hilly, mountainous and flat, with an average altitude of 600 above sea level. The proposed road lies in a very flat terrain, with very little change of altitude.

Climate

Pogradec climate is typical continental, with a hot summer and cold winter. Maximum temperatures during summer vary from 36-38°C. During winter there is considerable snowfall, which reaches a depth of 0.5 m. Pogradec is characterized by strong winds. Lowest temperature during January has been registered at -17.2°C.

Hydrology and water resources

Ohrid lake has a total surface of 111.4 km² and reaches a depth of 10 m at 1.5 km and 100 m at 5 km distance from the coast. Its maximum depth is at 255 m. This lake has been created 2 million years ago from the filling up of a tectonic surface with water. It's the second biggest lake of Albania.

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Apart from Ohrid lake, there are a few streams (Figure 13), such as the Drilon stream, situated near the proposed road. This stream originates from Tushemisht Springs, which are part of the underground springs of Galicica - Mali i Thate massif that drain into Lake Ohrid. The hydrologic measurements in Tushemisht Springs started at 1971. The long-term average discharge is estimated at $2.5\text{m}^3/\text{s}$.

The Pogradec River is a small stream that flows through the city of Pogradec. Its catchment area is 10.6 km^2 and its origin is in the mountains around the city. The main characteristic of the Pogradec River is its elevated bed slope, around 9.2%, which represents a threat to the city of Pogradec during heavy storms. To protect the city from the flood flow, the riverbed was reclaimed with concrete in all urban sectors. There are hydrologic data for the Pogradec River for the period 1974-1990. These data suggest an annual average discharge of $0.250\text{ m}^3/\text{s}$.



Figure 13: Location of the existing streams in Pogradec town

4. Biodiversity and Natural Habitats

Protected areas

The coast of Ohrid lake is a Protected Landscape (category VI of protection).

The proposed road segment is located in the urban area of Pogradec town and does not enter the natural park of Drilon. This park is used for recreational purposes, but the Drilon stream is a protected natural monument. It is located at a distance of approx. 390 m from the end of the proposed segment (Figure 14.)



Figure 14: Location of Drilon natural monument

Flora and fauna

The sub-project area is not rich in fauna species. Common insects, birds and small mammals species are frequently found, which populate the scattered vegetation of the area.

There are no endangered or protected species of flora and fauna at the subproject site. However, there is a variety of species outside the town of Pogradec, but not near the project site.

The grasslands, arable lands and abandoned arable land turned into grasslands located in the vicinity of settlements and villages' provide support to high bird species abundance, mostly small birds (Order Passeriformes). In winter the open fields are used by flocks of finches in company with other small passerines. In summer the open fields provide breeding grounds for the Quail - *Coturnix coturnix*. Hedges and various fruit trees in the open terrains are visited by the Robin - *Erithacus rubecula*, Corn bunting - *Miliaria calandra*, House Sparrow - *Passer domesticus*, Wren - *Troglodytes troglodytes*, Larks (*Alaudidae*) and many species of finches. Shrub lands provide an important wintering habitat for many bird species which breed at higher altitudes and move down to shrub lands to escape bad weather. The typical birds are Blackcap - *Sylvia atricapilla*, Sardinian Warbler - *Sylvia melanocephala*, Buntings - *Emberiza spp*, Cetti's Warbler - *Cettia cetti*, etc. During spring-summer seasons shrubs support a range of species of birds, such as Subalpine Warbler - *Sylvia cantillans*, Olivaceous Warbler - *Hippolais pallida*, etc. During migration, shrubs are also used as stop-over grounds for other species such as Hoopoe - *Upupa epops*, Bee-eater - *Merops apiaster*, Wryneck - *Jynx torquilla*, Black Bird - *Turdus merula*, etc.

Large mammals are also encountered as the bear - (*Ursus arctos*), the Wolf (*Canis lupus*), the Roe Deer (*Capreolus capreolus*) and the Wild boar (*Sus scrofa*).

Bats are presented mainly by *Myotis nattereri*, *Nyctalus leisleri*, beach marten (*Martes foina*), badger (*Meles meles*), weasel (*Mustela nivalis*), red fox (*Vulpes vulpes*), red squirrel (*Sciurus vulgaris*), hare

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(*Lepus europeus*), hedgehog (*Erinacues concolor*), dormice (*Glis glis*, *Muscardinus avellanarius*), wood mice (*Apodemus flavicollis*, *A. sylvaticus*, *A. mystacinus*), shrews (*Crocidura* sp), moles (*Talpa stankovici*) and voles (*Microtus* sp).

The flora and fauna and the degree of biodiversity in Pogradec Lake is strongly connected with the lakes water quality and the ecosystem conditions. The littoral vegetation of Pogradec Lake is rich of 125 aquatic plants . Most common species are common reed (*Phragmites australis*), pondweed (*Potamogeton spp.*), green algae (*Chara spp.*), hornworts (*Ceratophyllum spp.*), and watermilfoil (*Myriophyllum spp.*). The aquatic vegetation is also of a great importance in erosion and water flow control. Further, the vegetation establishes a native habitat for different invertebrate and vertebrate species, and functions as breeding ground for many fishes and protective place from predators.

5. Air quality

The project area is located near the center of the town, which is impacted by heavy traffic, causing an increased air pollution within the project site, especially during spring-autumn. Sources of air pollution in Pogradec include greenhouse gases released by vehicle engines, few petrol processing units outside of town that release volatile organic substances, dust and suspended particles from vehicles and engineering works.

Although there is a decrease of industrial air pollution from the 90's up to now, due to closing down of factories and petrol processing in the surrounding area, there is an increase in vehicle emissions (consumption of fuels) due to increased number of vehicles and large number of old vehicles used.

6. Waste

The urban waste issue along the segment and nearby, falls under the jurisdiction of the Municipality of Pogradec.

