

Road Safety Impact Assessment **Prof.Dr. Shkelqim Zeqo**

The Adriatic-Ionian Road Corridor **is a strategic project** for the Southeast Europe (SEE) and the Balkans region. Its completion will provide **a corridor of high capacity and quality** which will connect Central Europe and Northern Italy with the Ionian peninsula via Slovenia, Croatia, Bosnia and Herzegovina, Montenegro, Albania and Greece). The estimated length of the Road Corridor is about 1,550 km.

The Adriatic-Ionian Road Corridor is part of the indicative extension of the TEN-T Core Network into the Western Balkans, encompassing the Croatian Border – Bar - the Albanian border through Montenegro (Route 1) and the Albanian North-South Road Corridor linking the Montenegro border with the Greek border through Albania (Route 2) figure 1.

The purpose of the Feasibility study for the Adriatic-Ionian Road Corridor is the development of regional transport infrastructure that interconnects the countries within the Western Balkans region and with the EU. The scope of the feasibility study covers the territories of Albania and Montenegro, which share a common goal and vision to further strengthen bilateral relations between the countries through alignment to the EU standards and acquis.

This is not only directly linked to the EU integration process of the SEE countries but is also a condition for improving transport operations by increasing the quality of the transport services and enhancing the overall performance of the transport system. After a long and comprehensive process started at the Berlin Conference in August 2014 and continued at the WB6 Ministers of Transport Meeting in Riga under the framework of the 2015 TEN-T Days, it was agreed that the segment starting from the border crossing R Croatia-Bar-Sukobin / Muriqan-Durres to Kakavija Greek border (North-South national road corridor), including the Adriatic-Ionian Road Corridor/expressway in Montenegro and Albania, is part of the Core Network.

The **overall objective of the assignment** is to prepare a Feasibility study (FS) in Montenegro and Albania, and for potential financing institutions, to appraise the Project and decide on its prospective financing. The FS will be developed in line with international requirements for such studies and the EBRD requirements including compliance with EBRD Environmental and Social Policy and Performance Requirements 2014 as well as the IPA II Pre-Accession Assistance rules.

