

**Republic of Albania**  
**BYPASS OF FIER AND LEVAN**

**Environmental Impact  
Assessment**



**FINAL REPORT  
NON-TECHNICAL SUMMARY**

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## 1.1. BACKGROUND

The General Roads Directorate (GRD) of Albania is implementing the Fier Bypass project, which consists of a new dual carriageway road bypass between the city of Fier and the town of Levan for a total length of approximately 22km.

This Non-Technical Summary (NTS) describes the project and summarises the results of various environmental and social studies carried out.

It is intended that the project will be partly financed by the European Bank for Reconstruction and Development (EBRD) and the European Investment Bank (EIB) in the amount of EUR 30 million. In order to finance the Project, the EIB and EBRD seek to ensure through its environmental and social appraisal and monitoring processes that the project is developed and implemented in accordance with the relevant national requirements, EU Directives and the EBRD Performance Requirements (PRs).

### Project Description

The project involves the construction of a new road as part of the North to South corridor. This corridor is one of the Albanian government's priority objectives in the Transport Sector as stated in the Albanian National Transport Plan (ANTP).

The section North of Fier (Lushnje - Fier) is already constructed.

This link will connect the city of Fier to the other cities of Albania. The link is very important for the development of southern Albania for both industrial and tourism development in the area.

The proposed new Bypass of Fier and Levan starts North of the village of Mbrostar and ends South-West of Levan.

### Environmental and Social Impact Assessment (ESIA) Process

The EIA has been prepared by EGIS Route as part of the statutory development consent procedure for the proposed Fier and Levan Bypass Scheme having regard to the EBRD Environmental Policy (2003) and the European Community Environmental Assessment Directive 85/EEC/337 (as amended by Directive 97/11/EC) transposed into Albanian law by the law on Environmental

## 1.1. PERSHKRIM I PERGJITHSHEM

Drejtoria e Përgjithshme e Rrugëve (DPRR) të Shqipërisë po zbaton projektin Bypassi i Fierit, i cili përbën një rrugë të dyfishtë të re anësore rrugës së qytetit të Fierit dhe qytetit të Levanit për një gjatësi të plotë rreth 22km.

Kjo Permbledhje Jo-Teknike (PJT) pershkruan projektin dhe bene permbledhjen e rezultateve te dala nga studimet e ndryshme mjedisore dhe sociale.

Eshte menduar qe ky projekt do te financohet pjeserisht nga Banka Evropiane per Rindertim dhe Zhvillim (BERZH) dhe pjeserisht nga Banka Evropiane e Investimeve (BEI) ne shumen prej 30 milion Euro. Ne menyre qe te financohet projekti, BEI dhe BERZH-i kerkojne te sigurojne nepermjet vleresimit te tyre mjedisor dhe sociale si edhe prej monitorimit te proceseve, se projekti hartohet dhe zbatohet ne perputhje me kerkesat kombetare perkatese, me Direktivat e BE-se dhe me Kerkesat e Performances te BERZH-it (KPs).

### Pershkrimi i Projektit

Projekti perfshin ndertimin e nje rruge te re si pjese e korridorit Veri - Jug. Ky korridor eshte nje nga objektivat prioritare te Qeverise se Shqiperise, ne Sektorin e Transportit sic edhe theksohet ne Planin Kombetar te Transportit ne Shqiperi (PKTSH).

Seksioni ne Veri te Fierit (Lushnje - Fier) tashme eshte ndertuar.

Kjo pjese do te lidhe qytetin e Fierit me qytetet e tjera te Shqiperise. Kjo lidhje eshte shume e rendesishme per zhvillimin e jugut te Shqiperise, nga pikepamja industrial dhe turistike ne zone.

Bypasi i ri i propozuar i Fierit dhe Levanit nis ne Veri te fshatit Mbrostar dhe perfundon ne Jug-Perendim te Levanit.

### Procesi i Vleresimit te Ndikimit Mjedisor dhe Social (VNMS)

Ky VNM eshte pergatitur nga EGIS Route si pjese e procedures ligjore per miratimin e Skemes se propozuar te Bypass-it Fier-Levan, duke patur parasysh Plotiken Mjedisore te BERZH (2003) dhe Direktiven e Komunitetit Europian per Vleresimin Mjedisor 85/EEC/337 (amenduar me Direktiven 97/11/EC) e transpozuar ne legjislacionin shqiptar ne ligjin per Vleresimin e Ndikimit ne Mjedis, no. 8990 te dates 23.01.2003.

Impact Assessment n° 8990 dated 23.01.2003.

According to the European Directive, the EIA process includes the following stages :

- **Screening:** *The Competent Authority makes a decision on whether an EIA is required.*
- **Scoping:** *The Scoping stage identifies the matters to be covered in the EIA.*
- **Environmental studies:** *The developer carries out environmental studies and prepares the EIA.*
- **Consultations with Statutory Environmental Authorities, Other Interested Parties and the Public:** *The environmental information is made available to authorities with environmental responsibilities and to other interested organisations and to the general public for review.*
- **Consideration of the EIA by the Competent Authority before making the Development Consent Decision:** *The environmental information and the results of consultations are considered by the Competent Authority in reaching its decision on the application for development consent.*
- **Announcement of the decision:** *The decision is made available to the public including the reasons for it and a description of the measures that will be required to mitigate adverse environmental effects.*

After the Completion of the EIA by EGIS Route, EBRD has engaged D'Appolonia S.p.A. to review the existing Project documentation and to assess the potential environmental and social impacts of the new design for the Fier Bypass and the proposed mitigation measures in line with the EBRD's Environmental and Social Policy 2008, identify the gaps between the Project's documentation and EBRD Performance Requirements (PRs) and address the identified issues.

## 1.2. ALTERNATIVE OPTIONS CONSIDERED

Five different alternatives were considered as part of an Environmental, Technical and Socio-economical analysis.

- Firstly, a **“Do-Minimum”** option uses and upgrades the existing road, which involves the route passing through the urban centres of Fier and Levan was considered.
- **Alternative A:** This route starts from the adjacent Lushnje-Fier section of the Lushnje-

Sipas Direktives Europiane, procesi i VNM perfshin fazat si paraqiten me poshte:

- **Ekzaminimi:** *Autoriteti Kompetent merr nje vendim mbi ate nese duhet ose jo te kryhet VNM.*
- **Perfshirja:** *Faza e perfshirjes identifikon ceshtjet qe do te trajtohen ne VNM.*
- **Studimet mjedisore:** *Zhvilluesi/Sipermarresi realizon studime mjedisore dhe pergatit VNM.*
- **Konsultime me Autoritetet Ligjore Mjedisore, Palet e Tjera te Interesuara dhe Publikun:** *Informacioni mjedisor vihet ne dispozicion te autoriteteve qe kane pergjegjesi mjedisore, dhe organizatave te tjera te interesuara si dhe publikut, per rishikim.*
- **Marrja ne konsiderate e VNM nga Autoriteti Kompetent, perpara se te merret Vendimi per Miratimin e Punimeve:** *Informacioni mjedisor dhe rezultatet e konsultimeve merren ne konsiderate nga ana e Autoritetit Kompetent si pjese per marrjen e vendimit mbi miratimin e zhvillimit te punimeve.*
- **Shpallja e vendimit:** *Vendimi behet i njohur per publikun, perfshire dhe arsyet e marrjes se ketij vendimi, si dhe nje pershkrim te masave qe kerkohet te merren per te parandaluar efektet e demshme mbi mjedisin.*

Pas perfundimit te VNM nga EGIS Route, BERZH angazhoi D'Appolonia S.p.A per te rishikuar dokumentacionin ekzistues te Projektit dhe per te vleresuar ndikimet potenciale mjedisore dhe sociale te projektit te ri teknik per Bypass-in e Fierit si dhe masat zbutese qe propozohen ne perputhje me Politiken Mjedisore dhe Sociale te BERZH te vitit 2008, per te identifikuar mangesite midis dokumentacionit te Projektit dhe Kerkesave te Performances (KP) te BERZH dhe per te trajtuar ceshtjet e identifikuar.

## 1.2. OPSIONET ALTERNATIVE TE KONSIDERUARA

Jane marre ne konsiderate pese alternativa te ndryshme si pjese e analizes Mjedisore, Teknike dhe Social-Ekonomike.

- Se pari, eshte opsioni **“Bej Minimumin”**, i cili perdor dhe permireson rrugen ekzistuese, ku perfshihet linja qe kalon permes qendrave urbane te Fierit dhe Levanit.
- **Alternativa A:** Kjo fillon nga seksioni Lushnje-Fier, i korridorit Lushnje-Vlore, tek rrethrotullimi ne veri te Fierit. Pastaj,

Vlore corridor at the roundabout situated north of Fier. The project then crosses over the existing railway and the existing road to Fier before crossing River Seman.

This alternative route passes to the west of Fier near the Hoxhara Canal. In the area of Dermenas the proposed alignment follows a tangential route to the south of the urban area.

From there, the route passes at the foot of the hill systems of Havaleasit, Pojan and Shtyllasit, passing to the west of the canal, without interference with the expanded boundaries of Apollonia Park and urban area around Levan. A large roundabout to the south-west of the urban area connects the route of Alternative A with Levan's centre.

