



more than 100,000 houses and other buildings in Bosnia and Herzegovina (May 2014) were no longer fit to use and that over a million people had been cut off from clean water supplies.



**UNECE and EUSDR PA1b
WORKSHOP**
How to develop resilient infrastructure (Global SDG 9)
Thursday and Friday, 16-17 November 2017
Ljubljana, Slovenia

Bosnia and Herzegovina...

...is the heart shaped land that lies in the heart of southeast Europe. It is here that eastern and western civilizations met, sometimes clashed, but more often enriched and reinforced each other throughout its long and fascinating history...

*„The EU - flood hazards may increase in coming years as a result of climate change, and a recent report found that the frequency of severe flooding across Europe is set to double by 2050 — and could result in a five-fold increase in annual economic losses from the floods. **The EU spent about \$6.7 billion on average for flood-related costs between 2000-2012.** But based on the report's rainfall projections, that number will likely increase to \$32.1 billion by 2050.“*

Total length of the road network is **24,796 km**:

- 3,970 km main roads (16.0%); **128,7 km** of which classified as Motorways (120 km of motorways and 28.7 km of roads reserved for motor traffic) which meet high quality standards (2x2+1 emergency lane),
- 4,611 km secondary / regional roads (18.6%) and
- 14,200 km other / local roads (57.3%)

how to better plan, build and maintain resilient infrastructure?

Out of 1.030,389 km of railway lines, 91.48% are single-track and 8.52% are double-track lines. The entire network is based on a standard gauge (1,435 mm) and the majority is single track (92%). More than 85% of the network is allowing maximum loads of 22.5 tonnes per axle or 8.0 Tonnes per linear meter. Around 76% of the network is electrified with a mono-phase 25kV, 50HZ AC system.

Bosnia and Herzegovina...

...situated at the heart of the Balkan Peninsula, Bosnia and Herzegovina encompasses both Mediterranean and Alpine climates, landscapes and henceforth some of the richest flora and fauna found in Europe. ..

Continued efforts of the European Union aimed at integrating the countries of the Western Balkans into the EU are important for regional cooperation. The Berlin process has provided particular impetus to continue with the reform agenda. Regional cooperation has been significantly improved, resulting in benefits for economic and social development that are already visible.

Creating competitive, reliable and safe TEN-T network is one of the common goals we are committed to achieve.

2016-2030 Framework Transport Strategy was adopted mid-2016. The Framework Transport Strategy serves as the guideline for the development of the transport sector in Bosnia and Herzegovina in the following 15 years, describing in detail the implementation of the Transport Policy as of today and until 2030. It sets out the procedures and programs to be undertaken (administrative reforms, regulatory alignment, capacity building and the investment programs), as well as the distribution of responsibilities, timeframe and key performance indicators.

Bosnia and Herzegovina...

...the currency is strong, inflation is low, the country is not heavily indebted, and much of the infrastructure has been reconstructed. The country is focused on cutting back its bureaucracy, privatize public companies and attract foreign investments....

The **WB6 initiative** provided further support to transport development as the economic generator of the region. Establishment of the Core Network and modification of the Comprehensive Network in the Western Balkans provided a structure for more concentrated development of infrastructure in the region with the aim of enhancing connectivity and mobility and joining WB with the EU TEN-T network.

Updating **REBIS** will develop a Priority Action Plan for enhancing the efficiency of the indicative extension of the TEN-T Comprehensive Network to the Western Balkans, by developing a transport demand model, identifying the main corridors/routes on the TEN-T Comprehensive Network in the Western Balkans based on the EU TEN-T criteria, analysing the physical and non-physical barriers to the efficient operation of the Network and identifying potential efficiency-enhancing investments and measures.

The **Flagship Axis Initiative** aimed to identify physical and non-physical barriers to selected multimodal axes (Corridors/Routes) from the TEN-T Comprehensive Network in Western Balkans, focusing on development of cost efficient measures for reducing travel times and transport costs.

Bosnia and Herzegovina...

...there are three main 'peoples' that inhabit this country: Bosniaks, Croats, and Serbs. Despite different religious and/or ethnic background their language, traditions and culture are more similar than not...

In order to objectively assess improvements in connectivity and corridor performance, a reliable measurement and monitoring system is essential.