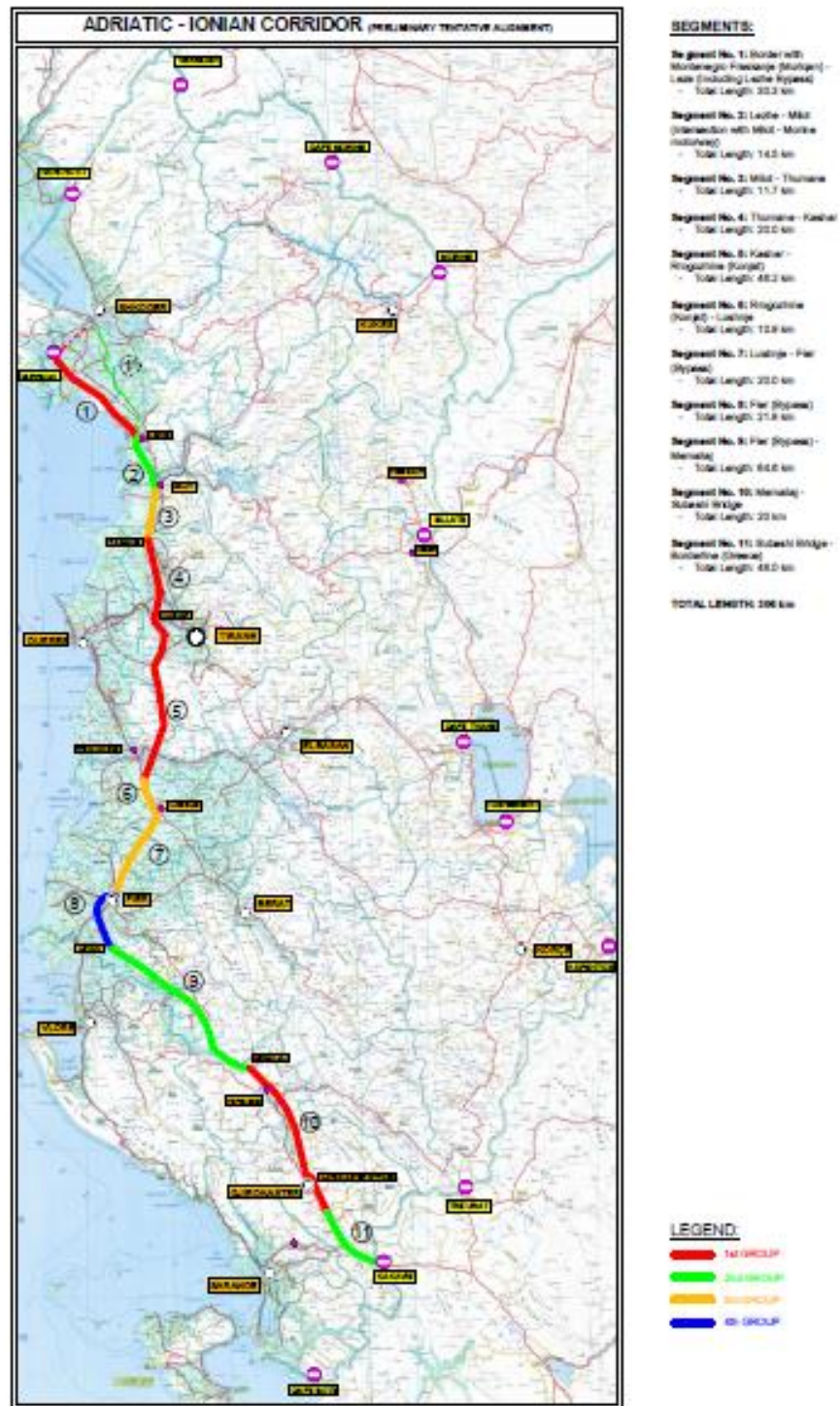


Figure 1. Route 2 from Muriqan (the border with Montenegro) to Kakavi (Greek border)

The main output is the Preparation of the Feasibility Study for the Adriatic-Ionian Road Corridor/**expressway** Route 1 (Montenegro) and Route 2 (Albania). The FS, **will assess the project as a whole** (i.e. entire corridor - both countries) and will also consider the two-tier impact assessment: regional approach of the entire Adriatic-Ionian Corridor with transboundary influence, and national approach for Montenegro and Albania individually.

During **options assessment**, the road safety shall be distinct criteria. The assessment of various options shall follow the criteria set out in Annex I of the EU DIRECTIVE 2008/96/EC on road infrastructure safety management. The road safety impact assessment shall indicate the road safety considerations which contribute to the choice of the proposed solution and also provide all relevant information necessary for a cost-benefit analysis of the different options assessed

However, we will review, inter-alia, the following aspects of the preferred Adriatic-Ionian Road Corridor, Route 2 from Muriqan to Kakavi designs at the level of conceptual design throughout the corridor, and recommend adjustments as appropriate to improve the potential acceptability of this option:

- Route alignment;
- Design standards by road segment;

For the above, we will mainly rely on:

Design standards by road segment. **DIRECTIVE 2008/96/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 19 November 2008 on road infrastructure safety management**

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- **Provide all relevant information necessary for a cost-benefit analysis of the different options assessed.**

Meanwhile the “**TEM Standards and Recommended Practice**” will be based on the evaluation of the 13 sections that appear on the extension of Road 2 , to be fitted with the road safety standard as an autostrada..

During the field observation, note that these standards are needed to be checked for the segments that will be:

- Section to be doubled with total length 112.85 km (1, 2, 11, 13)
- Full new construction with total length 160.75 km (1, 4, 5, 10, 12)
- Sections to be performed according TEM standards with total length 43.20 km (3, 8, 9)
- Sections nothing to do with total length 22.00 km (6, 7, 8), but need to forecast emergency lanes and replacement of roundabouts with interchanging