- **Alternative B:** is similar to Alternative A is located closer to the village of Dermenas to the south-west of the urban area and connects the route of Alternative A with Levan's centre.
- **Alternative C:** passes on the eastern limit of the urban area of Fier, really close to Zhupan (a southern district of Fier) and Levan.
- **Alternative D:** passes south of Fier avoiding southern urban districts of Fier.

The different alternatives considered are presented on Figure 4.1.

Alternatives A and B are the most appropriate to ensure that the project achieves the required geometrical and safety standards, provide for the traffic growth and minimise the environmental impacts.

Alternative A is located further away from the inhabited village of Dermenas than alternative B reducing noise nuisances.

**Alternative A** was therefore considered the most suitable alternative.

This alternative was required to be updated in the section Pojan - Shtyllas (km 11 - km 18) where a new detour alignment was selected 300m west of Apollonia Archaeological Park boundaries. This new alignment avoids the impact of interfering directly within the Apollonia Park territory.

### 1.3. TECHNICAL ASPECTS OF THE SCHEME

The total length of the scheme is approximately

projekti kalon permes linjes ekzistuese hekurudhore dhe rruges ekzistuese per ne Fier perpara se te kaloje lumin Seman.

Kjo linje alternative kalon ne perendim te Fierit, prane kanalit te Hoxhares. Ne zonen e Dermenasit rrugetimi i shtrirjes se propozuar ndjek nje linje tagjenciale ne jug te zones urbane.

Prej andej, rruga kalon ne rrezë te kodrave te Hevaleasit, Pojanit dhe Shtyllasit, duke kaluar ne perendim te kanalit, pa interferuar me zonen e e zgjeruar te kufijve te Parkut te Apollonise dhe ate urbane perreth Levanit. Nje rrethrotullim i madh ne jug-perendim te zones urbane, lidh linjen e Alternatives A me qendren e Levanit.

- **Alternativa B:** eshte e ngjashme me Alternativen A dhe pozicionohet me prane fshatit Dermenas ne jug-perendim te zones urbane dhe lidh linjen e Alternatives A me qendren e Levanit.
- **Alternativa C:** kalon ne kufirin lindor te zones urbane te Fierit, shume prane Zhupanit (rajoni jugor i Fierit) dhe Levanit.
- **Alternativa D:** kalon ne jug te Fierit duke shmangur zonat urbane ne jug te Fierit.

Alternativat e ndryshme te marra ne konsiderate jane paraqitur ne Figuren 4.1.

Alternativat A dhe B jane me te pershtatshme per te garantuar se projekti do te arrije standartet e kerkuara gjeometrike dhe te sigurise, do t'i pergjigjet rritjes se trafikut dhe do te minimizoje ndikimet ne mjedis.

Alternativa A pozicionohet me tutje fshatit te banuar te Dermenasit, sesa alternativa B, duke reduktuar shqetesimet nga zhurmat.

**Alternativa A** konsiderohet per sa u tha si alternativa me e pershtatshme.

Kjo alternative u kerkua te rishikohet ne seksionin Pojan - Shtyllas (km 11 - km 18) ku u perzgjodh nje vije harkore e re 300m ne perendim te kufijve te Parkut Arkeologjik te Apollonise. Kjo vije e re shmang ndikimin e seksionit te vjeter qe nderhynte drejtperdrejt brenda territorit te Parkut te Apollonise.

### 1.3. ASPEKTE TEKNIKE TE SKEMES

Gjatësia totale e skemës është përafërsisht 22.1 km dhe konsiston në ndërtimin e një autostrade

22.1 km and consists in constructing a dual two lane highway to the west of the towns of Fier and Levan. To the North and South, the scheme will tie into dual two lane carriageways that are currently under construction and will open to traffic before the end of the works for this project.

Apart from the first kilometer (where the alignment crosses a hill and the design speed has been reduced to suit the difficult nature of the geometry), the project traverses flat, low-lying land with little variation in topography. By avoiding the environmentally sensitive archaeological site of Apollonia, the surrounding hills and several urban areas, the alignment of the project is such that many lengths of the project are superelevated.

Four grade separated interchanges are envisaged together with two half-interchanges (same traffic directions). These are located at approximately 4km intervals. The grade separated interchanges are of the "two-bridge roundabout" type with the mainline passing over the top of the local road network and roundabout. The local road network will therefore remain at approximately existing ground levels. The vertical alignment of the project is generally positioned between 2 to 4m above the existing ground rising to a maximum of 8m as the main line passes over the interchanges.

Several roads and streams are maintained along the alignment via culverts and underpasses. Three "major" three- span structures are also to be constructed. Each of them is 80m in length.

The Fier and Levan bypass is planned to be in operation in 2012.

Recent traffic growth in Albania has generally been strong. The traffic forecast for the Fier and Levan Bypass Scheme is :

- 2.647 veh/days in 2009,
- 3.570 veh/days in 2014,
- 6.515 veh/days in 2023.

## 1.4. THE EXISTING ENVIRONMENT

### 1.4.1. ARCHAEOLOGY AND CULTURAL HERITAGE

On the eastern edge of the Study Area lies the ancient town of Apollonia located on a hill 12 km

me dy korsi ne secilin krah, në pjesën perëndimore të qyteteve Fier dhe Levan. Ne veri dhe jug skema do te lidhet me rruget me dy korsi qe jane duke u ndertuar, dhe do te happen per trafikun perpara perfundimit te punimeve për këtë project.

Pervec kilometrit te pare (ku linja kalon neper nje koder dhe shpejtesia e projektuar eshte ulur per t'ju pershtatur natures se veshtire te gjeometrise), projekti pershkon nje zone te sheshte, te ulet dhe me pak variacione ne topografi. Duke shmangur zonen e ndjeshme mjedisore te Apollonise, kodrat rrethuese dhe disa zona urbane, shtrirja e projektit eshte e tille qe shume gjatesi te projektit jane te superngritura.

Jane parashikuar kater nderkembime me nivele te ndara, se bashku me dy gjysem-nderkembime (ne te njejtin drejtim trafiku). Keto gjenden afersisht ne intervale 4 km. Nderkembimet me nivele te ndara jane te tipit "rethrotullim me dy ura" ku linja kryesore kalon persiper rrjetit rrugor lokal dhe rethrotullimit. Keshtu qe, rrjeti rrugor lokal do te mbetet, perafersisht, ne nivelet baze ekzistuese. Shtrirja vertikale e rrugekallimit te projektit, pergjithesisht pozicionohet midis 2 deri 4 m mbi nivelin ekzistues te tokes , duke u ngritur deri ne nje maksimum prej 8 m, nderkohe qe linja kryesore kalon mbi nderkembimet.

Pergjate shtrirjes do te mirembahen disa rruge dhe perrenj, me tombino dhe nenkalime. Parashikohet te ndertohen tre struktura "kryesore" me tre hapje. Secila me 80 m gjatesi.

Baypasi i Fierit dhe Levanit, planifikohet te jete ne shfrytezim ne 2012.

Kohet e fundit, rritja e trafikut ne Shqiperi ka qene pergjithesisht e forte. Parashikimi i trafikut per skemen e baypasit Fier-Levan eshte:

- 2.647 makina/dite ne 2009,
- 3.570 makina/dite ne 2014,
- 6.515 makina/dite ne 2023.

## 1.4. MJEDISI EKZISTUES

### 1.4.1. ARKEOLOGJIA DHE TRASHEGIMIA KULTURORE

Ne skajin lindor te zones se studimit gjendet qyteti antik i Apollonise, i pozicionuar ne nje koder 12 km larg Fierit.



away from Fier.

Apollonia is a very important site. The ancient city had a surface area of 137 ha and was surrounded by a long stone wall of 4 kms. It is estimated that 60 thousand inhabitants were living in Apollonia.

Archaeological excavations on the site started in 1916 with an Austrian military expedition and continued throughout the 20th century until today.

Based on the ancient itineraries, Apollonia was an important crossroads. Apart from being an important coastal town with shipping activities, there were several roads leading to, or through Apollonia.

#### 1.4.2. LANDSCAPE AND VISUAL AMENITIES

The landscape in the study area of the Fier and Levan scheme is mainly characterised by a wide and flat plain.

The study area could be divided into 3 landscape units:

- *The hills, north of Fier at the northern extremity of the survey area,*
- *The wide and flat plain extending from the foot of the hills in the north and on the east of the area to the Adriatic Sea, where human settlements, villages and churches are scattered all over the territory,*
- *The mountainous hills on the eastern border of the survey area, where Apollonia is located.*

#### 1.4.3. CLIMATE

The annual average temperature varies from 15.1°C in Fier district to 16.1°C in Lushnja.

The maximum air temperature reaches 30°C during the period of July/August and the minimum average temperature in January is 4.8°C.

In the area of Fier the predominant winds are from the southeast and the northwest directions and are high intensity winds.

Precipitation is mainly in the form of rain. Hail, snow, fog and mist are rare in the study area.

The largest amount of precipitation falls during the coldest period of the year: 70% of

Apollonia eshte nje zone shume e rendesishme. Qyteti antik kishte nje siperfaqe prej 137 ha dhe rrethohej nga nje mur i gjate guri, prej 4 km. Vleresohet se ne Apolloni jetonin rreth 60 mije banore.

Germimet arkeologjike ne zone filluan ne vitin 1916 nga nje ekspedite ushtarake austriake, dhe vazhduan pergjate shekullit te 20-te deri ne ditet e sotme.

