Non-Technical Summary

The Proposed Shëngjin to Velipojë Road Scheme, Albania

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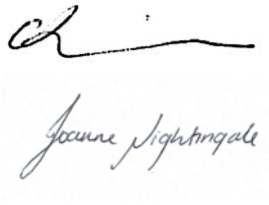
Signature		Signature	
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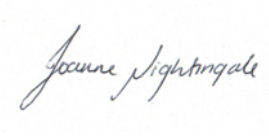
Signature	
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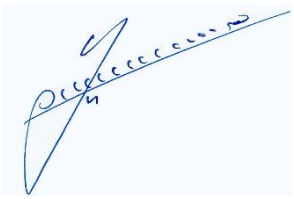
Signature		Signature	
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1 INTRODUCTION AND APPROACH

1.1 Introduction

The European Bank for Reconstruction and Development (EBRD) is considering providing a sovereign loan to the Republic of Albania to finance the development of the proposed Shëngjin to Velipojë road scheme (hereafter 'the Project'). The Project is located on the west coast of Albania, approximately 55 km from Tirana. It comprises the rehabilitation and upgrade of an existing road and the construction of a new section of road (c. 15 km long in total) between these two towns (Figure 1-1).

This Project requires an Environmental Impact Assessment (EIA) in accordance with regulatory requirements in Albania. This is a legal process that involves the identification of significant environmental impacts (both positive and adverse) and risks that are likely to arise from the development of the Project. The EIA enables the Project proponent, in this case the Albanian Development Fund (ADF), to develop robust control measures to avoid and minimise residual impacts to environmental receptors. Whilst Albanian law requires an EIA, the Project is also voluntarily considering the socioeconomic receptors, impacts and risks.

The EIA for the Project was first prepared by ADF in 2017. This was then updated in 2019 on receipt of data collected through targeted environmental and biodiversity studies. This report presents the Non-technical Summary (NTS) of this EIA and describes the key findings of the assessment in 'non-technical language'. This NTS is one of a number of supplementary assessments and action plans for the Project provided to meet EBRD's performance requirements, as follows:

- Supplementary Biodiversity Baseline Assessment
- Biodiversity Impact Assessment
- Habitat Regulations Assessment
- Biodiversity Management Plan
- Environmental and Social Action Plan
- Environmental and Social Management Plan
- Health and Safety Management Plan

1.2 Project Rational

The Project forms part of the Regional and Local Roads Connectivity Project (RLRCP). This aims to improve roads and enable connectivity-driven economic gains, particularly in the agricultural and tourism sectors, which are both key drivers of growth and employment in Albania. More specifically, the proposed RLRCP will support the development of tourism through improving road access to existing and potential touristic destinations. It will also provide quality tourism-friendly amenities (for example, parking lots, viewpoints and signage) in the Project areas. It will also support the integration of

agricultural producers to agri-food value chains and market participation, particularly for women who constitute the majority of the workforce in agriculture.

According to the General Local Plan of both municipalities and the Strategic Environmental Assessment of Shkodër Municipality (produced by the Arizona State University, MetroPolis, Polis University and Shkodër Municipality 2013) the Project is of strategic importance, especially for the tourism sector.

The local resident populations in Shëngjin and Velipojë are 12,630 and 9,623 people respectively (Ministry of Internal Affairs, 2017), however, these towns are growing tourist destinations. According to the Project's economic analysis report 830,000 tourists visited Velipojë and 1,000,000 tourists visited Shëngjin in 2017 (J. V. Klodioda & Sphaera Ltd, 2018). The proposed road alignment will provide a more direct and quicker access route to these tourist destinations compared to the existing access roads.

Figure 1-1: Project Location

1.3 Project Description

1.3.1.1 The Proposed Road Alignment

The footprint of the proposed road is 12.6 km in length and covers approximately 12.5 ha. Approximately 10.82 km of the proposed road will traverse the Buna River Protected Landscape (IUCN Category 5; National Park), which is under the management of the Skadar Forestry Service Directorate and is also designated as a Ramsar wetland, Important Bird Area (IBA) and a candidate Emerald Site (Figure 2 2).

Approximately 2.3 km of the road scheme, located at the north-western end of the proposed road in the village of Rrjoll (near Velipojë; Figure 2.1), falls within the alignment of the existing Rruga Banks Rrjollë road. This is a predominantly unsurfaced road that extends from the settlement at Baks-Rrjollë, beyond Rrjolli, across exposed sand (Figure 2.3). This existing sandy track is used mainly during summer season by tourists to access the beach.

From this point the proposed road alignment gradually rises to the ridge of Mount Renci and the site of a degraded settlement over a distance of approximately 5.25 km. This section of the proposed alignment crosses unvegetated dunes located at the base of Mount Renci, followed by a mosaic of oak scrubland, small stands of Mediterranean evergreen Quercus forest dominated by *Quercus ithaburensis* (IUCN least concern, Least Concern), areas of sparsely vegetated scree, poorly vegetated cliffs and small areas of exposed rock faces.

Over the ridge of Mount Renci, the alignment traverses a mosaic of degraded pasture, fallow and regenerating fallow that surrounds the degraded settlements. From this point the footprint crosses an adjoining area of maquis, arborescent matorral and thermo-Mediterranean scrub, before joining an existing unsurfaced road / track. The footprint of the proposed road then roughly follows the alignment of this existing road / track for approximately 3.7 km before joining Bulevardi Nënë Tereza near Shëngjin port. Habitats located along this portion of the proposed alignment are dominated by a mosaic of bare ground, maquis, arborescent matorral and thermo-Mediterranean scrub, and miscellaneous inland habitats with sparse or no vegetation. This transitioned into coniferous forest dominated by pine plantations, regenerating pine scrub (arising from the clearance of pine stands) and settlements near Shëngjin.

1.3.1.2 Road Design

The proposed roadway will comprise two-lanes and will vary in width between 7 m to 9 m depending on the tip profile. Two hard shoulders will be located either side of the road (measuring between 0.5 m to 1 m depending on the location) in some sections. The road will also be fitted with safety barriers, retaining walls, protection walls and a drainage system. Artificial lighting will be installed along a 7 m section of the road located within Shëngjin. This section of the road will also comprise two shoulders measuring 0.5 m and two sidewalks measuring 1.5 m. Artificial lighting and pavements will also be installed along the end portion of the road at Rrjolli. The road will be surfaced with asphalt. The maximum slope of the road will be 8%, according to the predicted standard.