- These standards were elaborated under technical guidance provided by the countries participating in the Trans-European North-South Motorway Project (TEM), where we enter and road 2 in Albania and were adopted by the Steering Committee of the Project
- The role of these standards is to ensure that the planning and design of the TEM motorway provide for the adequate traffic flow at minimum operating cost, while ensuring harmonized conditions for motorway users, proper level of service, safety, speed and driver comfort over medium and long distances. Specific provisions were formulated in accordance with the following subdivision:
 - a) Essential and uniform throughout the whole length of the TEM. Countries would make every effort within reason to comply with these standards as a minimum: (S);
 - b) Recommended practice: (RP);
 - c) Although their primary application will be to the Trans-European North-South Motorway, these standards are at disposal to other United Nations countries which find them beneficial for the formulation or updating of their national standards.
- The TEM is classified as „motorway”.
- 1.1.2 These standards, therefore, refer to a highway which (S):
 - 1) is specially designed and built for motor traffic and does not serve properties bordering on it;
 - 2) is provided, except at special points or temporarily, with separate carriageways for the two directions of traffic, separated from each other by a dividing strip (central reserve) not intended for traffic or, exceptionally, by other means;
 - 3) does not cross at level with any road, railway or tramway track, or footpath;
 - 4) is specially sign-posted as a motorway.
- In addition to that, the TEM shall:

- (a) be provided with hard shoulders of adequate width, on which no other than emergency stopping is allowed (see paragraph 3.2.4) (S);
- (b) have a sufficient distance between the interchanges (see paragraph 3.3.3) (RP);
- (c) be provided with its own police and maintenance services (RP).

Article 2 of this Directive clarifies the definition of ‘road safety impact assessment’ (RIA), that means a strategic comparative analysis of the impact of a new road or a substantial modification to the existing network on the safety performance of the road network;

And in the article 3 **Road safety impact assessment for infrastructure projects**, this process requires that :

1. Member States shall ensure that a road safety impact assessment is carried out for all infrastructure projects.
2. The road safety impact assessment shall be carried out at the initial planning stage before the infrastructure project is approved. In that connection, Member States shall endeavor to meet the criteria set out in Annex I.
3. The road safety impact assessment shall indicate the road safety considerations which contribute to the choice of the proposed solution. It shall further provide all relevant information necessary for a cost-benefit analysis of the different options assessed.

Whereas Annex 1 deals with tasks that will be undertaken in the continuation of the development of the Feasibility Study :

ROAD SAFETY IMPACT ASSESSMENT FOR INFRASTRUCTURE PROJECTS

1. Elements of a road safety impact assessment:

- (a) problem definition;
- (b) current situation and ‘do nothing’ scenario;
- (c) road safety objectives;
- (d) analysis of impacts on road safety of the proposed alternatives;
- (e) comparison of the alternatives, including cost-benefit analysis;
- (f) presentation of the range of possible solutions.

2. Elements to be taken into account:

- (a) fatalities and accidents, reduction targets against ‘do nothing’ scenario;
- (b) route choice and traffic patterns;
- (c) possible effects on the existing networks (e.g. exits, intersections, level crossings);
- (d) road users, including vulnerable users (e.g. pedestrians, cyclists, motorcyclists);
- (e) traffic (e.g. traffic volume, traffic categorisation by type);
- (f) seasonal and climatic conditions;
- (g) presence of a sufficient number of safe parking areas;
- (h) seismic activity.

In our practice of road safety assessment during the development of the Adriatic-Ionian Corridor's Feasibility Project we will be largely supported in **SEETO Road Safety Inspection Manual** (Revised version – 2016) builds to a large extent on international best practice based on World Road Association (PIARC) manuals/handbooks; the existing SEETO Road Safety Inspection Manual prepared within the project ‘Support for implementing measures for the South East Europe Core Regional Transport Network Multi Annual Plan (MAP) 2008–2012’ and implemented in 2008–2009 by the consortium WYG, Trademco, VV and TRL; and on the direct experience of the authors in SEETO Participants.

In this Manual a package of road safety measures including:

- Road safety impact assessment (RSIA),
- Road safety audit for the design stages of roads (RSA),
- Safety ranking and management of the road network in operation (including management of high-risk road sections) (RAP, BSM and NSM),
- Road safety inspections for existing roads (RSI) and
- In-depth accident analysis (IDS).