Currently, the management of waste along the segment by the Municipality consists of periodical picking up waste from existing bins. During site visits, the situation of urban waste was not found to be problematic.

Prior to start of works, the contractor must clean up the existing track along the segment from urban and domestic waste.

7. Local community

This road is situated in the urban area of Pogradec town and along small settlements of tourist profile. The Resettlement Action Plan for this sub-project deals in detail with the social impacts that may be caused during project implementation.

8. Analysis of Possible Environmental Impacts

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Reconstruction of the road from Pogradec to Tushemisht, lot 1, is not expected to cause significant environmental impacts and those that are likely to occur should be easily mitigated through good construction practices and adequate environmental mitigation measures, described in the Environmental Management (Mitigation) Plan below.

The environmental impacts associated with this project are presented during the construction phase as well as the operational phase.

Construction phase:

Materials to be used during the reconstruction of this road are, in general:

- Asphalt
- Gravel stone
- Concrete edging
- Pavement tiles
- Stone walls
- Sand
- PE Pipes
- Electricity cables
- Lighting columns, bulbs and accompanying elements
- Handrail along the whole length of the road
- trees
- The tender documents will also acknowledge that the materials must be obtained from licensed suppliers/quarries.

Works will consist mainly in:

- Removal of existing asphalt, cleaning up of inert materials
- Road pavement, including layers
- Placement of covered box culvert and water drainage canal
- installation of lighting, planting of trees as specified in the bill of quantities, in harmony with local flora species

Air quality and noise generation

Construction activities including general construction and transport to and from the site may cause dust emissions, temporarily reducing air quality in the area during the construction works.

Noise during construction will be caused as a result of loading and discharging of vehicles and material transport. Heavy machinery are expected to be used during construction for excavation, opening of canals for installation of drainage pipes.

Geology and soils

Medium impacts on geology and soils are foreseen during this project. However, the project will follow the existing right of way without deviations.

Since the base of the road is already established and works will consist in improvement of the road surface layers, the drainage water system, installation of lighting and signs, temporary impacts on soil are identified, such as improper disposal of waste materials, improper material storage, management and usage, accidental spillage during connection of the existing drainage system to the new pipes.

Generation of construction waste

During the implementation of the works, since the stones of the pavement will be replaced, a certain amount of waste will be generated. The waste will be generated during works for site clearance, removal of inert materials, dirt, and concrete. The used asphalt will be handed over to the Municipality of Pogradec, who is the final beneficiary of this proposed segment. The Municipality will recycle and reuse it for small village roads rehabilitation.

This waste will have a negative visual impact if not managed or disposed off properly, at a site assigned by the municipality of Pogradec.

Hydrology, surface and ground waters

The project also foresees installation of a water drainage system underneath the pavement/walkway surface, on the right side of the road. This is an improvement of the existing drainage system. This system will serve for collecting rain and sewage water from the existing sewage system of the houses and businesses along the road, transferring them to the existing drainage and sewage system of the town, while waste waters will be transferred to the waste water treatment plant in Pogradec town. These works are foreseen to last approximately 2 months according to the works program.

Habitat and biodiversity

The road is situated near a highly inhabited urban settlement and also a tourist attraction.

Medium impacts are foreseen to occur on the vegetation beside the road, while the poplar trees that are located at the end of the segment will not be removed.

After the construction phase, the traffic on the Pogradec-Tushemisht road will be increased, but due to the protected status of Drilon, new constructions to increase the capacity of the restaurant located at

Drilon Park (Villa Art) will not be allowed. The current road that is located near the lake front, which is currently used to access the Drilon site by car, will be closed to vehicles and become a pedestrian walkway.

Operation phase:

During the operation phase, minor environmental impacts are foreseen.

All impacts foreseen to occur during the operation phase are detailed in the Environmental and Social Management Plan (Table 1). Impact will mainly consist in noise disturbance to local population and workers caused by regular and scheduled maintenance works on the road, increased traffic disturbance

Summary of recommended mitigation measures for the “Reconstruction of the road from Pogradec to Tushemisht, lot 1”

In addition to the impacts identified in the ESMP table (table 1) and detailed corresponding mitigation measures, below are highlighted the mitigation measures that are considered most important due to the specificities of this project, based on the detailed design

- Waste (recycling and disposal)
 - o Designation of temporary site for construction waste or arrangements for transportation need to be provided and in place before works commence as this will have impact on communities around the road and the local transportation mode;
 - o Prior to start of works, all urban and domestic waste along the segment, including slopes, must be cleaned up by the contractor.

- Chance find items of cultural and historical interest
 - o According to the Albanian law, in case of any chance findings during excavation and general works, the works will cease immediately, the area will be secured and the relevant authorities will be informed within three days of said finds. The authorities will have fifteen days to respond and indicate what measures need to be taken to proceed with the works. Excavations during the construction phase will be supervised by archaeologists of the Institute of Cultural Monuments.

- Biodiversity

Existing decorative trees will not be cut. The design will provide solutions for cleaning up the channels and planting the decorative grass around these trees.

In order to avoid impacts on local community, works will be implemented outside the tourism season, which is July-August.

Other concerns

Health and safety issues for the work force and the community are part of the Environmental and Social Management Plan for this subproject, tackling the issues identified and mitigation measures, as follows:

- Labour and working conditions

Issues:

- Disease prevention and health examinations
- Creation of additional workplaces
- Workforce accommodation
- Workers safety on site

Mitigation measures for labour and working conditions include:

- Preventative health examinations for workers, training on disease prevention, provision of education/ information and health related to reduce sexually related disease.
- Informing of local population on vacancies. Maximum possible involvement of local labour
- Accommodation needs will be assessed in all worker camps. Ensure standard for accommodation
- provide workers with safety instructions and protective equipment (glasses, masks, helmets, boots, etc);
- Provision of construction workers training
- Organization of bypassing traffic warning signs installed, number of accidents recorded, regarding vehicle and pedestrian safety when there is no construction activity

The terrain for the road construction is hilly in some sections and will require specific Occupational Health and Safety aspects to be covered/implemented by the contractor and monitored by ADF).