The section of the road from Shëngjin town to the top of Mount Renci will be constructed over an existing unsurfaced track, characterised by a continuously climbing slope. A viewing platform and access road will be constructed at the highest point to enable tourists to stop for a few minutes to enjoy the view.

Excavation will be undertaken to achieve a flat or gentle inclined road surface in sloped areas. In areas of steep gradient, the road embankment will be scaled every 6 m to 8 m height. These embankments will be contoured with drainage channels to avoid water damage to the road from surface runoff.

The section of the road from the top of Mount Renci to Baks-Rrjollë is characterised by a steep gradient and loose rockface. To protect the road and vehicle traffic from rockfalls, and to avoid massive excavations of the rockface, 'open sided tunnels' will be constructed in key locations (*i.e.* in areas where the ground slope is above 60º), comprising reinforced concrete platforms situated over the road on concrete pillars (almost like a square tunnel).

The rockface within this section of the road will be stabilised using terramesh / geocell geotextile (a safety net that will support the establishment of vegetation), instead of concrete. This geotextile has two layers. The first layer comprises zinc plated wire mesh that is anchored to the rockface and protects the landscape from erosion. The second layer comprises a dense plastic net which can hold substrate for planting and natural revegetation.

As part of the Project preparation, a road safety audit will be undertaken in alignment with national law and in accordance with the provisions of the EU Directive 2008/96/EC. This will include technical and economically feasible road safety improvements.

1.3.1.3 Construction

The detailed methods of construction have yet to be developed. However, some key aspects have been confirmed. Habitats and topsoil will be cleared using graders or bulldozers. In total, 434 trees and bushes will be moved from within the footprint / working width during habitat clearance and translocated (or relocated) to suitable receptor sites. Pneumatic drills and jackhammers will also be used during excavation and grading; blasting will not be used during construction. Re-engineering and landscaping of the slopes will generate excess spoil and rock material. The excavated material (*i.e.* topsoil and rocky substrate) will be stockpiled and reused for construction and landscape restoration. The exact locations of these stockpile areas will be defined in the contractor's management plan.

Materials for road construction will be supplied by a licensed company. Waste Project materials will also be deposed in accordance with the official process and the approach will be approved by the local authorities. Construction works will not be carried out at night; hence, security fencing and artificial lighting will be erected around machinery and plant at night along the proposed alignment. Water from waterbodies located in the Project area and the Buna River Protected Landscape will not be extracted for construction activities (*e.g.* drilling) or for consumption by the workforce. Water for civil works will be supplied to the Project area using water tanks.

Personnel facilities such as a portable office and cabins for storage of personal items and equipment will also be installed within the Project area. The power supply to the office

will be made through the existing network. It is anticipated that the workforce will use existing accommodation located in Shëngjin. Other works associated with the Project include borrow areas (quarry sites) and manufacturing / processing areas for asphalt and concrete. The locations of these work areas will be defined in the contractor's management plan. It is anticipated that the road will take 12 months to construct and the start date will be determined by the Investor according to the procurement process.

1.3.1.4 Operation

According to the Economic Analysis Report, Design of Road Shëngjin to Velipojë, Project Ideas (December 2017), the predicted volume of traffic utilising the proposed road is an estimated 1,238 vehicles per year with an average of 2.5 occupants per vehicle. Maintenance road works will be undertaken on an annual basis or when required. ADF will be responsible for the monitoring and maintenance work for the first 2 years of operation including the establishment of the landscaping Scheme. This responsibility will then be devolved to the municipalities (namely Lezhe and Shkoder) for the following 3 years or until establishment has been achieved. ADF will retain a quality assurance role for monitoring the establishment of habitats and species as part of the Habitat and Species Rehabilitation / Restoration Pan and Landscaping Scheme.

1.3.2 Consideration of Project Alternatives

An assessment of Project alternatives was undertaken as part of EIA (ADF, 2017). The Project considered four alternative alignments for the proposed Project including a non-Project option. The first proposed option was a route that stayed close to the coast for much of its length but required a new section over Mount Renci with one tunnel. The second option was similar to the first but with two additional tunnelled sections and a slightly shorter length of 14.870 km. The third option heads inland and climbs Mount Renci soon after leaving Shengjin. The fourth option was designed based on the Regulatory Plan of Lezha. The road would start from Lezha, climbing through Mount Renci Mountain, first on the west side of the ridge, passing through the centre ridge and finally on the northeast side of the mountain downhill towards the fields of Velipoja. This Lezha-Velipja road would be connected to the road in Shëngjin.

An assessment of alternatives was undertaken which looked at 3 environmental and social criteria and 17 sub-criteria. A scoring system was used which ranked the options against the criteria and scored the options between 0 and 4 with 4 being the greatest impact. Based on these scores, the fourth route option was identified as having the least impact to the environment and was taken forward as the preferred option.