The introduced measures are an integrated part of road safety management:

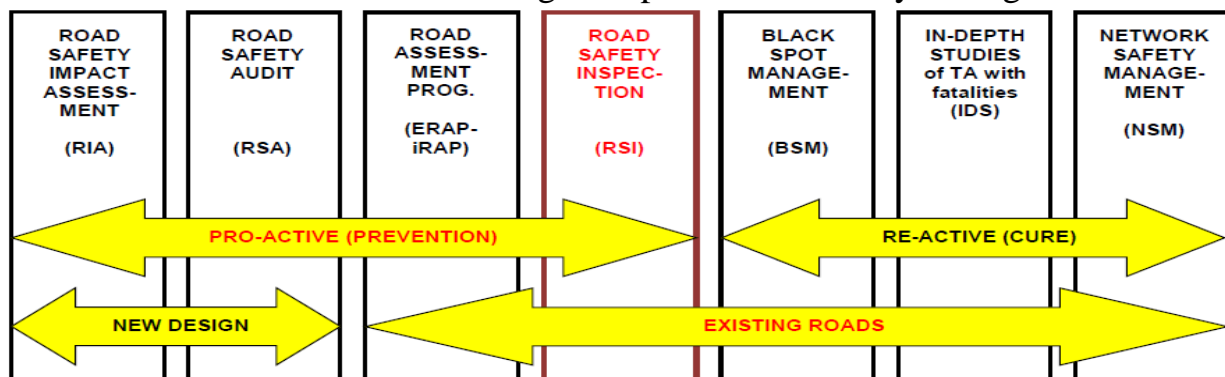


Figure 2. Road safety inspection as part of road safety management

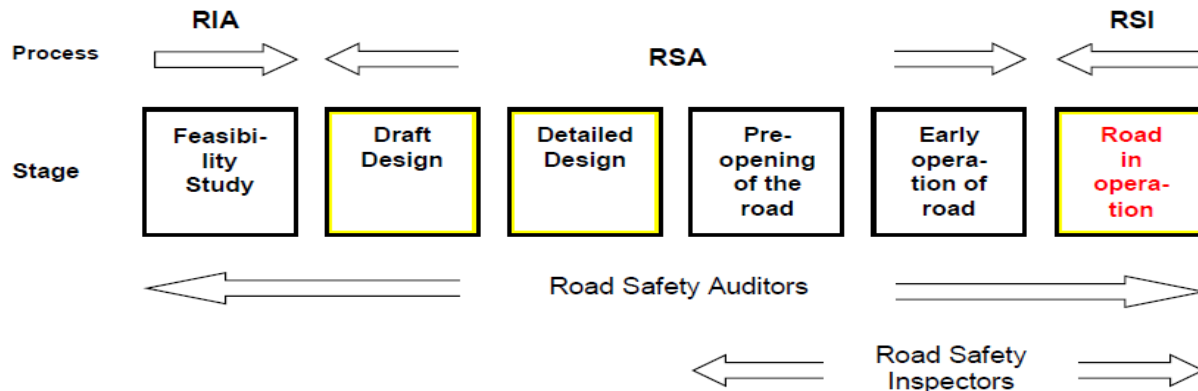


Figure 3. RIA, RSA and RSI – stages and responsibilities

The general design standards adopted will be consistent with current practice in Albania as:

- Standards for Design and Construction of Albanian Roads 2015
- **EC Directive 2008/96/EC Road Infrastructure Safety Management** and the Espoo Convention on Environmental Impact Assessment in a Transboundary Context and in line with legislation and following the stringent requirements of the European Bank for Reconstruction and Development (EBRD) Performance Requirements (2014) and EIB Environmental and Social Principles and Standards (2009). Specific legislative framework for both countries is given in Annex 1.
- The most important strategic document is the “National Strategy for Development and Integration 2015- 2020” (NSDI-II), which presents Albania’s vision for its national social, democratic and economic development over the period 2015-2020, as well as its aspirations for European integration.

The importance of this road is recognised in the following national strategic documents:

- National Strategy for Development and Integration approved with CMD (Council of Minister's Decision) CMD 348, date 11.5.2016 Government of Albania Programme 2013-2017;
- National Plan for European Integration, NPEI 2016-2020
- National Single Strategic Project Pipeline (under revision)

- National Transport Strategy 2016-2020 (approved by Council of Ministers Decree November 2016).
- Albanian National Transport Plan (first review) 2011-2016;
- Five Year Multi Annual Plan SEETO, 2013;
- The Regional Balkans Infrastructure Study (REBIS) Update September 2015.