The Environmental and Social Management Plan also includes a monitoring plan, which details monitoring indicators specifically for health and safety, in addition to environmental issues.

Implementation arrangements for ESMP

All mitigation measures listed in the ESMP table at the end of this document will be monitored during implementation of works.

This ESMP will be part of bidding documents and an annex to the works contract.

The measures foreseen in the ESMP will be implemented by the contractor and will be frequently checked and reported to ADF by the supervisor.

The Albanian Development Fund will be the contracting authority for the implementation of this subproject, which will be funded by the World Bank. The responsibilities of ADF during implementation include, among others, the fulfillment of the criteria set out in the Environmental and Social Management Plan. The ADF unit consisting of dedicated environmental and social specialists will monitor the work site bi-monthly and provide a check list for each site visit on the fulfillment of criteria as set out in the ESMP plan. The ADF environmental unit will prepare monthly environmental reports, tackling all problems noted during the site visits and providing recommendations and measures to be taken.

An environmental permit is required by Albanian Law and therefore periodical reporting must be prepared by the permit holder and submitted to the National Environmental Agency, as specified in the permit.

Construction works will be supervised by a licensed supervisor for this type of works, as well as by the Municipality of Pogradec. The supervisor's staff will include also an environmental, health and safety specialist who will check the implementation of the ESMP, weekly.

However, since environmental and social safeguards instruments are considered an integral and important component during implementation of World Bank financed projects, monitoring and reporting will be performed as requested.

ESMP Capacity building

The construction operator and/or supervisor must be fully aware of the ESMP provisions and trained regarding its implementation. The ADF staff will provide training on ESMP implementation and reporting, in line with the World Bank guidelines and the Environmental and Social Management Framework.

Reporting and monitoring

The supervising engineer/contractor will report on the implementation of the ESMP to the ADF monthly as well as on the implementation of works. The report must include a chapter on environmental performance, based on ESMP items. The content of the report will be agreed with ADF.

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In case of accident or negative impact on the environment (not predicted by the ESMP) the supervising engineer will report to ADF immediately.

Public information and disclosure

The right of the public to be informed is a mandatory process requested by the Aarhus convention, of which Albania is a signatory party.

Upon approval of project financing, the Municipality of Pogradec, in cooperation with the ADF, will make available to the public the technical project for public review.

This project requires an environmental approval, but public consultation for EIA is not mandatory by Albanian law. However, in line with the World Bank operational policies (OP 4.01 and disclosure of information), the draft ESMP will be disclosed in local language in Pogradec (Pogradec municipality and on the ADF website). Feedback that is gathered based on the public consultation, will be taken into account in the latest version of the ESMP.

In conclusion, this subproject falls under Category B projects, since its environmental and social impacts can be managed through implementation of adequate mitigation measures described in the following Environmental and Social Mitigation Plans and Monitoring Plans. In addition, upon various communications with local community, the draft design was modified in order to avoid any involuntary resettlement. An Abbreviated Resettlement Action Plan is drafted for this subproject, to appropriately address and solve the compensation for agricultural land acquisition that will take place due to unavoidable road widening through this segment.

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9. Table 1: Environmental and Social Management Plan

Environmental and social management plan for the reconstruction of the road from Pogradec to Tushemisht, 3.6 km

A. Environmental and Social Mitigation Plan

Phase	Issue	Mitigating measure	Cost (in EUR)		Institutional responsibility		Comments (e.g. secondary impacts)
			Install	Operate	Install	Operate	
<u>Design Phase</u>	<i>Protection of trees</i>	Carefully plan design to avoid tree cutting. In the case it is necessary obtain a permission from the competent authority.	Designer contract		Designer/ADF	Designer/ADF	No trees will be cut
<u>Design phase</u>	<i>Increase of traffic, access difficulties</i>	Prepare traffic management plan. The plan is to be approved by the competent authority (e.g. Ministry of Interior or local traffic police)	Designer contract		Designer/ADF	Designer/ADF	
<u>Pre-construction</u>	<i>Involuntary resettlement</i>	Preparation of Resettlement Action Plan in case involuntary resettlement is needed	Included in the project cost		ADF/Designer/municipality		ADF/designer to prepare resettlement plan and municipality to follow up
<u>Pre-construction</u>	<i>Accidental situations</i>	Prepare an Emergency Preparedness Plan (that includes procedures in the case of spills)	Included in the project cost		ADF/Designer/municipality		ADF/designer to prepare resettlement plan and municipality to follow up
<u>Pre-construction</u>	<i>Waste management</i>	Identifying licensed landfills for major waste streams – hazardous and nonhazardous waste	Included in the project cost, 60,400 EUR		ADF/Designer/municipality		ADF/designer to prepare resettlement plan and municipality to follow up
<u>Pre-construction</u>	<i>Cleaning up of the work site from inert materials, dirt, concrete, old asphalt, etc</i>	In consultation with the Municipality of Pogradec, provide an appropriate method for recycling construction materials and scrap metal materials. Waste from cleaning of site will be separated and transported and processed/disposed on the licensed landfills.	NA		ADF/Municipality of Pogradec	Contractor	As provided in BOQ
<u>Design</u>	<i>Permits</i>	All legally required permits (construction, environmental and other) have been obtained before works commence. Contractors and subcontractors have valid operating licenses.	NA	Included to project cost	ADF, Municipality and contractor		

Environmental and social management plan for the reconstruction of the road from Pogradec to Tushemisht, 3.6 km