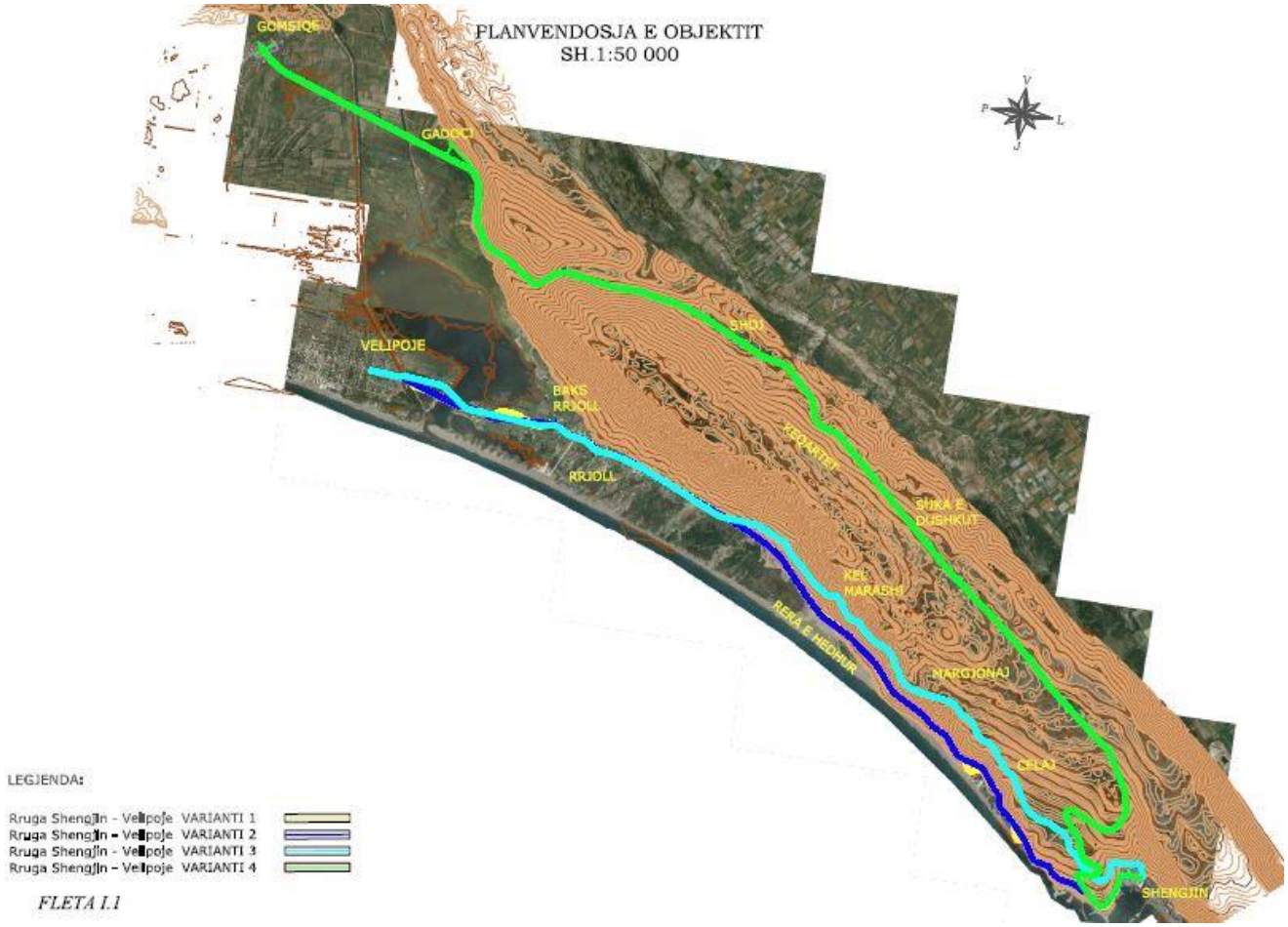

Figure 1-2 Alternative Options Considered

1.4 Legal Aspects and Compliance

1.4.1 National Requirements

Based on regulatory requirements, the Project is subjected to an EIA as part of the permitting procedure in Albania in accordance with the requirements of the Albanian Environmental Legal Acts, including Laws no.10440 and 10431. Whilst the Albanian regulatory system requires an EIA, the Project is also voluntarily considering the socioeconomic characteristic and cultural heritage values of the Project area. Also, the project should meet all the national Health and Safety laws, (Decisions of the Council of Ministers (DCMs), Directives and EU requirement. This will enable the Project to meet international best practice and EBRD's Performance Requirements.

1.4.2 EBRD Requirements

The EBRD is an international financial institution which uses investment as a tool to build market economies. Commitment to sustainable energy and safeguarding the environment are central to the EBRD's activity. The EBRD Performance Requirements were introduced to provide guidance for EBRD clients to manage and improve their environmental and social performance through a risk and outcomes-based approach. The Project's EIA package has been prepared following EBRD's Performance Requirements, which are as follows:

PR 1: Assessment and Management of Environmental and Social Impacts and Issues

PR 2: Labour and Working Conditions

PR 3: Resource Efficiency and Pollution Prevention and Control

PR 4: Health and Safety

PR 5: Land Acquisition, Involuntary Resettlement and Economic Displacement

PR 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources

PR 7: Indigenous Peoples

PR 8: Cultural Heritage

PR 9: Financial Intermediaries

PR 10: Information Disclosure and Stakeholder Engagement

The Project includes international best practice measures in accordance with the mitigation hierarchy to avoid, minimise / mitigate and restore / rehabilitate any adverse changes in environmental and social conditions. Of particular focus are those critical habitat-qualifying features and priority biodiversity features for the Project which are of high conservation value.

The EIA package also takes into account international conventions and treaties, relating to environmental and social issues, particularly with regards to biodiversity conservation.

1.4.3 Status of the EIA

The Preliminary EIA was submitted to the Ministry of Tourism and Environment on the 18th March 2018 and the Project was issued the Environmental Permit from the National Environmental Agency on the Prelim EIA Decision the date on 28th May 2019.

The Preliminary EIA was updated by ADF in August 2019 on receipt of new environmental and biodiversity baseline data.

According to Albanian Law No. 10 440, date 7.7. 2011 "On Environmental Impact Assessment", Article 8, a Project needs to reapply for the Environmental Permit in the event of any material changes to the Project and if the works do not commence within 2 years since the date of the first Decision of Preliminary EIA.

1.4.4 Stakeholder Consultation, Engagement and Disclosure

Stakeholders are individuals, groups or organisations (government and non-government organisations (NGOs)) that either affect, are affected by, or have an interest in the Project. Stakeholder consultation and support is integral to the design and implementation of any Project.

Albanian law does not require a public consultation to be undertaken at the current stage of Project development. However, some stakeholder engagement has also been undertaken for the Project. Consultation with biodiversity-related stakeholders was undertaken to inform the EIA, the Project's Habitat Regulations Assessment (RSK, 2019) and the Biodiversity Management Plan (BMP). The Habitat Regulations Assessment was undertaken to assess, identify and characterise any adverse Project-related impacts on the integrity, conservation objectives and or biodiversity importance of the candidate Buna River Emerald Network Site. A workshop was held in Tirana by ADF and RSK on the 23rd January 2019 and the following local and regional government and non-governmental organisations were represented:

- ADZM Lezhe (Regional Protected Areas Agency Lezhe)
- ADZM Shkoder (Regional protected areas Agency Shkroder)
- AKZM (National Protected Areas Agency)
- Albanian Development Fund (ADF)
- Protection and Preservation of Natural Environment in Albania (PPNEA)
- Albanian Ornithological Society (AOS)
- University Marin Barleti
- Albaglobal
- Ministry of Tourism and Environment (MTM)

The workshop involved a discussion of the current ecological understanding of the Buna River Protected Landscape, Ramsar site, IBA and candidate Emerald Network Site, identified data gaps, key priority features for the Project, the likely significant effects for each qualifying feature and the identification of key avoidance and mitigation measures. Feedback was collated and used to inform the Habitat Regulations Assessment, EIA and BMP.