Sipas intinerareve antike, Apollonia ishte nje udhekryq i rendesishem. Pervectse ishte nje qytet bregdetar i rendesishem me aktivitet tregetar, kishte edhe shume rruge qe te conin tek, apo kalonin permes Apollonise.

#### 1.4.2. PEISAZHI DHE BUKURITE NATYRORE

Peisazhi i zones se studimit te skemes Fier dhe Levan, karakterizohet kryesisht nga nje fushe e gjere dhe e sheshte

Zona e studimit mund te ndahet ne tre njesi peisazhi:

- *Zona kodrinore ne veri te Fierit ne skajin verior te zones se studimit,*
- *Zona fushore e gjere dhe e sheshte qe shtrihet nga rreza e kodrave ne veri dhe ne lindje te zones deri ne detin Adriatik, ku vendbanimet e njerezve, fshtrat dhe kishat jane perhapur neper te gjithe territorin,*
- *Zona kodrinore-malore ne kufirin lindor te zones se studimit, ku gjendet Apollonia.*

#### 1.4.3. KLIMA

Temperaturat mesatare vjetore variojne nga 15.1°C ne zonen Fier, ne 16.1°C ne Lushnje.

Temperatura maksimale e ajrit arrin 30°C ne periudhat Korrik/Gusht, ndersa temperaturat minimale mesatare jane ne Janar qe eshte 4.8°C.

Ne zonen e Fierit ererat dominuese kane drejtimin nga jug-lindja dhe veri-perendimi, dhe jane erera me intensitet te larte.

Rreshjet jane kryesisht ne formen e shiut. Bresheri, debora dhe mjegulla jane te rralla ne zonen e studimit.

Sasia me e madhe e rreshjeve bie gjate periudhes me te ftohte te vitit: 70% e rreshjeve vjetore bien gjate periudhes se

the annual rainfall occurs during winter period.

#### 1.4.4. RELIEF, GEOLOGY, SOIL AND GROUNDWATER

The survey area is divided into four different geomorphologic units:

- *The new road will pass through the slopes of the hill of Petove village.*
- *Then it will cross the railway and pass through Fier's plain, which has alluvial and marshy origin. The relief is nearly flat. It is agricultural land with a well - developed drainage ditch network.*
- *Then the new road will pass by a detour 300m away of the foot of the hills of Pojani and than the Shtyllas village, but still in the plain. The area is sloping gently towards west.*
- *At the end of the study area, the new road will pass across Mifoli's plain.*

The main geological layers present on the survey area are sediments of Neogene age and Quaternary formations.

The Neogene deposits are the basal layer on the survey area. They outcrop in the Northern part of the survey area and on the South-eastern border of the survey area, where hills are located. Neogene rocks are composed of mudstone and sandstone.

The Quaternary formations are present throughout the plain on the survey area.

They are divided into 3 different categories:

- *Alluvium,*
- *Colluvium,*
- *Marsh and littoral deposits.*

Soils developed on the alluvium are composed of organic material and roots. They are 20 to 30cm thick and can be found everywhere on the plain crossed by the survey area. Hills are covered with a thinner layer of soil.

The main source of ground water is River Seman together with some ephemeral mountain torrents.

Groundwater is relatively abundant in the region and it is available through wells located mostly in plains. The water is of good quality; however, some specific locations experience problems

#### 1.4.4. RELIEVI, GJEOLGJIA, TOKAT DHE UJERAT NENTOKESORE

Zona e studimit ndahet ne kater njesi te ndryshme gjeomorfologjike:

- *Rruga e re do te kaloje permes shpateve te kodres se fshatir Petove.*
- *Pastaj ajo do te kaloje hekurudhen dhe permes fushes se Fierit, e cila ka origjine alovionale dhe mocalore. Relievi eshte gati i sheshte. Toke bujqesore ka rrjet te mire ujitjeje/kullimi.*
- *Me pas, ruga do te kaloje me nje hark 300 m larg rrezes se kodrave te fshatit Pojan dhe pastaj ne fshatin Shtyllas, por akoma ne fushe. Zona ka pjerresi te bute per nga perendimi.*
- *Ne fund te zones se studimit, rruga e re do te kaloje permes fushes se Mifolit.*

Shtresat kryesore gjeologjike te pranishme ne zonen e studimit jane sedimentet e epokes se Neogjenit dhe formacionet e Kuaternarit.

Depozitat e Neogjenit perbejne shtresen baze ne zonen e studimit. Ato dalin ne siperfaqe ne pjesen veriore te zones si dhe ne kufirin jug-perendimor te saj, ku gjenden kodrat. Shkembinjte e Neogjenit perbehen nga guret argjilore dhe ata ranore.

Formacionet e Kuaternarit jane te pranishme pergjate fushes se zones se studimit.

Ata ndahen ne tre kategori te ndryshme:

- *Aluvione,*
- *Koluvione,*
- *Depozitime mocalore dhe litorale.*

Tokat e krijuara mbi aluvionet perbehen nga material organik dhe rrenje. Ato jane 20 deri 30 cm te trasha dhe mund te gjenden kudo neper fushen ku kalon zona e studimit. Kodrat mbuloohen nga nje shtrese me e holle e dheut.

Burimi kryesor i ujerave nentokesore eshte lumi Seman, se bashku me disa perrenj te perkohshem malore.

Ujerat nentokesore jane relativisht te bollshme ne rajon, dhe shfrytezohen me ane te puseve kryesisht ne fusha. Cilesia e ujit eshte e mire, megjithate, disa zona te vecanta kane probleme ndotjeje nga pusët e naftes dhe ujerat e kripur.



from pollution due to oil fields and saline water.

#### 1.4.5. HYDROGRAPHY AND SURFACE WATER

The main watercourse in the survey area is the River Seman which runs Southeast to Northwest towards the Adriatic coast. The River Seman is characterized by a high flow rate as all Albanian rivers. In its Eastern, mountainous part, the rivers exhibit a torrential and erosive regime, forming large and undulated beds in the western coastal lowland.

The River Seman is considered as industrially polluted water. The Hoxhara canal, which also crosses the study area is highly polluted due to hydrocarbons and rubbish dumping

High levels of nitrites were found in the Seman river. They exceed the EC guide values for freshwater quality.

It seems that the impact of heavy metals on the water quality on rivers such as the Seman River became negligible 15 years after mining activities ceased. However petroleum industry (extraction and refinement) continues to be one of the principal sources of pollution for some rivers such as the Seman.

#### 1.4.6. HABITAT AND BIODIVERSITY

The majority of the survey area is dedicated to agriculture and therefore it does not present exceptional natural habitats.

Hills on the northern part of the survey area are covered with olive trees.

The area between those hills and the Seman River has potentially valuable habitat. Shrubs and scattered trees cover the area and reed beds have developed on river banks.

Wetland flora species, nesting birds, amphibians and reptiles might be found in this area.

#### 1.4.7. AIR QUALITY

It is common knowledge that the main sources of air pollution in the Fier Region are oil extraction and processing, electricity generation, family heating, uncontrolled burning of waste and transport. Despite the lack of adequate data, it can be said that air quality in Fier region is worsening due to the pollution by SO<sub>2</sub>, NO<sub>x</sub>, ozone, CO<sub>2</sub>, and heavy

#### 1.4.5. HIDROGRAFIA DHE UJERAT SIPERFAQESORE

Lumi kryesor ne zonen e studimit eshte Semani, me rrjedhe juglindje-veriperendim, drejt bregut te Adriatikut. Lumi Seman karakterizohet nga prurje te larta, si gjithe lumenjte e Shqiperise. Ne pjesen e tij lindore, ate malore, lumi paraqet regjim eroziv me rrjedhje te forte, duke formuar shtreter te medhenj dhe te valezuar ne pjesen e ulet bregdetare ne perendim.

Lumi i Semanit konsiderohet lum i ndotur industrial. Kanali i Hoxhares, qe kalon gjithashtu ne zonen e studimit, eshte shume i ndotur prej hidrokarbureve dhe mbeturinave.

Ne lumin e Semanit jane gjetur nivele te larta te nitriteve. Ato tejkalojne vlerat udhezuese te BE-se lidhur me cilesine e ujerave te embla.

Duket se ndikimi i metaleve te renda ne cilesine e ujit te lumenjve, sic eshte ai i Semanit, u neglizhua per 15 vjet pas nderprerjes se aktiviteteve minerare. Megjithate, industria e naftes (nxjerrja dhe perpunimi) vazhdon qe te jete nje nga burimet kryesore te ndotjes per disa lumenj, sic eshte Semani.

#### 1.4.6. HABITATET DHE BIODIVERSITETI

Pjesa me e madhe e zones se studimit i dedikohet bujqesise, keshtu qe ajo nuk paraqet habitate te vecanta natyrore.

Kodrat e pjeses veriore te zones se studimit jane te mbjella me ullinj.

Zona midis ketyre kodrave dhe lumit Seman ka habitat potencialisht te vlefshem. Zona mbulohet nga shkurrta dhe peme te shperndara, ndersa ne brigjet lumore jane zhvilluar kallamishtet.

Ne kete zone gjenden edhe speciet e flores se ligatinave, zogjte, amfibet dhe reptilet.