Phase	Issue	Mitigating measure	Cost (in EUR)		Institutional responsibility		Comments (e.g. secondary impacts)
			Install	Operate	Install	Operate	
Design	<i>Organization of traffic during construction</i>	Traffic has been organized through the temporary Traffic Management Plan so that there is minimal interference and maximized safety of participants. Traffic signalization and safety measures are prepared. Safe pedestrian passages are provided.	NA		ADF, Municipality and contractor		
Design	<i>Notification of public and relevant institutions</i>	All relevant institutions (e.g. traffic police, construction, environmental and H&S inspectorate, etc.) has been notified on the upcoming works. The public has received timely and relevant information through appropriate means and its geographical and temporal scope.	NA	Included to project cost	ADF, Municipality and contractor		
Design	<i>Materials supplied from illegal or unauthorized sites may exert pressure on the natural resources</i>	use existing and licensed stones quarries; requirement for official approval, environmental permit and/or valid operating license (whichever is required within the national regulation)	NA	NA	stone quarry	Contractor to obtain all permits	As required in the environmental permit To be specified in bid documents.
Design	<i>Landscape and nature protection</i>	No trees are foreseen to be cut. Special permission from ADF/WB will be required in case of unavoidable tree- cutting	Included to project cost	Included to project cost	Contractor	Contractor	
Design	<i>Water and soil protection, accidents</i>	Emergency Preparedness Plan that includes spill/leak control action plan and procedures for accidents and accidental spilling/leaking.	Included to project cost	Included to project cost	Contractor	Contractor	
Design	<i>Biodiversity protection</i>	Arrange for works to occur outside breeding season of vulnerable or endangered species. Road does not enter marshland. Advise MoTE and other competent authorities if any specific measures need to be included e.g. construction of animal passages.	Included to project cost	Included to project cost	Contractor	ADF	
Design	<i>Public participation</i>	The relevant comments from (i) preliminary design and (ii) ESIA public consultations	Included	Included to	ADF, designer	ADF	

Environmental and social management plan for the reconstruction of the road from Pogradec to Tushemisht, 3.6 km

Phase	Issue	Mitigating measure	Cost (in EUR)		Institutional responsibility		Comments (e.g. secondary impacts)
			Install	Operate	Install	Operate	
		will be addressed in the final design and revised ESIA.	to project cost	project cost			
<u>Design/Construction</u>	<i>Damage to infrastructure</i>	The works on sections transecting utility infrastructure will be coordinated with utility services providers (electricity, sewerage, water supply, telecommunications, etc.). Precise positions of present infrastructure/installations will be determined before works on a particular section commence.	Included to project cost	Included to project cost	Contractor	Contractor	
<u>Design/Construction</u>	<i>Soil stability</i>	Appropriate geotechnical studies are carried out.	Included to project cost	Included to project cost	Contractor	Contractor	
<u>Construction Phase</u>							
<u>Construction</u>	<i>Dust generated during transport of stone, aggregate or other materials</i>	wet or covered truck load. Unload trucks while preventing dusting, e.g. avoid free-falling and use dust protection sheets. Sites must be maintained in tidy condition, Keep drop height to the minimum.	NA	NA	Construction Contractor	Construction Contractor	As required in the environmental permit To be specified in bid documents.
<u>Construction</u>	<i>Dust generated during construction works</i>	Water construction site and material storage sites as appropriate. Use dust screens if needed. Adjust the speed During pneumatic drilling/compaction dust shall be suppressed by ongoing water spraying and/or installing dust screen enclosures at the site. The surrounding environment (at last one road line) shall be kept free of debris to minimize dust. Speed of vehicles is limited to 40km/h. Road is kept clean.	NA	NA	Construction Contractor	Construction Contractor	As required in the environmental permit To be specified in bid documents.
<u>Construction</u>	<i>Air pollution and noise from</i>	Do not allow vehicles or machinery to idle	Minimal,	Minimal,	Construction	Construction	

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Phase	Issue	Mitigating measure	Cost (in EUR)		Institutional responsibility		Comments (e.g. secondary impacts)
			Install	Operate	Install	Operate	
	machinery on site, transport and combustion on site	on site. Use attested and proper equipment only. No open burning or combustion of any sort is allowed on site.	included in the project cost	included in the project cost	Contractor	Contractor	
<u>Construction</u>	<i>Noise disturbance</i> to humans and animals	Check that noise emitted during rehabilitation of the road does not exceed the national norms set out in regulations (85 dB for urban environment, outside as defined in the national legislation). During operations, the engine covers of generators, air compressors and other powered mechanical equipment shall be closed, and equipment placed at site camp. No night work will be carried out unless with a special permission from competent authorities and for a limited period of time. Night works in protected areas need permission from the NAPA. Works will be avoided during the tourist peak season (July-August)	minimal, included in the project cost	Minimal, included in the project cost	Construction Contractor	Construction Contractor	To be specified in bid documents.
<u>Construction</u>	<i>Traffic</i> that may create noise, vehicle exhaust, road congestion on and around the site	Arrange for material transport at hours of minimum traffic. Use alternative routes to minimize traffic congestion. Works to be performed alternatively on half of the road length or in batches in order to allow access to pass	NA	minimal, included in the project cost	Construction Contractor: Transport manager and Truck operator	Construction Contractor: Transport manager and Truck operator	
<u>Construction</u>	<i>Traffic disruption</i> during construction activity	Traffic management plan with appropriate measures to redirect traffic and is easy to follow (signs and signaling); in cooperation with the local authorities, include traffic police. Regularly inform the local communities and traffic informational agencies of traffic disruptions. Ensure alternative access to the key locations (schools, hospitalists.)	as specified in bidding documents, included in the project cost	minimal, included in the project cost	Construction Contractor	Construction Contractor	Measures to be included in the Traffic management Plan (Bid documents)
<u>Construction</u>	<i>Vehicle and pedestrian safety</i>	Appropriate lighting and well defined safety signs. Timely announcement in the media when construction will take place. Safety passages for pedestrians are ensured	as specified in bidding documents, included in	minimal, included in the project cost	Construction Contractor	Construction Contractor	

Environmental and social management plan for the reconstruction of the road from Pogradec to Tushemisht, 3.6 km