Future stakeholder engagement and consultation will be conducted as part of the regulatory process in Albania. It will be based on the principles of participation, respect for human rights and culture, non-discrimination, empowerment, transparency and accountability.

2 SUMMARY OF EXPECTED PROJECT-RELATED IMPACTS, RISKS AND OPPORTUNITIES

2.1 Biodiversity and Natural Resources

2.1.1 Key Sensitivities

The proposed Project is located within an area of high biodiversity value as it will traverse the Buna River Protected Landscape (IUCN Category 5; National Park), Ramsar, Important Bird Area, Important Plant Area and candidate Emerald Network Site for 10.82 km. The Project Development Area (PDA, defined as the project footprint, working width and associated working sites) has been identified as providing habitat for a number of endemic, rare and threatened species at the national and global scales. A critical habitat and priority biodiversity feature screening confirmed the presence of key sensitivities for the Project that are of high biodiversity value.

2.1.2 Pre-construction / Construction

Key impacts to priority biodiversity features, prior to mitigation, are summarised as follows:

- the permanent loss of 17.8 ha of terrestrial habitat from within the Project footprint, including a small section of the Annex 1 habitat type 'embryonic shifting dunes' (EU code 2110) and 14.3 ha of natural habitats within the Buna River Protected Landscape
- loss of breeding bird habitats which are known to support five species which are globally rare and threatened, and 17 species classified as rare and threatened by the national Albania Red List.
- loss of a lesser horseshoe bat and greater horseshoe bat roost located in a building through habitat clearance
- clearance of 14 Albanian Red Listed plant species from within the Project footprint namely: *Punica granatum* (Critically Endangered), *Colchicum autumnale* (Endangered (EN)), *Galatella albanica* (EN and a national endemic located in *Quercus trojana* woodlands), *Origanum vulgare* (EN), *Hypericum perforatum* (EN), *Quercus ilex* (EN), *Arbutus unedo* (Vulnerable (VU)), *Erica arborea* (VU), *Juniperus oxycedrus* ssp. *Macrocarpa* (VU), *Ostrya carpinifolia* (VU), *Quercus pubescens* (VU), *Salvia officinalis* (VU), *Satureja montana* (VU) and *Crataegus heldreichii* (Near Threatened)
- the permeant loss of oak woodland habitat for the great Capricorn beetle (*Cerambyx cerdo*; IUCN listed VU, Albanian Red Data Book listed EN)
- the risk of accidental injury or mortality to individuals of priority biodiversity fauna species including great Capricorn beetles, golden jackals, Eurasian badgers and wildcats from vehicle and machinery collisions during habitat clearance and excavating, and once the road is operational

- noise and vibration emissions, the use of artificial lighting and air quality impacts during construction is expected to result in the disturbance and displacement of fauna from habitats near the Project footprint and the Project associated facilities.
- the greatest risk to aquatic habitats (*i.e*. wetland pools, coastal lagoon (an Annex I priority habitat), wetlands and associated waterways) and aquatic species is associated with suspended sediments loading generated by earthworks and runoff.

2.1.3 Operation

During operation, the physical structure of the proposed road (*i.e*. steep-sided road embankments, safety barriers and concrete structures), compounded by noise and vehicle movement) is expected to form a barrier to the movement of medium sized fauna with home ranges that overlap the Project footprint, in particular golden jackals. Lighting of sections of the road at night may also result in disturbance to commuting / foraging nocturnal fauna such as bats.

Indirect Project-related impacts associated with facilitated access and Project-related in-migration poses the greatest risk to terrestrial and aquatic habitats and species diversity and abundance within the Project area including the Buna River Protected Landscape.

2.1.4 Avoidance, Mitigation and Restoration

A key priority for the Project is the continued safeguard and conservation of the Buna River Protected Landscape, Ramsar site and IBA. Pre-clearance checks will be undertaken to avoid any disturbance and injury to bats, badgers and breeding birds in the PDA during construction. Dead wood from oak woodland in the working width will be translocated to a suitable receptor site to minimise the habitat loss and risk of mortality for the great Capricorn beetle. Nationally endemic, rare and threatened plant species will be translocated from within the PDA to a suitable receptor site to minimise the risk of mortality or injury to these individual species. Roosting bats within the PDA will also be translocated to a purpose-built bat roost. The establishment of a wildlife crossing point for golden jackals and other priority fauna will be integral to enable golden jackals and other wildlife to retain access to resources in the PDA and the wider region.

The implementation of the Reinstatement and Landscaping Plan will be integral to restoring the physical environment and ecosystem function within the PDA as 'like for like' (or better) than that which existed prior to Project construction where feasible.

Whilst avoidance, mitigation and restoration actions will reduce the significance of impacts to biodiversity, these actions will not eliminate all residual Project-related impacts. For example, a total of 17.8 ha of habitats will be permanently lost from within the PDA. Residual impacts will also arise from facilitated access and Project-related in-migration; and the magnitude of this impact was difficult to quantify. Hence a Sustainability / Eco-tourism Programme will be implemented by the Project to minimise indirect Project-related impacts to habitats and vascular plants (and other priority biodiversity features) arising from facilitated access and Project-related in-migration (predominantly tourists). The objective of the assignment is to establish a programme of activities and co-ordinated stakeholder consultation to support sustainable ecotourism in the Shëngjin and Velipojë region of Albania by undertaking strategic and local actions. It

is anticipated that the programme will support increased environmental awareness, sustainable and safe communities within the Shëngjin and Velipojë region, promote environmental preservation and conservation practices, circular economy through establishing stakeholder engagement networks, capacity building (through the provision of tools, management plans and awareness raising materials) and support policy dialogue.

2.2 Air Quality

Baseline air quality monitoring (i.e. PM10 and PM2.5 CO, SO2, NOx and VOCs) has been undertaken in the Project area. Ambient air quality monitoring identified elevated levels of SO_2 and NO_2 which exceed EU standards.