#### 1.4.7. CILESIA E AJRIT

Tashme eshte e ditur se burimet kryesore te ndotjes se ajrit ne rajonin e Fierit jane nxjerrja dhe perpunimi i naftes, prodhimi i energjise elektrike, ngrohja e shtepive, djegia e pakontrolluar e mbeturinave dhe transporti. Megjithese te dhenat e sakta mungojne, mund te thuhet se cilesia e ajrit ne rajonin e Fierit po perkeqesohet per shkak te ndotjes me SO<sub>2</sub>, NO<sub>x</sub>, ozon, CO<sub>2</sub>, dhe metale te renda.

Ndotja e ajrit eshte shqetesim ne qytetet Fier,

metals.

Air pollution is a concern in Fier, Patos and Ballsh cities chiefly due to the thermo-electric plant and oil industries located in these municipalities. Fier has the second highest concentration of PM10 in Albania (Tirana has the highest). The level of PM10 has been increasing since 1976 due to the increase in the number of vehicles. The concentration level has always been higher than the National standards, and as shown in the table reached the highest concentration in the year 2000.

#### 1.4.8. NOISE

The study area is situated in the outskirts of Fier and Levan where important roads and some few activities generate some noise. Anywhere else, the amount of noise is low as the study area consists of agricultural lands, small hamlets and farms. Except for the areas situated along the main existing roads, it is thus considered a calm area where noise levels, even during the day are relatively low.

#### 1.4.9. LOCAL COMMUNITY AND SOCIO-ECONOMIC ISSUES

The Fier region includes the three districts of Fier, Lushnja and Mallakaster and is located in the Southwestern part of Albania.

Fier, the second most populated region in the country with 382.544 inhabitants, encompasses thirty-six communes and six municipalities throughout the three districts of Fier, Lushnja and Mallakastra. The Fier region represents 12% of the national population.

In the Fier region the education reforms have contributed to reduce the level of illiteracy from 7.3% in 1989 to approximately 1% in 2001.

In the Fier Region, during the previous ten years of transition from a state-planned to market economy, there have been two main factors that have caused an increase in poverty for many families and a simultaneous decline in the overall economy. Firstly, in urban areas, the closing, renewal, and/or privatisation of economic enterprises was accompanied by massive unemployment.

Domestic and foreign investments did not create enough jobs to replace the employment previously provided by the large state-owned corporations. The second factor concerns the distribution of land in the rural areas; land

Patos dhe Ballsh, kryesisht per shkak te termocentralit dhe industrise se naftes qe gjendet ne keto zona. Fieri ka perqendrimin e dyte me te larte te PM10 ne Shqiperi (Tirana eshte e para). Niveli i PM10 eshte rritur qe nga viti 1976 per shkak te rritjes se numrit te automjeteve. Niveli i perqendrimit ka qene gjithmone me i larte sesa standartet kombetare, dhe, sic tregohet edhe ne table, ka arritur nivelin me te larte ne vitin 2000.

#### 1.4.8. ZHURMA

Zona e studimit gjendet ne rrethinat e Fierit dhe Levanit, ku rruget e rendesishme dhe disa aktivite te pakta shkaktojne njefare zhurme. Kudo tjeter, niveli i zhurmes eshte i vogel, pasi zona e studimit perbehet nga toke bujqesore, fshatra te vegjel dhe ferma. Vec zonave pergjate rrugeve kryesore ekzistuese, zona konsiderohet e qete, me nivele zhurme relativisht te uleta dhe gjate dites.

#### 1.4.9. KOMUNITETI LOKAL DHE CESHTJET SOCIAL-EKONOMIKE

Qarku i Fierit perbehet nga tre rrethe: Fieri, Lushnja dhe Mallakastra, dhe gjendet ne pjesen jug-perendimore te Shqiperise.

Fieri, qyteti i dyte me popullsine me te madhe ne vend me 382.544 banore, perbehet nga tridhjetegjashte komuna dhe gjashte bashki, ne te tre rrethet e tij: Fier, Lushnje dhe Mallakaster. Qarku i Fierit perfaqeson 12% te popullsisë se vendit.

Ne qarkun e Fierit, reformat arsimore kontribuan ne reduktimin e nivelit te analfabetizmit nga 7.3% ne 1989 ne rreth 1% ne 2001.

Ne qarkun e Fierit, gjate dhjete viteve te tranzicionit nga ekonomia shteterore e planifikuar ne ate te ekonomise se tregut, ka patur dy faktore qe kane ndikuar ne rritjen e varferise per shume familje, dhe ne te njejten kohe ne renien e ekonomise ne pergjithesi. Se pari, ne zonat urbane, mbyllja, riparteritja, dhe/ose privatizimi i ndermarrjeve ekonomike, u shoqerua me papunesi masive.

Investimet vendase dhe ato te huaja nuk krijuan mjaft vende pune per punesimin e njerezve qe me perpara punonin ne ndermarrjet e medha shteterore. Faktori i dyte lidhet me shperndarjen e tokes ne zonat rurale; tokat qe i perkisnin ish fermave shteterore dhe ish kooperativave ju shperndane familjeve, ne formen e parcelave te vogla - megjithate, efektiviteti per prodhim dhe

holdings belonging to the ex-state-owned farms and ex-cooperatives were distributed to families as small plots - however, the efficiency with regard to production and market access of these small plots were found to be insufficient.

## **1.5. SIGNIFICANT ENVIRONMENTAL IMPACTS**

### **1.5.1. ARCHAEOLOGY AND CULTURAL HERITAGE**

There are two major potential impacts of the new road on the archaeological resources of the study area. One is negative and the other one is positive. The negative impact is the threat of destruction of potential archaeological remains and the positive impact is the possibility of evaluation and integration of this heritage into the future development of the area.

As the expanded area of Apollonia Park is avoided, the scheme does not cross known sensitive areas, but further investigations will be carried out before road construction and, in case of unexpected findings, archaeologists will be called to conduct surveys to determine if there are any remains of interest.

Based on the Albanian Law No. 9048, date 07.04.2003 (amended) on "Cultural Heritage", Article 47, and Contractor prior to starting the works on site should receive a written approval letter from the National Archaeological Council (NAC) after the conduct of a non-intrusive survey on the site. In addition the Contractor should sign a pre contract agreement with the NAC.

Finds of great importance might necessitate amending the design of the road. All available information has been provided (contacts with Albanian Archeological Survey Agency did not gave more information).

These measures need to be followed closely with the Albanian Archeological Survey Agency. It is this institution that can provide a statement of measures and further develop a detailed plan, if required.

### **1.5.2. LANDSCAPE AND VISUAL AMENITIES**

As nearly all the project is in embankment, it will be highly visible in the vast agricultural plain situated on the right bank of River Seman.

In general and given the various constraints, the alignment has been selected to minimize,

aksesim te tregut nepermjet ketyre parcelave te vogla, u verrejte se ishte i pamjaftueshem.

## **1.5. NDIKIME TE RENDESISHME NE MJEDIS**

### **1.5.1. ARKEOLOGJIA DHE TRASHEGIMIA KULTURORE**

Dy jane ndikimet e rendesishme potenciale qe ka kjo rruga mbi rezervat arkeologjike te zones se studimit. Njeri eshte negativ dhe tjetri eshte pozitiv. Ndikimi negativ eshte kercenimi i shkaterrimit potencial te mbetjeve arkeologjike; dhe ndikimi pozitiv eshte mundesia e vleresimit dhe integritimit te kesaj trashegimie ne zhvillimin e ardhshem te kesaj zone.

Duke qene se zona e zgjeruar e Parkut te Apollonise shmanget, skema nuk kryqezohet me zona te ndjeshme te njohura, por do te kryhen investigime te metejshme para ndertimit te rruges dhe, ne rast gjetjesh te papitura, arkeologet do te thirren te kryejne vezhgimet per te percaktuar nese ka gjetje me interes.

Bazuar ne Ligjin Shqiptar No. 9048, date 07.04.2003 (I amenduar) mbi "Trashegimie Kulturore", Neni 47, Kontraktori para fillimit te punimeve ne terren duhet te marr nje leter aprovimi me shkrim nga Keshilli Kombetar i Arkeologjise (KKA) pas kryerjes se nje vzhgimi jo intruziv ne terren. Ne vazhdim Kontraktori duhet te firmose nje marreveshje para-kontraktuale me KKA.

Gjetjet e nje rendesie te madhe mund te kerkojne amendimin e projektimit te rruges. Gjithe informacioni i vlefshem eshte paraqitur (kontaktet me Agjensine e Vezhgimit Arkeologjik Shqiptar nuk dhane tjetere information).

Keto masa duhet te ndiqen nga afer me Agjensine e Vezhgimit Arkeologjik Shqiptar. Ky eshte institucioni qe mund te jap pozicionimin e masave dhe te zhvilloje me tej nje plan te detajuar nese nevojitet.

### **1.5.2. PEISAZHI DHE BUKURITE NATYRORE**

Pasi gati i gjithe projekti eshte ne argjinture, do te jete teper i dukshem ne fushen e gjere bujqesore ne te djathte te lumit Seman.

Ne pergjithesi, si dhe nisur nga shqetesimet e ndryshme, shtrirja eshte perzgjedhur qe te

wherever possible, adverse impact on adjoining properties and the landscape.

A large cut will be visible from both sides of the hills on the north end of the project.