Phase	Issue	Mitigating measure	Cost (in EUR)		Institutional responsibility		Comments (e.g. secondary impacts)
			Install	Operate	Install	Operate	
		if needed.	the project cost				
Construction	<i>Depletion in non-renewable resources and producing stress to the environment</i>	Use raw materials (sand, gravel, stone) only from suppliers that have valid licenses and concessions issued by the competent authorities.	Included to project cost	Included to project cost	Contractor	Contractor	
Construction	<i>Risk from surface soil erosion and landslides</i>	<p>Inspect the site for potential landslides and surface erosion.</p> <p>Topsoil from the work's area will be stripped and stockpiled for later use in landscaping the site;</p> <p>The surface runoff management will be applied in the entire length of the road;</p> <p>Cleaning the channels, culverts/ box culverts and having a good maintenance of drainage system will ensure effective protection of the road from erosion and sedimentation;</p> <p>Slope's systematization will be carried out in a way that will not affect the effectiveness and efficiency of protection from erosion.</p> <p>Where works are necessary, they will be undertaken in such a way to minimize the occurrence of soil erosion, even for short periods. They will be rehabilitated (greened) as soon as possible. Stockpiles will not be placed on these lands.</p> <p>During the works necessary measures preventing erosion and landslides will be taken (use of silt fences, hay bales and other appropriate).</p> <p>Vehicles and machinery manipulation and movement space will be defined in advance and clearly marked.</p>	Included to project cost	Included to project cost	Contractor	Contractor	

Environmental and social management plan for the reconstruction of the road from Pogradec to Tushemisht, 3.6 km

Phase	Issue	Mitigating measure	Cost (in EUR)		Institutional responsibility		Comments (e.g. secondary impacts)
			Install	Operate	Install	Operate	
		In the case of risk form landslides, apply adequate measures, such as geotechnical assessment and design, installation of gabions, reinforcement measures, etc.					
Construction	<i>Water and soil pollution</i> from works, management and usage of construction machines	<p>Isolate all works from the watercourses. Where necessary use water pumps, filters and other equipment to prevent turbidity. Working site run-offs with possible charge with suspended matter should be filtered before discharging to natural flows.</p> <p>Care is taken not to mix topsoil and subsoil during stripping. Topsoil must be reused where possible. Soil stripping is carried out only in necessary areas.</p> <p>Install leak control equipment Have a leak control mechanism in place (bunds, leak proof containers, containment systems, etc.) and emergency interventions/procedures to control spills.</p> <p>The site will establish appropriate water and sediment control measures such as e.g. silt fences to prevent water sediment from moving off site and causing excessive turbidity in the channel.</p> <p>Collectors will be temporary adapted to avoid surface water dispersion in case of watering of sand or gravel to control the dusts.</p> <p>Construction equipment and vehicles (regular maintenance and checkups of oil and gas tanks, machinery and vehicles will be performed) can be parked (manipulated) and washed only on asphalted or concrete surfaces with surface runoff water collecting and treatment system.</p>	as specified in bid documents, , included in the project cost	50 / month, included in the project cost	Construction Contractor	Construction Contractor	It is recommended that stones and other materials that will be removed, to be reused and recycled at the advice of the Institute of Cultural Monuments and the municipality.

Environmental and social management plan for the reconstruction of the road from Pogradec to Tushemisht, 3.6 km

Phase	Issue	Mitigating measure	Cost (in EUR)		Institutional responsibility		Comments (e.g. secondary impacts)
			Install	Operate	Install	Operate	
		<p>There will be no discharge of wastewaters to natural recipients without a prior treatment and it nth water protected area, there will be none.</p> <p>On site painting or applying protection coatings should be done in the way that annuls the risk of leaking or spilling to waters (e.g. using trays).</p> <p>Sanitary facilities will be provided for workers and no wastewater will be discharged to the natural recipient without an appropriate treatment.</p> <p>There will be no unauthorized use of water resources. The exploitation will require obtaining a special permit from the competent authorities.</p>					
Construction	<i>Pollution</i> from improper disposal of waste materials	<p>Temporarily dispose earth and mineral waste material at appropriate designated location protected from runoff, in cooperation with the municipality of Pogradec. The mineral waste (topsoil and other) should be reused or landfilled/processed in the licensed locations/plants. No waste can remain on temporary or working site upon the completion of works.</p> <p>For temporary, short storage of wastes, select an area on impermeable surface with the runoff collection system, away from any potential leaking into the watercourse. Sufficient number of waste containers for separate collection and of adequate volumes/capacity is provided.</p> <p>All waste, including construction debris and excavated materials will be regularly and timely transported off site and managed through a licensed agency/company and</p>	minimal, included in the project cost	As specified in BOQ, included in the project cost	Construction Contractor	Construction Contractor	Most of the waste generated can be recycled.

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Phase	Issue	Mitigating measure	Cost (in EUR)		Institutional responsibility		Comments (e.g. secondary impacts)
			Install	Operate	Install	Operate	
		<p>disposed of at a licensed landfill/processing plant for the type of waste.</p> <p>Waste collection and disposal pathways and sites will be identified for all major waste types expected from demolition and construction activities.</p> <p>General refuse, recyclables, organic, liquid and chemical wastes by on-site sorting and stored in appropriate containers.</p> <p>Whenever feasible, the contractor will reuse and recycle appropriate and viable materials</p> <p>All hazardous and toxic wastes (e.g. oil and oiled materials) will be separately collected, in bins which are leak-proof, and will be handled over to the authorized management and disposal to the licensed landfill/processing company, receipts for which shall be kept.</p> <p>Waste manifests/records that inform on disposal/processing location, amounts, waste type and other will be kept.</p> <p>All waste types will be separately collected and not mixed (hazardous with non-hazardous and different hazardous waste types). Disposing any type of liquid or solid waste to the natural surrounding (water particularly) is strictly forbidden.</p>					