2.2.1 Pre-construction / Construction

Construction activities associated with the Project have the potential to result in adverse air quality impacts. These include:

- localised elevated levels of combustion emissions such as CO, SO_2, NOx, particulate matter (PM_{10} and $PM_{2.5}$) and VOCs generated by Project vehicles and machinery that use diesel fuel
- fugitive dust emissions measured as particulate matter of varying particle size (*e.g*. PM_{10} and $PM_{2.5}$) generated by land clearance and earthwork activities
- localised cement dust emissions arising from concrete works
- smoke emissions generated from the use of bitumen during road construction works.

Prior to the implementation of mitigation measures, these air quality impacts may potentially have adverse impacts to human health and the biological fitness of fauna and flora species in the Project area. Increased dust and combustion emissions are known to cause irritation and impairment of respiratory functions, skin irritation and vision impairment. Potential impacts may be cumulative in nature. Pollutants could also be ingested (for example when deposited on plants or fruit which is then consumed) which may then have an adverse impact to human and species health. The magnitude of impacts to people and species of fauna and flora arising from the inhalation of these dust emissions and air pollutants is dependent on the quantity, composition and respiratory rates and a persons' / species' health.

2.2.2 Operation

Air quality combustion emissions generated by vehicle activity are likely to be elevated during the operation phase compared to construction phase, as vehicle traffic increases within the Project area to an estimated 1238 vehicles per year. The Environmental Impact Assessment: Design of Road Shëngjin – Velipojë Project Ideas (December 2017) has identified that 90% of all passenger cars registered in Albania are equipped with diesel engines and a large proportion are old imported vehicles with high SO_2 and particulate matter emissions. Furthermore, the EIA states that sulphur content in fuel is likely to be higher than European standards.

2.2.3 Avoidance, Mitigation and Restoration

During the pre-construction / construction phase, staff and contractors will adhere to a Standard Operating Procedure for: Emission and Dust Control, Erosion and Suspended Sediment Control. This includes the use and maintenance of fuel-efficient vehicles, machinery and equipment that comply with industry standards and the use of catalytic converters / low emission engines. Dust control measures (*i.e.* watering, gravel application and wheel washes) will be implemented on unsealed access tracks and exposed surfaces heavily trafficked by machinery and vehicles (i.e. entry / exit points, vehicle routes and loading and unloading areas) during the summer months when conditions are dry, when excessive dust generation is evident and during periods of high risk (*e.g*. dry and windy conditions). Dust suppression water should be taken from suitable recycled water sources where possible. ADF will also undertake an air quality pre-construction assessment and will monitor levels throughout the construction phase.

2.3 Noise and Vibration

2.3.1 Pre-construction / Construction

The predominant noise emissions generated during the pre-construction and construction phase will be generated by sources such as vehicle traffic, plant vehicles, pneumatic drills and jackhammers and machinery (i.e. drilling rigs, pile drivers, excavators / grader and vibratory rollers). Construction noise emissions will relatively localised, temporary and generated over a 2-year period.

The impact from noise generated by Project construction could potentially be significant within 1 km of the construction site. This would be expected to cause disturbance to fauna and avifauna near the Project footprint and fauna within zones 1a, 1b and 2b of the River Buna Protected Area Landscape. Noise emissions will also be audible to residents near the proposed road alignment and are likely to be of nuisance.

It is anticipated that ground vibration generated during construction by vehicle traffic, plant vehicles, pneumatic drills and jackhammers and machinery (i.e. drilling rigs, pile drivers, excavators / grader and vibratory rollers) will be relatively more localised and nuisance level vibration impacts are expected to be perceptible within 200 m of the construction site.

There will be no blasting and therefore no noise, vibration and air blast impacts.

2.3.2 Operation

Noise and vibration emissions during operation will predominantly be generated by vehicle traffic using the proposed Shëngjin and Velipojë road and are likely to be of lower levels during operation than construction.

2.3.3 Avoidance, Mitigation and Restoration

Staff and contractors will adhere to a Standing Operating Procedure: Noise and Vibration Management throughout the pre-construction and construction phases. This includes the use of silencers and sound barriers (natural and artificial), particularly within and near the Buna River Protected Landscape, and regular vehicle / machinery maintenance to minimise noise and vibration. ADF will also undertake noise and vibration pre-

construction assessment and will monitor levels throughout the construction phase to ensure effective mitigation to the extent practicable. The Project's grievance mechanism will also include a procedure for receiving and for ADF to address compilates during road construction.

2.4 Hydrology and Water Quality

The Buna River Protected Landscape and Ramsar site is situated in Skadar district and covers 1900 ha. It encompasses the estuary of Drin, Viluni coastal lagoon, the river of Buna / Bojana with its estuary, and the gulf of Drin that runs across the city of Velipojë adjacent to the Adriatic Sea. These protected areas are characterised by a complex hydrologic system with rich water resources and wetlands. Lake Shkoda and River Buna Ramsar complex Buna River and connecting waterbodies within the wetland habitat provide refuge for wildlife including critical habitat-qualifying fish and bird species and represent important natural resources for local communities and businesses including fishing, aquaculture and farming. The Project is located approximately 1.11 km from the Viluni lagoon, associated irrigation channels and wetland are the primary surface water sources within the Project area.

Baseline water quality sampling (including but not limited to pH and Biological Oxygen Demand, Chemical Oxygen Demand and chemical composition) undertaken in the Project area identified elevated NO_3 levels which is likely to be attributed to agricultural runoff and other sources of pollution.

Ten small ephemeral creeks transect the Project footprint and these are only active during the raining season, during which time surface runoff is transported to the lower reaches of Mount Renci.

2.4.1 Pre-construction / Construction

The ten small ephemeral creeks that transect the Project footprint will be diverted using culverts and other drainage systems. These creeks are not characterised by aquatic habitats and species. This is not expected to impact the hydrology of any receiving waters such as the wetlands located at the base of Mount Renci and the aquatic fauna associate with these waterbodies.

Project construction will not cause any significant changes to the surface hydrology of the coastal lagoon, associated waterways and wetlands within the River Buna Protected Landscape. Hence wildlife dependent on these habitats will be unaffected. There will be no water extraction (*i.e.* to be used during drilling or consumption) within the zone of influence. Water for civil works will be supplied to the Project area using water tanks.