### 1.5.3. CLIMATE

The impact of the project on the climate will not be significant.

### 1.5.4. RELIEF, GEOLOGY, SOIL AND GROUNDWATER

During construction, stripping the surface material will increase groundwater vulnerability. The potential will exist for groundwater contamination from construction plant leaks and accidental spillages of vehicle fuels and oils.

Silt and clay particles mobilised by rainfall and construction activities can percolate to a shallow water table, resulting in an impact on groundwater quality in the immediate vicinity of the construction works.

During operation, the greatest potential impact on water supply wells or springs relates to the potential for contamination from road runoff and the accidental spillage of hazardous chemicals on the proposed Scheme. Given traffic forecasts, those risks are however minor.

### 1.5.5. HYDROGRAPHY AND SURFACE WATER

During construction works will be temporary in nature but have the potential to cause impacts on the aquatic environment.

Main potential impacts of construction works include:

- *Accidental spillages of liquids or contaminated runoff,*
- *Obstruction of watercourse channels (i.e. arterial drainage) and floodplains leading to flooding.*

During operation, as the road crosses areas where drainage ditches currently exist, their use, organisation and effectiveness will be affected.

The proposed road drainage system consists of directing the contaminated runoff to road verges where soft grassed edges retain part of the suspended solid pollutants.

Where drainage is concentrated into point

minimize, aty ku eshte e mundur, ndikimin negativ mbi pronat dhe peisazhin perreth.

Nga kodrat, ne skajin verior te projektit do te jete e dukshme nje prerja e madhe.

### 1.5.3. KLIMA

Ndikimi i projektit ne klime do te jete i parendesishem.

### 1.5.4. RELIEVI, GJEOLGJIA, TOKA DHE UJERAT NENTOKESORE

Gjate ndertimit, heqja e materialit siperfaqesor do te rris ndjeshmerine e ujerave nentokesore. Mundesia e ndotjes se ujerave nentokesore ekziston nga rrjedhjet e vajrave dhe karburantit te makinerive dhe mjetet.

Grimcat e pluhurit / baltes, qe percillen nga shiu dhe aktivitetet e ndertimit, mund te depertojne ne shtresat e ceketa te ujit, duke ndikuar ne cilesine e ujerave nentokesore ne afersi te vendit ku kryhen punimet.

Gjate funksionimit, ndikim i madh potencial mbi puset e burimet e ujit vjen nga mundesia e ndotjes nga rrjedhjet ne rruge dhe derdhjet aksidentale te kimikateve te rrezikshme ne skemen e propozuar. Nisur nga parashikimet e trafikut, keto rreziqe jane te uleta.

### 1.5.5. HIDROGRAFIA DHE UJERAT SIPERFAQESORE

Gjate ndertimit, do te kete punime te perkohshme ne natyre, por ka mundesi qe te shkaktohen ndikime ne mjedisin ujqor.

Ndikimet potenciale kryesore te punimeve te ndertimit perfshijne:

- *Derdhjet aksidentale te lengjeve te ndryshme apo ndotesve te ndryshem,*
- *Bllokim te kanaleve ujore (psh te kanaleve te kullimit) nga mbeturinat e dheut, duke shkaktuar permbytje.*

Gjate shfrytezimit, meqe rruga kalon ne zona ku ekzistojne kanalet kulluese, do te preket perdorimi, organizimi dhe efektiviteti i tyre.

Sistemi i propozuar i kullimit te rruges ben ridrejtimin e derdhjeve te ndotura ne bordurat e rruges, ku brezat e bute me bar do te mbajne pjese te pezullive ndotesve te ngurta.

Ku kullimi perqendrohet ne pikat e shkarkimit,

discharges it is likely that dilution from high rainfall and rapidly flowing rivers such as the River Seman will dilute contamination relatively quickly. However, accidental spillages could potentially have a major adverse impact on surface water quality.

#### **1.5.6. HABITAT AND BIODIVERSITY**

During construction there are numerous minor potential direct and indirect impacts such as vegetation clearance, erosion of slopes on cuts and fills, destruction of existing valuable trees and riverin woodland, etc.

During the operational phase, the most important impact will be accidental mortality for animal species that will cross the road. Numerous minor potential direct and indirect impacts might be found such as noise, lighting, air pollution and providing new accesses to secluded areas for illegal and uncontrolled logging, fishing and hunting.

#### **1.5.7. AIR QUALITY**

During construction, dust is likely to be generated by construction activities.

Due to relatively low predicted traffic levels until 2023, low emissions are likely to be caused by the traffic of the proposed Scheme. Emissions will also decrease, as improvement in unitary vehicle emissions will take place in the future.

#### **1.5.8. NOISE**

During construction, a variety of engines will be in use. It is also possible that rock breaking and/or blasting may be required on occasions and there will be vehicular movements to and from the site that will make use of existing roads. Due to the nature of the activities undertaken on a large construction site, there is potential for generation of significant levels of noise. However, the impact due to construction activities will be transient in nature.

During the operational period, certain properties were identified as having potential noise impact generated from the Scheme.

#### **1.5.9. LOCAL COMMUNITY AND SOCIO-ECONOMICS**

duket se ulja e perqendrimt, nga shirat dhe lumenjte e rrjedhshem shpejt, si lumi Seman, ulin relativisht shpejt perqendimin e ndotjes. Megjithate, derdhjet aksidentale ka mundesi te kene nje ndikim te konsiderueshem negativ ne cilesine e ujerave siperfaqesore.

#### **1.5.6. HABITATI DHE BIODIVERSITETI**

Gjate ndertimit mund te kete disa ndikime potenciale te vogla, direkte apo indirekte, sic jane prerja e bimesise, erozioni i argjinaturave ne germime dhe mbushje, shkaterrimi i pemeve dhe drureve te vlefshem lumore, etj.

Gjate fazes se shfrytezimit, ndikimi me i rendesishem do te jete vdekja aksidentale e specive te kafsheve, te cilat mund te kalojne rrugen. Mund te kete edhe ndikime te tjera me te vogla, direkte apo indirekte, si zhurma, drita, ndotja te ajrit dhe krijimi i rrugeve hyrese per ne zona te izoluara per te prere dru, gjueti / peshkim ilegal e te pakontrolluar.

#### **1.5.7. CILESIA E AJRIT**

Gjate ndertimit do te shkaktohet pluhur prej punimeve te ndertimit.

Per shkak te niveleve te uleta te parashikuara per trafikun deri ne 2023, shkarkimet ne ajer do te jene ne nivele te uleta. Shkarkimet do te vijne ne ulje dhe si rezultat i permiresimeve qe do te ndodhin ne te ardhmen ne teknologjine e prodhimit te makinave.

#### **1.5.8. ZHURMA**

Gjate ndertimit do te perdoren shume makineri. Gjithashtu mund te jete e nevojshme thyerja e shkembinjve ose eksplozivet si dhe do te kete levizje te automjeteve nga nje vend ne tjetrin te cilat do te perdorin rrugen ekzistuese. Per shkak te llojit te punimeve qe kryhen ne nje kantier ndertimi, ka shume mundesi qe te gjenerohen zhurma ne nivele te konsiderueshme. Megjithate, ndikimi i punimeve te ndertimit eshte nje ndikim kalimtar.

Gjate periudhes se shfrytezimit, pergjate skemes u identifikuan disa prona qe mund te ndikohen nga zhurmat e gjeneruara nga rruga.

#### **1.5.9. KOMUNITETI LOKAL DHE CESHTJET SOCIAL-EKONOMIKE**

For all communities situated along the Scheme, impacts have been evaluated for land use, road infrastructure, water supply network, power and gas supply, health, education, culture and sport facilities as well as industry and business.

During site visits and contacts with the population, no impact on minority groups was mentioned.

The principal negative impacts are:

- *The proposed road will be a potential obstacle for farmer and cattle movements,*
- *In some locations, the proposed road will be a potential obstacle for reaching schools, shops and other local facilities,*
- *During construction, water, electricity and gas supplies to the inhabitants and farms might be affected by the project,*
- *During construction drainage of the fields will be affected,*
- *Influx of workers,*
- *Land acquisition and involuntary resettlement may cause adverse impacts on Project Affected Persons (PAPs), particularly if the process is not managed properly,*
- *During the constructions, some restrictions to land use of PAPs might occur,*
- *Land acquisition and the construction of the road may negatively impact on the livelihoods of PAPs in terms of agricultural production,*

The principal positive impacts are:

- *The new road will provide a better connection with the rest of the districts, the regions and the country.*
- *The new road will revive local economy as it will generate the construction of new shops, restaurants, bars, gas stations, local products stores, etc.).*

Per te gjitha komunitetet e vendosura pergjate skemes, u vleresuan ndikimet lidhur me perdorimin e tokes, infrastrukturen rrugore, furnizimin me uje dhe me energji elektrike, shendetin, edukimin, kulturen, aktivitetet sportive, biznesin dhe industrine.

Vizitat ne terren dhe kontaktet me popullsine nuk u permenden ndikime mbi grupe minoritare.