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Phase	Issue	Mitigating measure	Cost (in EUR)		Institutional responsibility		Comments (e.g. secondary impacts)
			Install	Operate	Install	Operate	
Construction	<i>Potential contamination of soil and water</i> from improper maintenance, improper material storage, and fueling of equipment	<p>Organize and cover material storage areas; Proper handling of lubricants, fuel and solvents by secured storage; ensure proper loading of fuel and maintenance of equipment; collect all waste and dispose to permitted waste recovery facility or licensed landfills. In the case of leakage, the contaminated soil should be collected and as hazardous waste disposed as hazardous waste. The waste should be collected in separate and leak proof containers. Have a leak control mechanism, procedures and equipment (e.g. absorbents, impermeable bags, spill fences, etc.) in place and emergency interventions to control spills.</p> <p>Store all materials in original containers in adequate locations, which allow for leak-proof storage (e.g. use of bunds).</p> <p>Ensure workers are familiar with safety regulations and storage requirements for each product.</p> <p>Hazardous substances (including hazardous waste) must be kept in appropriately labelled leak-proof containers during temporary storage. Either the container or the storage room must be equipped with the secondary containment system.</p> <p>No large amounts of fuel will be kept on the site. In the case of re-fuelling on site, precautionary measures will be taken to prevent accidental spilling (e.g. use of trays).</p> <p>In the case of any run-off coming from works area possibly contaminated by hazardous substances, it shall be collected on site to a temporary retention basin and transported to an adequate treatment plant.</p>	minimal, included in the project cost	minimal, included in the project cost	Construction Contractor	Construction Contractor	The municipality of Pogradec must provide a written permission for an appropriate waste landfill before the construction works may commence. The selected landfill must be licensed in lien with the national regulation and hold all required permits (construction, environmental, etc.).

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Phase	Issue	Mitigating measure	Cost (in EUR)		Institutional responsibility		Comments (e.g. secondary impacts)
			Install	Operate	Install	Operate	
		Soil work and management will take into account metrological data and conditions when planned and carried out (e.g. avoid works during heavy rains). No water can be discharged to the surrounding nature without prior treatment.					
<u>Construction</u>	Protection from flooding	Clean culverts, ditches and other drainage elements to ensure sufficient uptake capacity. If possible, in cooperation with other relevant agencies and institutions remove other causes for flooding (e.g. clogged canals).	minimal, included in the project cost	minimal, included in the project cost	Construction Contractor	Construction Contractor	
<u>Construction</u>	Interruption of surface and underground drainage patterns during construction, creating of standing water.	In line with approved design, maintain natural drainage pattern.	minimal, included in the project cost	minimal, included in the project cost	Construction Contractor	Construction Contractor	
<u>Construction</u>	Workers health and occupational safety	Provide workers with safety instructions and protective equipment (glasses, masks, helmets, boots, et complying with the H&S international best practices. The protective equipment is worn at all times. Workers are adequately trained/certified and experienced in using dangerous equipment and for higher risk positions/work. All work will be carried out in the safe and disciplined manner designed to minimize the impacts and risks for workers, surrounding communities and the	minimal, included in the project cost	minimal, included in the project cost	Construction Contractor	Construction Contractor	

Environmental and social management plan for the reconstruction of the road from Pogradec to Tushemisht, 3.6 km

Phase	Issue	Mitigating measure	Cost (in EUR)		Institutional responsibility		Comments (e.g. secondary impacts)
			Install	Operate	Install	Operate	
		<p>environment.</p> <p>In case of accidental disruption, immediately stop all works and remove the cause of accident (e.g. stop the leakage), notify proper authorities and emergency remediation of damaged network in line with the requirements of Law on civil emergencies. Any incident will be reported to the project manager immediately and regularly to supervising engineer. During cleaning, ensure workers are equipped with protective equipment. Workers will avoid direct contact with contaminated sites. In the case of soil or water pollution, the contaminated soil or water should be collected and taken for the appropriate treatment/disposal (as hazardous waste).</p>					
<u>Construction</u>	Works site organization	<p>Construction sites are fenced off or protected by barriers, tape-marks and informational posts and warnings. Construction site is equipped with proper sanitary facilities (chemical toilets) and resting areas for workers; medical kit and fire equipment is present at the site with use trained employees. The site and construction camp remain inaccessible to public.</p> <p>Appropriate sign postage is in place informing workers of key rules and procedures to follow.</p> <p>Potentially hazardous areas (trenches, manholes, excavations and other) must be protected/covered and clearly marked.</p>	Included in the project cost	Included in the project cost	Construction Contractor	Construction Contractor	
<u>Construction</u>	Impacts on flora and fauna	The working zone must be reduced to space that is necessary. The clearing of vegetation shall be kept to a minimum, with replacement planting planned and conducted, and shall be done in	NA	, included in the project cost	Construction Contractor; Forestry Directorate, Municipality of Pogradec		<p>As specified in the environmental permit and technical specifications</p> <p>According to the national environmental regulations, for 1 tree that is cut, 3 must be planted</p>

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Phase	Issue	Mitigating measure	Cost (in EUR)		Institutional responsibility		Comments (e.g. secondary impacts)
			Install	Operate	Install	Operate	
		<p>coordination with the measures for protection of habitats and river banks.</p> <p>Project activities will not include use of pesticides.</p> <p>There will be no disturbance of any kind of animals.</p> <p>Collection of timber, firewood, herbs, forest products and poaching is strictly forbidden.</p> <p>Hunting is strictly forbidden.</p> <p>Only native species are used in greening and site rehabilitation;</p> <p>Site is restored to previous condition.</p>					
Construction	Chance finds items of cultural/historical interest.	In the case of chance findings, ensure all works are stopped, the area will be secured and the relevant authorities (Ministry of Culture/Regional Cultural Directorate) will be informed within three days of said finds. The authorities will have fifteen days to respond and indicate what measures need to be taken to proceed with the works.	NA	In case of chance finds, the project owner will pay for all required investigations	Construction Contractor, ADF, municipality of Pogradec		Albanian legislation details necessary actions in case of chance find items.
Construction	<p>Labor and working conditions</p> <p>a) Disease prevention and health examinations</p> <p>b) Creation of additional workplaces</p>	<p>a) Preventative health examinations for workers, training on disease prevention, provision of education/ information and health related to reduce sexually related disease.</p> <p>b) Informing of local population on vacancies. Maximum possible involvement of local labor.</p>	As specified in BOQ, included in the project cost	minimal, included in the project cost	Contractor, ADF	Contractor	It is a legal requirement to provide protective equipment for safety at work