It is anticipated that the main risk to the surface water quality of aquatic receptors during construction, prior to mitigation, is suspended sediments loading generated by site preparatory works and construction activities (i.e. habitat clearance, earthworks, drilling, top-soil and gravel stockpiling etc). The main input will result from water erosion of disturbed areas during periods of rain resulting in sediment laden runoff, while wind erosion will provide some additional input during drier months. Waterbodies located nearest to the Project footprint (*i.e.* dune wetlands and ponds at the base of Mount Renci) are more vulnerable to the risk of being impacted during construction. Suspended

sediments are detrimental in high qualities to the health of waterbodies and may impact the local water supply for residents.

There is also risk of surface and groundwater contamination through accidental spills or seepages of hazardous substances (*i.e.* diesel fuel, oil, bitumen etc) and grey-water or septic systems (*i.e.* portaloos) during construction. This could contaminate receiving aquatic habitats and pose a risk to downstream water quality, aquatic biodiversity and the water supply.

2.4.2 Operation

It is expected that erosion and sediment loading to receiving waters during the operation phase will be less extensive than during the pre-construction and construction phase, however the risk to surface and ground water resources associated with spills of non-hazardous compounds and vehicle fuel will remain during operation.

2.4.3 Avoidance, Mitigation and Restoration

Staff and contractors will adhere to a Standard Operating Procedure for Emission and Dust Control, Erosion and Suspended Sediment Control. This will include the use of sediment control dams and traps during construction, particularly along higher elevations above sensitive areas (*i.e*. the Buna River Protected Landscape) to further minimise the risk of sediment loading impacts. Emergency response procedures will be developed for the Project to effectively manage any accidental spills and leakages of non-hazardous waste and hazardous compounds. Staff and contractors will receive training in spill events management. This will include the development of a spill, incident, accident and response and management plan by the contractor.

The design of the drainage system will prevent contaminated surface water from polluting water resources in the region. The Project therefore not expected to entail any significant direct impacts to the water quality and hydrology of the Viluni coastal lagoon, Buna River and associated wetland and waterways with the application of effective mitigation measures.

2.5 Soils

Deposits from both the Neogene age and Quaternary formations are present within the PDA. The Neogene deposits are the lowermost unit in the survey area. Neogene sedimentary rocks are composed of mudstone and sandstone. The Quaternary formations are present throughout the lower lying areas within the PDA. The alluvium is composed of a mix of sandstone and claystone gravel clasts interspersed with sands, silty sand and silty clay covering a basal layer of gravel. This last layer is between 20m and 40m thick. Coastal alluvial plains are covered with Luvisols, Phaeozems, Arenosols, Fluvisols, Gleysols, Vertisols, Solonchaks and Histosols.

Soil erosion is apparent within the Project area within the Buna River Protected Landscape and is attributed to intense grazing pressure and wind erosion.

2.5.1 Pre-construction / Construction

Construction activities are expected to result in the loss of and disturbance of soil, soil compaction, potential soil loss through erosion where vegetation is disturbed or removed and contamination through accidental spills and leakages of hazardous and non-hazardous compounds. No loss of agricultural land is anticipated.

2.5.2 Operation

The risk of soil contamination from accidental spills and leakages of hazardous compounds (i.e. vehicle fuel) will remain throughout operation.

2.5.3 Avoidance, Mitigation and Restoration

Pre-clearance soil sampling will be undertaken for the Project and a soil management plan will be prepared and implemented for the Project.

A Reinstatement and Landscaping Plan will be developed and implemented by the Project. This plan will provide a clear methodology for the reinstatement of the physical environment within the Project development area in addition to the progressive rehabilitation and restoration of habitats and vascular plant species. Rehabilitation and restoration works will aim to re-establish ecosystem function in a 'like for like' (or better) than that which existed prior to Project construction where feasible.

Emergency response procedures will be developed for the Project to effectively manage any accidental spills and leakages of non-hazardous waste and hazardous compounds. All relevant staff and contractors will receive training in spill events management. This will include the development of a spill, incident, accident and response and management plan by the contractor.

2.6 Landscape and Visual Amenity

The landscape within the Project area is dominated by Mount Renci which reaches a height of 545 m above sea level and the sandy beaches and marshes at its base. The coastal area comprises beaches and woodland and the lagoon system of Viluni. Three key areas were identified as receptors for visual impacts from the road:

- Protected area border
- Rana e Hedhun – Natural Monument
- Rrjoll Village – end of Project

2.6.1 Pre-construction / Construction

During construction, landscape and visual impacts will occur due to habitat clearance and landscaping, the presence of vehicles and machinery, security fencing, office facilities, stockpile and borrow pits and as such will have a significant impact on the local landscape character and visual receptors.

2.6.2 Operation

The road will continue to have a significant impact on the landscape character of Mount Renci during operation.

2.6.3 Avoidance, Mitigation and Restoration

The reinstatement of the physical environment, and the progressive rehabilitation and restoration of habitats and vascular plant species in accordance with the Project's Reinstatement and Landscaping Plan, will be integral to minimising the adverse visual impacts. This will not eliminate the changes in landscape character, particular the adverse impacts to the profile of Mount Renci.

2.7 Waste Management

2.7.1 Pre-construction / Construction

Both hazardous and non-hazardous waste will be generated during construction. This includes non-hazardous waste materials (i.e. aggregate, concrete and other construction material) and grey water waste and hazardous waste compounds (i.e. bitumen, used oil container, used fuel containers). Poor waste disposal poses a risk of pollution to the environmental and human health.

2.7.2 Avoidance, Mitigation and Restoration

The following mitigation measures will be applied:

- all waste materials will be deposed in accordance regulatory requirements and the approach will be approved by the local authorities
- waste permitting documentation / licences will be obtained
- emergency response procedures will be developed for the Project to effectively manage any accidental spills and leakages of non-hazardous waste and hazardous compounds and staff and contractors will receive training in spill events management.

2.8 Natural Hazards

Albania is located northeast of the Mediterranean Sea in the Western Balkan region. The entire Mediterranean basin, including both eastern and western shores, has a high risk of earthquakes. The Project is located within the Peri-Adriatic Depression Zone in which numerous earthquakes have been registered in this region. According to the Albania Seismicity Map, this area is included in Zone VII (to the east) and VIII degrees of MSK – 64 seismic intensity scale. Earthquakes with expected Mmax between 6.5 and 7 may occur

The Project is also located in an area prone to rockfalls. The steep sides slopes of Mount Renci are characterised by bare scree and expose rockfaces. Evidence of rockfall events are present along the dune system and near housing at in the village of Rrjoll.