Ndikimet kryesore negative jane:

- *Rruga do te jete nje pengese e mundshme per levizjen e fermerëve dhe te bagetive.*
- *Ne disa vende rruga do te jete nje pengese e mundshme per te shkuar ne shkollë, dyqan apo objekte te tjera lokale.*
- *Gjate ndertimit, uji, energjia elektrike dhe furnizimi me gaz i banoreve dhe fermerëve mund te ndikohet nga projekti.*
- *Gjate ndertimit mund te kete ndikime ne ujitjen e fushave.*
- *Influksi i punetoreve*
- *Shpronesime dhe zhvendosja pa deshire mund te shkaktoje impakte negative tek Personat e Prekur nga Projekti (PPP), sidomos ne rastet kur procesi nuk administrohet sic duhet.*
- *Gjate ndertimit mund te kete kufizime mbi perdorimin e truallit te PPP-ve.*
- *Shpronesimet dhe ndertimi i rruges mund te ndikojne negativisht ne jetesen e PPP-ve ne drejtim te prodhimit bujqesor.*

Ndikimet kryesore pozitive jane:

- *Rruga e re do te krijojë lidhje me te mira me pjesen tjeter te zones, te rajonit dhe te vendit*
- *Rruga e re do te rigjalleroje ekonomine lokale pasi do te nxise hapjen e dyqaneve te reja, restoranteve, bare, pika karburanti, dyqane te prodhimeve lokale etj).*

## 1.6. PROPOSED MITIGATION MEASURES

### 1.6.1. GENERAL MEASURES

As a general mitigation measure, during construction, the road contractor(s) will be required to prepare an environmental plan that will ensure that:

- *Construction works occurs mainly during dry season,*
- *Stream and river beds diversion are kept to a minimum,*
- *Works are strictly kept to the minimum near rivers, streams and canals,*
- *Workers campsites are not near river's bed,*
- *Temporary sedimentation basins are created for siltation,*
- *Solid and liquid wastes are collected and/or recycled,*
- *Road platform is watered during dry periods to avoid dust emissions,*
- *Temporary storage areas, worker's campsites, borrow pits, quarries, and waste deposits are rehabilitated to their original uses (agricultural land, natural land, etc.),*
- *Valuable trees and riverine woodlands are protected.*

### 1.6.2. SPECIFIC MEASURES

#### 1.6.2.1. Archaeology and Cultural Heritage

**During Construction**, in the vicinity of the Apollonia Archeological Park (APP), in order to identify and save all remains and artefacts, implementation of lengthy and archeological mitigation measures will be necessary due to the high density of artefacts present along the proposed alignment as well as in the near surroundings. This shall be done in consultation with the relevant authorities and administrations.

Possible options may include:

- *Non removal of the topsoil and*

## 1.6. MASAT ZBUTESE QE PROPOZOHEN

### 1.6.1. MASA TE PERGJITHSHME

Si nje mase e pergjithshme zbutese, gjate ndertimit, kontraktorit do t'i kerkohej te pergatise nje plan mjedisor, i cili do te beje te mundur qe:

- *Punimet ndertimit te zhvillohen kryesisht gjate periudhave te thata,*
- *Ndryshime te shtatit te lumenjve dhe perrenjeve te jene minimale,*
- *Punimet prane shtratit te lumenjve dhe perrenjeve te mbahen ne nivele minimale,*
- *Kampet e punetoreve te mos ndertohen prane lumenjve*
- *Duhet te krijohen bazene te perkohshme per te mbledhur llumrat.*
- *Mbetjet e ngurta ose te lengeta duhet te grumbullohen dhe/ose te riciklohen*
- *Rruge platforma laget ne periudhat e thata per te shmangur clirim pluhuri,*
- *Zonat e perkoheshme te magazinave dhe fjetoreve te punetoreve do te rikthehen ne gjendjen e tyre te meparshme (toke bujqesore ose natyrale, etc.),*
- *Druret me vleredhe druret lumore duhet te mbrohen.*

### 1.6.2. MASA TE VECANTA

#### 1.6.2.1. Arkeologji dhe Trashegimi Kulturore

**Gjate Ndertimit**, ne afersi te zones se Parkut Arkeologjik te Apollonise (PAA), me qellim identifikimin dhe ruajtjen e gjithe zbulimeve dhe relikeve, eshte i nevojshem zbatimi i masave zbutese afatgjata per arkeologjine; kjo per shkak te densitetit te larte te relikeve qe probabilisht gjenden pergjate rruges se propozuar si dhe ne zonat rreth saj. Kjo duhet bere ne konsultim me autoritetet perkatese dhe administraten.

Opsionet e mundshme perfshijne:

- *Mosheqjen e dheut te siperfaqes dhe*



*buidling an embankment directly over the area*

- *Excavation and archeological surveys before construction followed by adaptation of the project to suit the nature of any findings. This may include displacing artifacts, replacing embankment by structure or displacing the alignment.*

During the preliminary phases of construction, it is proposed that a suitably qualified archaeologist monitor soil stripping, or ground preparation works in advance of construction.

#### **1.6.2.2. Landscape and Visual Amenities**

**During Construction**, Valuable trees, groups of trees and riverine woodlands identified in this EIA or by the environmental management staff and situated in the margins of the construction site, will be protected.

**During Operation**, Landscape measures will ensure that, at minimum, continuous grassland will be established along the proposed Scheme.

For fill sections, slopes should be hydroseeded with a seed mix that includes both seeds of grass and Mediterranean scrub plants.

Specific Landscape Mitigation Measures will be established in order to protect neighbouring properties from visual intrusion. Such measures will include hydro-seeding and planting of material deposits and borrow pits in order to diminish the visual intrusion of the project.

#### **1.6.2.3. Relief, Geology, Soil and Groundwater**

**During Construction**, topsoil for re-use and rapid re-establishment of base areas of ground will be carefully stored.

**Before Operation**, a survey of all wells and springs within 250m of the Scheme fenceline will be undertaken prior to construction of the Scheme. Any wells and springs negatively impacted will be abandoned and provisions made for replacement water supplies for the owners.

#### **1.6.2.4. Hydrography and Surface Water**

**During Construction**, pollution control

*ndertimin e nje argjinature direkt mbi zone.*

- *Germime dhe studime arkeologjike perpara ndertimit pasuar me adoptim te projektit per t'ju pershtatur natyres se gjetjeve. Kjo mund te perfshije zhvendosjen e relikeve, zhvendosjen e struktures se argjinatures, ose te rruges.*

Gjate fazave paraprake te ndertimit, propozohet qe nje arkeolog i kualifikuar te monitoroje punet per largimin e dheut dhe pergatitjet per germim, para fillimit te punes.

#### **1.6.2.2. Peisazhi dhe Bukurite NATyrore**

**Gjate ndertimit** do te mbrohen peme me vlere, grupe pemesh dhe zonat pyjore lumore, te cilat jane identifikuar ne kete VNM ose nga personeli i menaxhimit mjedisor, dhe qe gjenden brenda kufijve te zones se ndertimit.

**Gjate funksionimit**, masat per peisazhin do te sigurojne qe, te pakten, te kete hapesire te vazhdueshme me bar, pergjate skemes se propozuar.

Ne seksionet mbushese, skarpitet do te mbillen me sperkatje uji, plehu dhe farash bimore, me bar dhe shkurre mesdhetare.

Masa te vecanta zbutese per peisazhin do te ndermerren me qellim mbrojtjen e pronave te banoreve fqinje nga nderhyrjet vizuale. Masa te tilla perfshijne mbjelljen e bimeve dhe krijimin e barrierave kunder zhurmave, me qellim zvogelimin e nderhyrjeve vizuale nga ana e projektit.

#### **1.6.2.3. Relievi, Gjeologjia, Dherat dhe Ujerat Nentokesore**

**Gjate ndertimit**, duhet te ruhen me kujdes dherat siperfaqesore per riperdorim dhe zonat per rivendosjen e shpejte te shtresave.

**Para funksionimit**, duhet te kryhet nje studim i te gjitha puseve dhe burime ujore brenda nje largesie prej 250m nga rruga. Cdo pus apo burim i cili do te kete ndikim negativ duhet te mbyllet dhe te merren masa per zevendesimin e ketyre burimeve te uji per perdoruesit dhe pronaret e tij.

#### **1.6.2.4. Hidrografia dhe Ujerat Siperfaqesore**

**Gjate ndertimit**, duhet te merren masa

measures will be put in place. These will include bunding, basins and siltation fences.

**During Operation**, any direct discharge in watercourses should be avoided. At any bridge, provisions should be made so that in the future a sealed drainage system could be put in place to collect surface water and bring it to infiltration / attenuation ponds or ditches nearby.

#### **1.6.2.5. Habitat and Biodiversity**

Some measures are already described in 'General Measures'.

**During Construction**, watercourse diversions and bridge construction will be avoided during fish spawning season (mainly March to June).

**During Operation**, Road signs will be put along sensitive area where habitats of wild animals have been identified.

Laws will be reinforced in order to protect newly accessible areas from hunting and logging. Urban development should be controlled along the proposed highway.

#### **1.6.2.6. Air Quality**

**During Construction** the contractor will reduce dust emission coming from trucking and excavation (quarries, borrow pits).

**During Operation**, no mitigation measures are proposed due to the low impact of the project. However, in order to verify the air quality in the study area and to follow its evolution, measurements using passive samplers might be done before constructing the road and some years after construction as part of the Environmental Management and Monitoring Plan.