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Phase	Issue	Mitigating measure	Cost (in EUR)		Institutional responsibility		Comments (e.g. secondary impacts)
			Install	Operate	Install	Operate	
	c) Workforce accommodation d) Workers safety on site	c) Accommodation needs will be assessed in all worker camps. Ensure standard for accommodation. d) provide workers with safety instructions and protective equipment (glasses, masks, helmets, boots, etc); b) Provision of construction workers training. c) Grievance mechanism for workers to raise reasonable workplace concerns (comments or complaints).					
<u>Construction</u>	<i>Grievance issues</i>	Establishment of a grievance redress mechanism			ADF	Municipality	
<u>Construction</u>	<i>Damage to electricity, water, sewerage and other infrastructure</i>	During works near and on utilities' installations (e.g. electricity, water supply, sewerage, etc.) the services may be shut down or limited. Local population will be informed and, in the case of longer periods of shutdown, alternative supply will be ensured. When working in vicinity of electrical and other installation, to avoid damages, the works will be manual with light equipment and using no machinery and in consultations with the owner of utilities (e.g. water company, electricity company, IT, etc.).	Included to project cost	Included to project cost	Contractor	Contractor	
<u>Operation / Maintenance/</u>	<i>Noise disturbance to local population and workers caused by regular and scheduled maintenance works on the road</i>	Limit activities to daylight working hours (as agreed with local authorities.)	Minimal, included in the project cost	minimal, included in the project cost	Maintenance Contractor/LGU	Maintenance Contractor/LGU	to be specified in maintenance contract documents-Technical Specifications for realization of maintenance works

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Part B: Environmental and Social Monitoring Plan

Phase	What activity/impact is to be monitored?	Where will be monitored?	How is to be monitored?/ type of monitoring equipment	When is to be monitored? (frequency of measurement or continuous)	Why is the parameter to be monitored? (optional)	Indicators	Cost		Institutional responsibility	
							Install	Operate	Install	Operate
Pre-Construction	All permits are obtained before works start. Possession of official approval or valid operating license for stone quarries and other material supply subjects (e.g. gravel and sand exploitation companies).	on location of stone quarry, minerals exploitation companies	inspection of all necessary documents	before work begins	to ensure sustainable use of materials	possession of official approval or valid operating license and concession	NA	NA	Quarry Operator	Quarry Operator
Pre-Construction	Public and relevant institutions are notified of works.	Contractor's premises	inspection of all necessary documents	before work begins	To ensure public awareness	Announcements in the media and direct information dissemination	Included to project cost	Included to project cost	Supervising engineer, ADF	Supervising engineer, ADF
Pre-Construction	Emergency Preparedness Plan and traffic organization plan have been prepared. Position of existing infrastructure at relevant sections has been determined. Traffic Management Plan is prepared	Contractor's premises	inspection of all necessary documents	before work begins	To reduce risks and impacts of accidental situations and damage to the infrastructure.	Plans and blueprints in place	Included to project cost	Included to project cost	Supervising engineer, ADF	Supervising engineer, ADF
Pre-Construction	Works organized and scheduled to avoid disturbance of animals in important lifecycle periods.	Contractor's premises	inspection of all necessary documents	Once before work begins	To reduce risks and impacts to biodiversity	Plans in place	Included to project cost	Included to project cost	Supervising engineer, ADF	Supervising engineer, ADF
Construction	Covering or wetting down transported materials that can generate dust, such as stone, sand or gravel, keeping the site wet and protected from dust spreading. Protection from dust while unloading.	job site – each vehicle	supervision	continuously	ensure minimal disruption to air quality	Covered truck load Report from the supervising engineer	NA	minimal, included in the project cost	ADF	Supervision Contractor Supervision Contractor

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	There is no burring at the site.									
Construction	Congestion on site, disruptions to traffic patterns, complaints on traffic management. Safe passages for pedestrians are provided.	On the site	Visual supervision	regularly by supervision	To ensure minimal disruptions to the local traffic, prevent accidents and ensure safety	Number of complaints received		minimal, included in the project cost	a) ADF	Supervision Contractor
Construction	Damage to soil structure, landslides and slips, embankments. Soil erosion and landslides prevention measures in place (e.g. silt fences, hay bales, geotechnical studies, reinforcement and other measures needed).	work site	supervision	unannounced inspections during work, after heavy raining; regularly before and during earth works on a particular section	To ensure minimal impacts on soil	land slips, erosion, damaged embankments, measures in place, studies completed before the works on the affected area	NA	minimal, included in the project cost	ADF	Minimal
Construction	Noise disturbance to human and animal population, and workers on site	job site; nearest homes	noise meter and analyzer, inspection	once for each machine and equipment when works start. In the case of noncompliance - regularly. oncomplaintor negative inspection finding	assure compliance of performance with environment, health and safety regulation and standards	Incompliance (>85dB), complaint, negative inspection finding	minimal, included in the project cost	minimal, included in the project cost	ADF	Supervision Contractor
Construction	Air pollution parameters of dust, particulate matter	At and near job site	Sampling by authorized agency	Upon complaint or negative inspection finding	To ensure no excessive emissions during works	Incompliance, complaint, negative inspection finding, reports of REA	minimal, included in the project cost	100/month	ADF	Supervision Contractor