Grant title- Feasibility study for Adriatic-Ionian Highway/Expressway (Route 1 and Route 2)

Grant code - WB14-REG-TRA-01

Beneficiary / Promoter - Ministry of Transport and Infrastructure of Albania

Lead IFI(s) European Bank for Reconstruction and Development (EBRD)

Client European Commission, DG NEAR

Project title: Horizontal Support to Coordination with International Financial Institutions (IFIs) and bilateral donors in the Western Balkans

Project number: EuropeAid /134120/C/SER/MULTI

Contract number: 2014/340-622 & 2016/372-215

Project Director and Team Leader: Wim Verheugt / Falko J Sellner

Project office: Mott MacDonald / IFICO Regus Building, Place Marcel Broodthaers 8 box 5, 1060 Brussels, Belgium

The proposed team of experts is presented in the table below:

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- 2 Aliko Tsarouchi Deputy PM Planning/Lead Economic & Financial expert Senior 1 260
- 3 Vasiliki Antoniou Deputy PM Engineering Senior 1 190
- 4 Pepi Dimopoulou Lead Traffic Planner Senior 1 190
- 5 Mirko Bajic Traffic Modelling Expert Senior 1 160
- 6 George Paraskevopoulos Lead Environment Expert Senior 2 160
- 7 TBA Lead Social Expert Senior 1 70
- 8 Eva Athanasaki PPP Expert Senior 1 40
- 9 Seraphim Kapros Regional Development Expert Senior 1 60
- 10 George Yannis Road Safety Expert Senior 1 80
- 11 Iosif Karousos CBA expert Senior 1 100
- 12 Rezar Kumbaro Senior Road Engineer 1 (ALB) Senior 1 200
- 13 Faruk Kaba Senior Road Engineer 2 (ALB) Senior 1 120
- 14 Rezart Arkaxhiu Road Engineer 3 Junior 50
- 15 Gzim Bimbli Senior Bridge Engineer Senior 1 130
- 16 Ervin Paci Senior Tunnel Engineer ALB Senior 2 120
- 17 Ylber Muceku Geotechnical expert Senior 2 120
- 18 Adrian Bulku Senior Land Surveyor Engineer Senior 2 110
- 19 Shkëlqim Zeqo Road Safety Expert Senior 1 60
- 20 Spartak SInojmeri Environment Expert ALB Senior 2 130
- 21 Alfred Mullaj Flora/fauna and Biology expert Senior 2 45
- 22 Petrit Harasani Agriculture expert Senior 2 25
- 23 Evis Pano Social Expert ALB Senior 2 130
- 24 Shkëlqim Daja Geology Engineer Senior 2 100
- 25 Fisnik Kruja Hydrology /Drainage/Hydraulic Engineer Senior 2 250
- 26 Kujtim Proseku Electrical/Electrical lines Senior 2 90
- 27 Bujar Drishti GIS Expert Senior 2 60
- 28 Entela Koja Landscape expert (ALB) Senior 2 70
- 29 Bardhyl Qilimi Land use expert Senior 2 30
- 30 Ivana Stevanovic Senior Road Engineer 1 (MNE) Senior 1 100
- 31 Danko Gavrilovic Senior Road Engineer 2 (MNE) Senior 2 100
- 32 Milutin Perišić Structural Engineer (MNE) Senior 1 100
- 33 Damir Peco Senior Bridge Engineer MNE Senior 1 50
- 34 Vera Pilipovic Bridge/structures Engineer MNE Senior 2 40
- 35 Jovo Kovacevic Senior Tunnel Engineer MNE Senior 2 70
- 36 Mirjana Vukicevic Geotechnical expert MNE Senior 2 80
- 37 Radan Jevtic Senior Land Surveyor Engineer MNE Senior 2 80
- 38 Danijel Vuckovic Road Safety Expert MNE Senior 1 40
- 39 Dragan Milic Environment Expert MNE Senior 1 90
- 40 Aleksandra Mladenovic Flora/fauna expert Senior 2 50
- 41 Ivana Bjeđov Biology expert Senior 2 50
- 42 Ljubomir Životić Agriculture expert Senior 2 50
- 43 Aleksandar Trifunovic Air/noise modeller Junior 80
- 44 Nina Valcic Social Expert MNE Senior 1 80
- 45 Milan Radulovic Geology/Hydrogeology Expert MNE Senior 2 80
- 46 Nebojša Jakšić Hydrology /Drainage Engineer MNE Senior 1 80
- 47 Miodrag Trifunovic Hydraulic Engineer MNE Senior 1 20
- 48 Miloš Popovic Electrical/Electrical lines MNE Senior 2 20
- 49 Jasna Stojiljkovic-Milic Spatial Planner Senior 2 50