#### **1.6.2.7. Noise**

**During Construction**, the contractor will be obliged to take specific noise abatement measures and comply with the recommendations of the European Communities. This should include predictions of noise from the construction site and measures to reduce noise to a minimum.

**During Operation**, according to a prediction model, and after an acoustic study was carried out, the potentially affected properties that will experience a noise level above the

kontrolli per ndotjen. Keto perfshijne basenet, pengesat dhe gardhet e filtrimit per llumrat.

**Gjate shfrytezimit**, duhet te evitohen shkarkimet direkte ne rrjedhat e ujit. Ne cdo ure, duhet te vendoset nje sistem kullimi i mbyllur, qe do te mbledhe ujrat siperfaqesore per t'i percjelle me kanalet e filtrimit ne pellgjet mbledhese ne afersi me uren.

#### **1.6.2.5. Habitati dhe Biodiversiteti**

Disa masa jane pershkruar ne seksionin 'Masa te Pergjithshme'.

**Gjate ndertimit**, duhet te evitohen devijimi i ujrave dhe ndertimi i urave ne periudhen e shumimit te peshqve (kryesisht mars-qershor).

**Gjate shfrytezimit**, duhet te vendosen shenja rrugore ne zonat sensitive ku jane identifikuar habitate te kafsheve te egra.

Duhet te forcohet ligji me qellim mbrojtjen e zonave nga gjuetia dhe prerja e drureve. Zhvillimi urban pergjate rruges se propozuar duhet te kontrollohet.

#### **1.6.2.6. Cilesia e Ajrit**

**Gjate ndertimit**, kontraktori do te reduktojë emetimet e pluhurit shkaktuar nga makinerite dhe germimet (guroret, zonat e germimit).

**Gjate funksionimit**, nuk jane propozuar masa zbutese, per shkak te ndikimit te ulet te projektit. Megjithate, me qellim qe te verifikohet cilesia e ajrit ne zonen e studimit dhe te ndiqet evoluimi i saj, mund te merren disa masa duke perdorur mostra pasive, perpara ndertimit te rruges dhe disa vjete pas ndertimit, si pjese e Planit te Menaxhimit dhe Monitorimit te Mjedisit.

#### **1.6.2.7. Zhurma**

**Gjate ndertimit**, kontraktori do te jete i detyruar te marre masa per reduktimin e zhurmes ne perputhje me rekomandimet e Komunitetit Europian. Keto duhet te perfshijne parashikimet e zhurmes se shkaktuar nga ndertimi dhe masa per reduktimin e saj ne minimum.

**Gjate shfrytezimit**, ne perputhje me modelin e parashikimit, dhe pas kryerjes se nje studimi akustik, pronat e prekura, qe do te perjetojne nje nivel zhurme mbi 65dB L<sub>aeq</sub>, ne 2023 (12

threshold limit 65dB  $L_{aeq}$ , in 2023 (12 years after the opening of the road) will be protected from the noise coming from the project. These protections will take the form of earth bunds and noise barriers.

#### **1.6.2.8. Local Community and Socio-Economics**

**During Construction** specific measures will be taken by the contractor in order to maintain water, electricity and gas services to the neighbouring inhabitants. A system of warning people if there are to be disruptions to services will be set up, where pedestrians and local traffic will also be diverted to prevent any safety hazards. Passages will be created to facilitate farmer and cattle movements and in locations where the proposed road will be a potential obstacle for reaching schools, shops and other local facilities.

It is highly likely that there will be an opportunity for temporary employment of local labourers.

**During Operation** Local routes frequented by locals, cattle, students and other pedestrians will be re-established. Local access to the project will be provided. All private properties will have their access to local roads re-established. Access to agricultural parcels will be provided.

For PAPs whose livelihoods will be affected, either in terms of income generation from small economic activities and/or in terms of agricultural production, assistance will be provided to restore the activities. The principles to be used to assess the type of assistance to be provided is laid out in the Resettlement Action Plan (RAP).

To mitigate adverse impacts to PAPs in case of land acquisition and involuntary resettlement, the RAP, specifically designed for the Project, will be implemented. The RAP sets out the principles that shall apply to assess and calculate the type of compensation and assistance to be provided to PAPs. Further information with regard to land acquisition and RAP is provided under Section 1.7.2.

As there is a significant population and activity along this road the project could lead to improved economic conditions.

The operation of the road can be expected to have a significant beneficial effect on the economy of the area through increased access

vjet pas fillimit te shfrytezimit te rruges) do te mbrohen nga zhurma qe vjen si rezultat i ketij projekti. Keto mbrojtje do te kene formen e pengesave te dheut dhe barrierave te zhurmes.

#### **1.6.2.8. Komuniteti Lokal dhe Ceshtjet Social-Ekonomike**

**Gjate ndertimit**, do te merren masa te vecanta nga kontraktori per te funksionuar furnizimi me uje, energji elektrike dhe sherbimi me gaz per banoret ne afersi te rruges. Do te vendoset nje sistem paralajmerues per njerezit nese do te kete nderprerje te sherbimeve ku trafiku lokal dhe kembesor do te devijohet per qellime sigurie nga rreziku. Do te ngrihen kalime qe do te lehtesojne levizjet e fermereve dhe bagetive. dhe ne ato vende, ku rruga e propozuar do te jete nje pengese potenciale per te arritur ne shkolla, dyqane dhe lehtesira te tjera lokale-

Ka shume te ngjare qe te krijohen mundesi punesimi te perkohshem per krahun e punes ne kete zone.

**Gjate shfrytezimit**, rruget lokale qe perdoren nga fermeret, bagetite, studentet dhe kalimtare te tjere do te ribehen. Do te ndertohen rruge hyrese per ne rrugen kryesore. Te gjitha pronat private do te kene akses ne rruget lokale qe do te ndertohen. Do te krijohet akses ne parcelat bujqesore.

Per PPP-te jetesa e te cileve do te preket ose ne drejtim te sigurimit te te ardhurave nga aktivitetet e vogla ekonomike dhe/ose ne drejtim te prodhimit bujqesor, do te jepete asistence per te rimekembur keto aktivite. Parimet qe do te perdoren per te vleresuar llojin e asistences qe do te jepet percaktohet ne Planin e Veprimit mbi Shpronosimet dhe Risistemimet (PVSHR) Per te zvogeluar pasojat e ketyre impakteve negative ndaj PPP-ve, do te vihet ne zbatim PVSHR i cili eshte hartuar posacerisht per Projektin. PVSHR percakton parimet qe do te zbatohen per te vleresuar dhe perlllogaritur llojin e kompensimit dhe asistences qe do t'u jepet PPP-ve. Nje informacion i metejsheem ne lidhje me shpronosimet dhe PVSHR jepet ne Seksionin 1.7.2.

Per shkak te popullsisë dhe aktivitetëve të konsiderueshëm përgjatë rrugës, projekti do të sjellë përmirësim të kushteve ekonomike.

Funksionimi i rrugës pritet që të sjellë një

to markets.

It will also provide a faster access for the people to health and other services.

## **1.7. OTHER EIA RELATED ACTIVITIES**

### **1.7.1. PUBLIC CONSULTATION**

Two rounds of public consultation were held during the environmental surveys carried out by GEOSAT and are mentioned in the 2006 version of the EIA.

The first public consultation was held in spring 2006 after the preparation of the detailed design of the main alignment of the road. The 2006 version of the EIA mentions that outcomes of this consultation have been integrated into the environmental assessment despite the road axis being moved; however public comments were not provided in the 2006 version of the EIA.

After the road alignment relocation, another public consultation was held and specifically addressed the new road axis. This consultation was held in Fier on December 9<sup>th</sup> 2006, with the participation of Central and Local Institutions, as well as Prefecture and Vice Prefecture, Communes and Municipalities, citizens, farmers etc.

The Authority requested that an updated/revised EIA be produced to take into account of the results of the detour alignment deviation out of the AAP territory. As a follow up, on 10<sup>th</sup> November 2010 another public consultation took place in Fieri Prefecture with the participation of all stakeholders representatives. Public comments are provided in this revised version of the EIA.

A summary on issues raised at the latest public consultation can be found in the EIA main report.

A final public consultation will be organised when the revised detail design is ready for presentation. This is foreseen to take place on 2011.

### **1.7.2. LAND ACQUISITION AND RESETTLEMENT ACTION PLAN (RAP)**

Development projects involving land acquisition and involuntary resettlement can generally give rise to severe economic, social and environmental problems. Involuntary resettlement may cause severe long-term hardship, impoverishment, and environmental damage unless appropriate measures are implemented to mitigate these impacts. The RAP provides details on likely impacts resulting from

efekt te rendesishem perfitues mbi ekonomine e zones permes rritjes se aksesit drejt tregjeve.

Do te sigurohet akses me i shpejte per njerezit ne sherbimet shendetesore dhe te tjera.

## **1.7. AKTIVITETE TE TJERA QE LIDHEN ME VNM**

### **1.7.1. KONSULTIMI ME PUBLIKUN**

Gjate studimeve mjedisore te kryera nga GEOSAT, jane mbajtur dy raunde konsultimi me publikun, dhe jane permendur ne versionin e VNM te 2006.

Konsultimi i pare me publikun u mbajt ne pranveren e 2006, pas pergatitjes se projektit te zbatimit per shtrirjen kryesore te rruges. Versioni i VNM te 2006 permend se rezultatet e ketij konsultimi jane integruar ne vleresimin mjedisor, megjithe spostimin e aksit te rruges, por sidoqofte komentet e publikut nuk u paraqiten ne versionin e VNM te 2006.