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Construction	water and soil quality (suspended solids, oil and grease)	At and near work site (upstream and downstream)	Sampling by authorized agency Visual inspection of leaks, turbidity and contamination	Upon complaint or noticed spill/leak/spill/turbidity into the river/water body or soil near the water body.	To ensure no excessive emissions during works	Incompliance, No of grievances recorded, reports of REA	Minimal, included in the project cost	minimal, included in the project cost	ADF	Supervision Contractor
Construction	Traffic safety, signaling and accessibility	In the wider area of the working site	Visual inspection, consultations with the traffic police, consultation with the local residents	Upon the start of works on a particular section, upon complaints.	To prevent accidents and ensure access to services and livelihood	No of grievances recorded	Included to the project cost	Included to the project cost	Supervising engineer, ADF	ADF
Construction	Safety signage and procedures in place. Fence is in place. Warning signs in place.	At and near work site	Visually by supervisor	Regularly	To ensure clear posting of safety signs	Number of signs	Minimal, included in the project cost	ADF	Supervision Contractor	ADF
Construction	Disposal of waste materials at licensed landfills/process plants, transported by the licensed transport companies.	On site for timely collection and disposal on final disposal site	Documents check (licences, waste records), site visit,, visually	Before start of works and regularly	To ensure proper waste management thus prevent contamination	Licenses issued by the competent bodies, amounts of waste removed	, included in the project cost	ADF	Supervision Contractor	ADF
Construction/waste	Separate waste collection	On site	Visually, number, labelling and capacity of containers, waste mix, containers safety	Regularly	Prevent pollution	No of containers, waste mix, labelling, procedures	included in the project cost	included in the project cost	Supervision Contractor	ADF
Construction / hazardous substances (including waste) management	Containers are leak-proof and with secondary containment system. Containers are accessible only to authorized personnel.	On site	Visual	Regularly	Prevent pollution	No. and size of spills, amount of contaminated soil or water,	included in the project cost	included in the project cost	Supervision Contractor	ADF

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	<p>During use, spill protection systems are in place.</p> <p>Containers are adequately labeled.</p> <p>Check tanks, machinery and vehicles for leaks.</p>					leaks				
Construction / Workers safety	<p>Protective equipment (glasses, masks, helmets, boots, et) worn at all times, safety warning and instruction are on site; organization of bypassing traffic, other Health and Safety (H&S) measures. Workers are adequately trained and certified for positions and work they perform. Emergency Preparedness Plan and emergency procedures are available on site and communicated to all workers through H&S training.</p>	job site	inspection	unannounced inspections during work	Prevent accidents	number of on-job accidents recorded, procedure available, protective equipment available	NA	minimal, included in the project cost	Supervision, ADF	NA
Construction / Site organization	<p>Site is well organized: fences, warnings, sign postage in place. Dangerous areas fenced and marked. Sanitary facilities available in sufficient number. Camp inaccessible for public.</p>	Work site, camp	inspection	unannounced inspections during work	Prevent accidents	number of on-job accidents recorded	NA	minimal, included in the project cost	Supervision, ADF	NA
Construction/ Destruction of crops, trees meadows etc	<p>loss of/impact on vegetation</p>	job site	Supervision, photographic reports	during material delivery and construction	Landscape value protection	Reports of frequent visits on site by the Env. Expert	NA NA	minimal, included in the project cost	Supervision Contractor, ADF	ADF

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Construction/impact to biodiversity and nature	<p>Only native species are used in greening and site rehabilitation;</p> <p>Site is restored to previous condition.</p> <p>Disturbance of animals and collection/destruction of flora is not present.</p>	Working site	Visual inspection of a site, inspection of documents;	Regularly; permissions before works commence.	Landscape value and nature protection.	Complaints	minimal, included in the project cost	minimal, included in the project cost	Supervision Contractor, ADF	ADF
Construction/Chance find items	Cultural properties. chance findings clause is applied	Job site, documentation	Expert visits from Institute for Cultural Monuments, regular supervision	Continuous, in the case of findings	Cultural heritage preservation	Catalogue of items found, including photographic and textual documentation; chance findings report	Should be part of the regularly scheduled activities	minimal, included in the project cost	Supervision Contractor, ADF, ICM	Supervision Contractor, Cultural Directorate, ADF
<p>Construction/</p> <p><i>a)Disease prevention and health examinations</i></p> <p><i>b)Creation of additional workplaces</i></p> <p><i>c)Workforce accommodation</i></p> <p><i>d)Workers safety on site</i></p>	<p>1) Health examinations for workers,</p> <p>2) training on disease prevention, including STD</p> <p>1)Informing of local population on vacancies</p> <p>2)Involvement of local labour</p> <p>1)Accommodation needs will be assessed 2)standard for accomodation</p> <p>1)safety instructions and protective equipment (glasses, masks, helmets, boots, etc); safe</p> <p>2)organization of bypassing traffic</p>	At or near job site	visits on site and communication with workers and community	Once a week by ADF	To ensure proper implementation of health and safety requirements	Knowledge able workforce on procedures, Equipped with safety equipment	Should be part of the regularly scheduled activities	Minimal, included in the project cost	ADF, supervisor, contractor	supervisor, contractor

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	3)Availability of grievance mechanism and grievance focal point									
<i>Operation/ Vehicle and pedestrian safety</i>	visibility and appropriateness of signage	at and near job site	observation	once per week in the evening	Safety	Number of warning signs installed, appropriateness, number of accidents recorded	minimal	minimal, included in the project cost	ADF	maintenance Contractor, ADF
<i>Operation/ Increase of domestic solid waste due to increased number of visitors to the site</i>	Visual impact	At and near job site	visits on site and communication with local authorities	Once per every two days by the LGU for maintenance reasons	For aesthetical reasons	Lack of waste on the ground, empty waste bins	Should be part of the regularly scheduled activities by the LGU		LGU	LGU