Over a year ago, we embarked on the first pilot in the Western Balkans for **corridor performance monitoring**. In collaboration with the World Bank and under support from SEETO and EC, we are piloting a corridor performance monitoring system that will systematically and consistently measure travel time, cost and reliability along Corridor Vc.

We hope that this monitoring system will not only identify bottlenecks along the Corridor including border crossings; it will help in explaining the reasons for the delays so that they can in turn be addressed.

This pilot can then be extended to other corridors in the region allowing for benchmarking and providing clear opportunities for improving performance.



Bosnia and Herzegovina...

...much of Bosnia and Herzegovina is mountainous. The long chain of the Southern Alps – the Dinaric Alps - stretches from northwest Slovenia through the heart of Bosnia and Herzegovina and into Montenegro, and finishes in Albania. ..

„A transport system that cannot withstand the emerging impacts of climate change will prove burdensome, impose high costs for repair, and cause significant economic losses. This requires a better understanding of existing vulnerability assessment tools, cost-effective engineering measures and technologies all designed to ensure robustness, redundancy, and resilience are designed into road networks.„ IRF

Improving Transport Network Resilience in the Western Balkan to climate change

Building resilience of the Core/Comprehensive Network

Sub-action 1 – Carry out scoping phase of developing Network Resilience Plan

The region is lacking on actions needed to diagnose systemic weaknesses and adapt transport systems to withstand expected climate impacts such as changes in rainfall, flooding, and sea-level rise as well as extreme weather events. This measure was agreed by the regional participants through the World Bank Trade and Facilitation Action Plan at the Paris Summit. The target for 2017 was only to carry out the scoping phase on the region's needs to improve their practices on transport resilience.

Bosnia and Herzegovina...

...some northern area share part of the long and agriculturally rich plains that extend from Hungary, through Slavonia and Croatia into the fertile fields of the Sava and Drina River valleys that flow into the Black Sea basin...

EBRD has chosen TA consultant for CC resilience in FBiH, mainly in terms of institutional building.

Within the loan arrangement with the EBRD, and in order to increase the resilience to climate changes in the countries in which the EBRD operates, the Bank systematically includes the assessments of climate risks and adaptation measures into its investment projects.

The aim is to reduce the long-term risks and to increase the resilience by improving practices and by investing into measures and technologies which are better adapted to the changing and unstable climate. As a response to the abovementioned issues prevailing in the road sector of the Federation of BiH, the EBRD, through the technical assistance as support to the Federal Ministry of Transport and Communications, helps to assess climate risks, establish appropriate institutional structures and to formulate the Strategy on adaptation to climate changes in road sector.

Bosnia and Herzegovina...

...Herzegovina hosts the highest and wildest part of this mountain range, which for centuries provided the population protection from Roman invaders, and which slowed the Ottoman conquest of Bosnia...

Objectives:

support to

- establish an appropriate institutional framework for assessing, managing and informing on climate risks on the road network
- assessing climate risks on the road network and mapping specific vulnerabilities
- preparing the strategy on adaption to climate changes
- if necessary, in implementing the climate changes resilience measures within the framework of the relevant investment project



Bosnia and Herzegovina...

...there are three 'official' languages spoken in Bosnia and Herzegovina: Bosnian, Croatian, and Serbian. For the local people there is a great importance attached to the name of the language...

The Consultant will be expected to submit the following reports:

- Initial report to be prepared after initial review
- Draft Interim report, including database for collecting meteorological data and data with respect to maintenance and synthesis of climate changes projections, to be prepared after 14 weeks
- Final Interim report, two weeks from receiving the comments from the EBRD and the Beneficiary
- Draft Final report which includes all above mentioned, as well as vulnerabilities and the Adaptation strategy, to be prepared after 38 weeks
- Final workshop on which the Final report will be presented
- Final report, two weeks from receiving the comments from the EBRD and the Beneficiary.

With the support from international financial institutions, activities are carried out to develop studies that will define the impact of climate change on the conditions and the activities on the main roads /comprehensive network



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Thank you



BOSNIA AND HERZEGOVINA



Ministry of Communications and Transport

TRG BiH 1

71000 Sarajevo

Bosnia and Herzegovina

transport@mkt.gov.ba

zoran.andric@mkt.gov.ba