Pas ripozicionimit te rruges, u organizua nje tjetër konsultim publik, qe i adresojte specifikisht aksit te ri. Konsultimi u be me 9 dhjetor 2006 ne Fier, me pjesemarrjen e institucioneve qendrore dhe lokale, si dhe prefektures e nen-prefektures, komunave, bashkive, qytetareve, fshatareve etj.

Autoriteti kerkoi pergatitjen e nje VNM te perpunuar/rishikuar per te marre ne konsiderate rezultatet rruges devijuese jashte territorit te PAA. Si vijim, ne 10 nentor 2010 nje tjetër konsultime me publikun u be ne Prefekturen e Fierit me gjithë perfaqesuesit e paleve te interesuara. Komentet e publikut jepen ne kete version te rishikuar te VNM.

Permbledhja e ceshtjeve ngritur ne konsultimin e fundit me publikun gjendet ne raportin e VNM.

Nje konsultim final me publikun do te roganizohet kur projekti i detujuar i rishikuar te jete gati per prezantim. Kjo parashikohet te ndodhe ne 2011.

### **1.7.2. PLANI I VEPRIMIT MBI SHPRONESIMET DHE RISISTEMIMET (PVSHR)**

Projektet e ndertimeve, qe perfshijne shpronesime dhe risistemime njerezish pa deshiren e tyre, pergjithesisht shkaktojne problem serioze ekonomike, sociale e mjedisore. Risistemimet e padeshirueshme mund te shkaktojne mundime serioze afatgjata dhe deme mjedisore, nese nuk

this intervention and the mitigation measures that will be put in place to address them.

The issue of title possession on land ownership of people affected by the bypass project has to be addressed to the Expropriation Department of GRD, which deal with these issues. GRD closely cooperates with Communes; as stated by the GRD and Fieri Prefecture representatives at the Public Consultation Meeting of 10th November 2010, it is important that all commune mayors cooperate in identifying persons affected from the project but who do not yet possess the ownership title from the cadastre office or who are in the process of receiving it. Mayors need to be as cooperative as possible to solve these issues in order to quickly clarify all ownership problems in time.

The RAP for the Fier Bypass Project has been prepared in accordance with the Albanian laws as well and the requirements of the EBRD Environmental and Social Policy 2008 and its PRs, particularly PR 5: *Land Acquisition, Involuntary Resettlement and Economic Displacement*.

The RAP specifies the procedures to be followed by the Government of Albania through the GRD and the Ministry of Public Works and Transportation and the actions it will take to properly resettle and compensate affected people. The document provides a description of the land, households and businesses that will be affected by property acquisition. The RAP's objective is to mitigate the negative impacts of land acquisition and displacement, and to set out the entitlements of the different categories of affected persons, paying particular attention to the most vulnerable ones.

The RAP applies to all affected persons regardless whether or not they have a legally registered title to the land. The severity of the impact will however affect the nature of the compensation and other assistance provided.

The RAP document is the result of various phases of consultations, data collection and analyses. The last update of the census has been done by GRD in July 2011 (the previous one was dated 2008) to reflect the current situation in the field. A socio-economic survey has been carried out in the week of July 11; although the results will be integrated at a later stage, all measures to protect the livelihood of affected people are already envisaged in the RAP.

The RAP's requirements are binding to both the Government, through the GRD and the Contractors to be hired to undertake the construction and operation of the Project.

merren masat e duhura per te zbutur keto ndikime. PVSHR jep hollesi mbi ndikimet qe mund te ndodhin si rezultat i kesaj nderhyrjeje dhe masat zbutese qe duhen marre per t'ju pergjigjur ndikimeve negative.

Ceshtja e zoterimit te titullit mbi pronesine e tokes per ata njerez qe preken nga projekti i bypasit duhet te adresohet ne Departamentin e Shpronesimeve te DPR, qe merret me keto ceshtje. Megjithate, sic dihet DPR bashkepunon ngushte me Komunat dhe sic theksuan perfaqesuesit e DPR dhe Prefektures Fier ne Takimin Publik te 10 Nentorit 2010, eshte me rendesi qe gjithe kryetaret e komunave te bashkepunojne per te identifikuar ata persona qe preken nga projekti por qe nuk kane ende titullin e pronesise nga zyra e kadasres ose qe jane ne process te marrjes se tij. Kryetaret e komunave duhet te bashkepunojne sa me shume per te zgjidhur keto ceshtje me qellim te gjitha problemet e pronesise te sqarohen shpejt.

PVSHR per Projektin eBypass-it te Fierit eshte pergatitur ne perputhje me legjislacionin e Shqiperise si dhe me kerkesat e Politikes Mjedisore dhe Sociale te BERZH te vitit 2008 dhe te KP-ve te tij, ne vecanti KP 5: *Shpronesimet, Risistemimet e Padeshiruara dhe Zhvendosjet Ekonomike*.

PVSHR specifikon procedurat qe duhet te ndiqen nga Qeveria e Shqiperise nepermjet DPRR dhe Ministrise se Puneve Publike dhe Transportit dhe veprimet qe ajo duhet te ndermarre per te risistemuar dhe kompensuar sic duhet njerezit e prekur. Dokumenti jep nje p[er]shkrim te tokes, banesave dhe bizneseve qe do te preken nga shpronesimi. Objektivi i PVSHR eshte qe te zvogeloje impaktet negative te shpronesimeve te tokes dhe te risistemimeve si dhe te percaktoje te drejtat e kategorive te ndryshme te personave te prekur, duke i kushtuar vemendje atyre ne gjendje me te dobet.

PVSHR gjen zbatim per te gjithe personat pavaresisht nese ata zoterojne apo jo nje titull pronesie mbi token te regjistruar ligjesisht. Madhesia e impaktit do te ndikojte sidoqofte natyren e kompensimit dhe asistencen tjetere qe mund te jepet.

Dokumenti i PVSHR eshte rezultat i fazave te ndryshme te konsultimeve, mbledhjes se te dhenave dhe analizave. Perditesimi i fundit i censusit eshte kryer nga DPRR ne Korrik 2011 (ai i meparshmi ishte i vitit 2008) per te reflektuar gjendjen aktuale ne terren. Ne javen e 11 Korrikut u krye nje vezhgim ekonomiko-shoqeror. Ndonese rezultatet do te perfrshihen ne nje faze

### 1.7.3. ENVIRONMENTAL MANAGEMENT PLAN

The Environmental Management Plan (EMP) is being prepared as part of the EIA study in order to define the environmental measures and procedures that will need to be adopted by the construction company for the construction of the Scheme and to identify those responsible for their implementation. The EMP will be finalised when the design of the project is completed and the contractors' working methods are known and agreed. It may need to be revised during the course of the project implementation.

The EMP is designed to contain the following information:

- *mitigation measures;*
- *institutional measures to be taken during project construction and operation;*
- *actions needed to implement measures;*
- *environmental monitoring plan.*

The EMP will define the timing, frequency, duration and cost of mitigation measures in an implementation schedule and integrate these actions with the overall project work plan.

The Environmental Management Plan will set out the ways in which the monitoring of the environmental impacts and the implementation of the mitigation measures during the construction phase will be carried out. The monitoring will be focused on the limited number of impacts identified during the EIA to ensure the efficiency of the planned mitigation measures.

te mevonshme, te gjitha masat per mbrojtjen e jeteses se njerezve te prekur jane te parashikuara ne PVSHR.

Kerkesat e PVSHR jane te detyrueshme si per Qverine nepermjet DPRR ashtu dhe per Kontraktoret qe do te zgjidhen per ndertimin dhe administrimin e Projektit

### 1.7.3. PLANI I MENAXHIMIT TE MJEDISIT

Plani i Menaxhimit te Mjedisit (PMM) eshte pergatitur si pjese e studimit te VNM me qellim percaktimin e masave dhe procedurave mjedisore qe duhen adoptuar nga firma e ndertimit per ndertimin e Skemes dhe per te identifikuar ata qe jane pergjegjes per zbatimin e tyre. PMM do te finalizohet kur projektimi do te kete perfunduar dhe do te jene bere te njohura dhe pranuar metodat e punes se kontraktorit. Mund te kete nevojte te rishikohet pergjate vijueshmerise se zbatimit te projektit.

PMM eshte modeluar qe te permbaje informacionin si me poshte:

- *masat zbutese;*
- *masat institucionale qe duhen marre gjate ndertimit e shfrytezimit;*
- *veprimet nevojites ne zbatim te masave;*
- *planin e monitorimit te mjedisit.*

PMM do te percaktoje kohen, frekuencen, kohen e koston e masave zbutese, ne formen e nje programi zbatimi, dhe do te integroje gjithë veprimet e planit te projektit.

Plani i Manaxhimit te Mjedisit do te nxjerre si percaktim gjithë menytrat sipas te cilave do te realizohet monitorimi i ndikimeve ne mjedis dhe zbatimi i gjithë masave zbutese gjate fazes se ndertimit. Monitorimi do te perqendrohet ne numrin e kufizuar te ndikimeve te identifikuar gjate VNM-se per te siguruar efektivitetin e masave zbutese te planifikuar.