The existing Rruga Banks Rrjollë road and the site of the new road, located at the base of Mount Reci, is situated within a flood zone. This area is characterised by wetland habitats, ponds and is in relatively close proximity to Viluni coastal lagoon. Localised surface flooding regularly occurs during the raining season.

2.8.1 Pre-construction / Construction

Vegetation clearance, grubbing and landscaping along Mount Renci during construction will increase the risk of rockfalls. This could pose a threat to human health, livestock and property. Inappropriate management of surface water may compound this issue and further contribute to localised flooding.

2.8.2 Operation

Rockfalls and flooding will continue to pose a risk to road users and residents during operation in the absence of appropriate management.

2.8.3 Avoidance, Mitigation and Restoration

During construction, emergency response measures will be put in place for a wide range of hazards including landslides, rockfalls, earthquakes, mudflows and flooding.

Slope stabilisation works will be undertaken by engineers during construction which will reduce the risk of rockfalls and landslides.

It is anticipated that design measures will also be in place during the operation phase to minimise the risk of a rockfall collisions with vehicle traffic. The design of the drainage system will also minimise the risk of compounding local flooding events and the effective management of high surface water levels and runoff.

2.9 Climate Change Vulnerability

The geographical position of the Project area in a low hilly plain with mountain ranges from northwest to southeast appear to be the main influence on the climate of the region. The area has a Mediterranean climate with humid and mild winters and hot dry summers typical of this central western lowland zone.

The annual average temperature varies from 14 – 15°C which is significantly influenced by maritime air masses. January is usually the coldest month with an average of 5°C but cold days are also recorded in autumn and spring. July and August tend to be hottest with temperatures of 40°C. Range of temperatures through the year is from c. -8°C to 41°C. The region experiences high levels of sunlight with sunlight hours reaching 2600 hours per year.

Average rainfall ranges from 1241 mm per year to 1354 mm which is on average lower than the rest of the country. The rainfall tends to fall during the autumn and winter period concentrated in a period of about 120 -130 days.

South westerly winds dominate the colder months and north westerly winds during the warmer months. A local wind called the Murlan is also prevalent.

The climate of Albania is changing as a result of climate change (i.e. increased risk of storms, flooding, temperature changes and rainfall). This could affect the Project in the following ways:

- increased erosion of the road surface, concrete structures and surrounding landscape
- increased risk of flooding and pressure on drainage systems

- increased risk of rockfalls and landslides
- increased fugitive dust.

2.9.1 Avoidance, Mitigation and Restoration

A flood risk assessment will be prepared for the Project and climate change resilience measures will be defined and adopted to ensure that appropriate design measures, materials and mechanisms for the effective management of climate resilience risk are considered and implemented (*e.g*. ensuring sufficient capacity of the drainage system during intense rainfall events).

2.10 Social

The municipality of Lezha comprises ten administrative units Lezha, Shëngjini, Zejmeni, Shënkolli, Balldreni, Kallmeti, Blinishti, Dajçi, Ungreji and Kolshi and has a population of 106, 245 inhabitants. The city of Lezha is the centre of the municipality and has a population of 65,633 inhabitants and is located within a low-lying coastal area bisected by the River Drin.

The Adriatic coastline, beaches and seascapes of the Bojana -Buna delta are important for tourism which fuel regional development and long-term economic growth of the region, in which beaches and woodlands attract nearly 250,000 tourists a year, mostly between July and August (UN 2002). The long coastline has some developments and some areas of high biodiversity value and includes the nature reserves of Mat Bank and Kune-Vain_Tales. The Kuna and Vain lagoons and the areas rich cultural and natural heritage make it a popular destination for tourists. with the economy is diverse but trade and services sectors employ the largest numbers. Recently the development of a fish processing industry in Lezha has contributed to the municipality's economic growth. Other sectors of employment include agriculture and livestock. The region is sometimes threatened by flooding.

Shkodra municipality's economy is dominated by tourism and agriculture but has high unemployment. The coastal areas and lakes, as well as the mountains and cultural heritage, provide much opportunity for tourism. In recent years there has been some significant investments in the region, namely infrastructure improvements such as the Buna bridge, Murigan border point with Montenegro and the Shkoder -Hani-I Hotit highway. However, there are also economic problems such as the lack of funds for social care, in particular for the elderly and those with disabilities.

According to the Project's economic analysis report (December 2017), 830,000 tourists visited Velipojë and 1,000,000 tourists visited Shëngjin in 2017. This type of high-volume, low-cost tourism puts high pressure on local resources and continues to stimulate controlled and uncontrolled urban development.

2.10.1 Pre-construction / Construction

The Project may adversely affect the local population in the following way:

- reduced air quality resulting in impacts to human health associated with fugitive dust and combustion emissions

- disturbance arising from noise and vibration generated by the use of machinery and vehicles during construction
- reduced trade to local businesses caused by disturbance (*i.e.* noise, vibration air quality and visual amenity impacts) during the construction Phase, particularly during the tourist season
- increase risk of accidental collisions with Project vehicles and machinery
- traffic congestion caused by Project vehicle traffic on public access roads
- influx of construction workers and the potential for increased anti-social behaviour and conflict with residents and tourists
- increased risk of security issues.

Project construction will have a number of positive economic and employment benefits. The timescale for construction is 12 months and it is anticipated that short-term direct employment opportunities will be created for local residents. The Project will also increase the demand for local services and goods. Unemployment is high in Shëngjin, therefore livelihood opportunities during Project construction represents a benefit.

2.10.2 Operation

The road will reduce travel time and facilitate movement vehicle traffic between Velipojë and Shëngjin. This is expected to contribute to an increase in tourism in the region. It is anticipated that this will have a positive impact to the economy of the area. However, this type of high-volume, low-cost tourism puts high pressure on local resources (*e.g*. health centres, waste management facilities and public resources and infrastructure) and is likely to continues to stimulate controlled and uncontrolled urban development in the region. There may also be some safety implications for the Project including increased vehicle traffic and the associated increased risks of accidents.

2.10.3 Avoidance, Mitigation and Restoration

The following mitigation measures will be implemented by the Project:

- the contractors will ensure employment and training of the local workforce and will ensure that recruitment is fully disclosed to the public and open to all people locally of working age, ability, regardless of gender
- the Project is located within state-owned land. However, a Resettlement and Livelihood Restoration Plan will be prepared by ADF in the event that the need to acquire privately owned land arises
- a Stakeholder Engagement Plan and Grievance Mechanism will be in place
- the road will be regularly marinated during operation to minimise the risk of accident due to the presence of substandard conditions and state of repair.
- a Traffic and Road Safety Management Plan will be developed and implemented by the Project contractors to minimise community and occupational road risks.
- segregated routes and side entrances (with no vehicles) will be provided for pedestrians

- the Project will be subject to a road safety audit
- a community risk assessment and an awareness programme will be prepared and implemented for the Project.

2.11 Cultural Heritage

2.11.1 Pre-construction / Construction

No architectural or cultural resources are expected to be encountered during construction and the proposed road alignment is of sufficient distance from known monuments of cultural heritage (i.e. Rana e Hedhun).

2.11.2 Operation

No significant cultural heritage impacts are foreseen during the operational phase

2.11.3 Avoidance, Mitigation and Restoration

In accordance with EBRD Performance Requirement 8, a Chance Find Procedure will be implements by contractors. Consent will also be obtained by the relevant authorities for the protection of cultural heritage.

2.12 Occupational and Community Health and safety

The impact to workers' and community health and safety will be taken into consideration in the construction activities for the rehabilitation, upgrading and construction of new segments of the roads. During construction, the activities that can impact the workers' health and safety include excavations, lifting activities, working at height, confined space activities, scaffolding and transportation (including the transfer of materials). Some of these activities such as excavations, transportation of the materials in and out the construction site, compaction of the road layers might impact the communities that are nearby and using existing roads. Impacts may be of the nature of excessive noise, vibration, air quality, increased traffic and potential collisions.

2.12.1 Avoidance, Mitigation and Restoration

Plans and mitigation measures should be in place as following:

- Health and safety Management Plan
- Traffic Management Plans
- Emergency Response Plan (including Medical Evacuation Plan and Fire Safety Plan)
- application of national laws, directives, regulations and DCMs and EU directives regarding Occupational Health and Safety
- identifying of sensitive receptors as schools, kindergartens, ambulances, etc., and appointing of community meetings to provide information on the project and safety awareness.

3 ENVIRONMENTAL AND SOCIAL AND MANAGEMENT

3.1 Project Management and Delivery

The roles, responsibilities and monitoring systems for the delivery of avoidance, mitigation and management measures are detailed in the Project's Environmental and Social Management Plan (ESMP), the Environmental and Social Action Plan, the EIA the Environmental Monitoring Plan (EMP) and the Biodiversity Management Plan (BMP). Implementation of all of these measures will require appropriate staff, financial resources, equipment and support systems. It is the responsibility of all ADF staff and Project contractors to comply with the requirements set out in the BMP, ESMP, EMP and EIA. The responsibility of Project contractors and suppliers will be defined through standard terms and conditions of contracts that are consistent with the commitments of the BMP, ESMP and EMP. ADF are committed to implementing the EMP, BMP and ESAP and will work with and direct their contractors to ensure full implementation and compliance.

3.2 Biodiversity Management Plan

A Biodiversity Management Plan (BMP) has been prepared for the Project in accordance with Albanian legislation as well as relevant international best practice and guidelines. The BMP details the Project's biodiversity management initiatives, commitments and obligations. The aim of the BMP is to safeguard and promote the viability of priority species and habitats associated with the Project. A key priority for the Project is the continued support for the conservation of the River Buna Protected Landscape and the Lake Shkoda and River Buna Ramsar Complex.

This BMP provides a framework for the implementation of the Project's biodiversity mitigation and management measures during the pre-construction / construction and operation phases that will be followed by ADF and the Project contractors. An outline biodiversity monitoring and evaluation strategy has been included to evaluate the efficiency and success of biodiversity management measures and to enable adjustments to be made if required. It is envisaged that this will be developed further by ADF prior to the pre-construction / construction phase.

Implementation of this BMP will ensure the Project's alignment with best practice, legislative requirements and the Project's commitments to biodiversity; including European Bank for Reconstruction and Development (EBRD) Performance Requirement 6: Biodiversity Conservation and Sustainable Management of Living Natural Resources.

3.3 Environmental and Social Action Plan

An Environmental and Social Action Plan (ESAP) has been prepared for the Project to meet EBRD requirements. In general, the ESAP requires compliance with the ESMP and BMP and includes specific requirements for many of the actions whose purpose is to avoid, reduce, or otherwise mitigate the most significant potential impacts.

3.4 Environmental and Social Management Plan

The Environmental and Social Management Plan is being prepared for the Project by ADF as part of the updated EIA. This includes a commitment register of the environmental and social mitigation measures that the Project will implement to reduce the significance of adverse Project-related impacts to environmental and social receptors. The ESMP is aligned with the BMP and the ESAP.

3.5 Stakeholder Engagement Plan

A stakeholder Engagement Plan will be prepared for the Project to meet EBRD requirements. This will provide the framework for stakeholder consultation and engagement. The implementation of the plan will be important in order to build strong, constructive and responsive relationships with stakeholders. It is essential to identify stakeholder's needs, concerns and ideas in relation to the proposed Project and to successfully characterise and manage the Project's environmental and social impacts.

Stakeholder engagement is an ongoing process that should involve stakeholder mapping, analysis, planning, disclosure and dissemination of information, as well as the development of a grievance mechanism and reporting back to affected communities the status of issues addressed via this mechanism

Key stakeholders already identified for the Project are Lezha and Shkoder Municipalities, NAPA, Ministry of Environment and Tourism, Ministry of Culture, Ministry of Infrastructure and Energy, NGOs and local residents and business owners.

3.6 Grievance Mechanism

The grievance mechanism is being established for the Project by ADF. This will be open to all stakeholders and will facilitate resolution of stakeholder concerns and grievances, particularly regarding the Projects' environmental and social performance. Through this process, all concerns, complaints, comments and suggestions will be provided to ADF who will manage an appropriate response to the grievance received in a timely manner. The grievance mechanism will become publicly available on ADF's website (https://www.albaniandf.org).

3.7 Point of Contact

The point of contact for this project is:

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