REGIONAL RAIL CONNECTIVITY WORKSHOP – presentation

Belgrade, 3 – 4 October 2019

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BOŠKO RISTIĆ, BHRPC
Institutional framework of the Bosnia and Herzegovina Railway System;
B&H transport strategic documents;
Bosnia and Herzegovina Railway Network
Technical characteristics of the Railway Network;
Number of employes;
Transport volume (2017, 2018);
Reconstruction and modernisation projects in 2018;
Future infrastructure projects;
B&H railways key economic growth potential
Connectivity within the Danube Region;
Connectivity within the Pan European Corridors
Future connection to the Mediterranean Transport Corridor
Conclusions & recommendations
INSTITUTIONAL FRAMEWORK OF THE BOSNIA AND HERZEGOVINA RAILWAY SYSTEM

- BH MoCT – Ministry of Communication and Transport of Bosnia and Herzegovina  
  www.mkt.gov.ba
- BH RRB- Regulatory Railway Board of Bosnia and Herzegovina
- BHRPC-Railway Public Corporation of Bosnia and Herzegovina
- MTRS - Ministry of Transport of Republic of Srpska  
  www.vladars.net
- FMoTC- Ministry of Transport and Communication of Federation of Bosnia and Herzegovina  
  www.fmpik.gov.ba
- RRS- Railways of Republic of Srpska
- RFBIH - Railways of Federation of Bosnia and Herzegovina
B&H TRANSPORT STRATEGIC DOCUMENTS

FRAMEWORK TRANSPORT POLICY OF BOSNIA AND HERZEGOVINA FOR THE PERIOD 2015 - 2030 (Official Gazette of BiH 62/15)

- Vision
- Objectives
- Regional cooperation and EU integration of BiH
- Promoting sustainable economic and social development

FRAMEWORK TRANSPORTATION STRATEGY OF BOSNIA AND HERZEGOVINA (Official Gazette of BiH 71/16)

- Infrastructure
- Services
- Regulatory issues
- Intermodal transport
TECHNICAL CHARACTERISTICS OF THE RAILWAY NETWORK

• Railway Network of B&H is 1048 km long, with standard gauge of 1032 km;
• Railway Network is single track, except of the 87 km of double track;
• 776 km of the Network is Electrified with system 25kV and 50Hz;
• Total number of the railway stations is 103, 52 stations with full interlocking system and 51 stations with simple interlocking system;
• Total number of the level crossings 491;
• Gauge Profile UIC GA and GB;
• Maximum speed Vmax=120km/h;
• Axle load D4 (22.5 t/ax) and C3(20 t/ax)
<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td>OPERATIONS</td>
<td>3152</td>
<td>2854</td>
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<tr>
<td>INFRASTRUCTURE</td>
<td>2273</td>
<td>2147</td>
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<tr>
<td>OTHER</td>
<td>698</td>
<td>643</td>
</tr>
<tr>
<td>TOTAL</td>
<td>6033</td>
<td>5644</td>
</tr>
<tr>
<td>TRANSPORT VOLUME</td>
<td>2017</td>
<td>2018</td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>-------</td>
<td>-------</td>
</tr>
<tr>
<td>NTKM (Mill.)</td>
<td>1.130</td>
<td>1.190</td>
</tr>
<tr>
<td>TRANSPORTED GOODS (M t)</td>
<td>13.4</td>
<td>13.7</td>
</tr>
<tr>
<td>PKM (M pkm)</td>
<td>29.3</td>
<td>39.8</td>
</tr>
<tr>
<td>TRANSPORTED PASSENGERS (P)</td>
<td>472.069</td>
<td>549.640</td>
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## PROJECT DESCRIPTION

<table>
<thead>
<tr>
<th></th>
<th>PROJECT DESCRIPTION</th>
<th>M€</th>
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<tbody>
<tr>
<td>1.</td>
<td>Signalling and Telecommunications System on the section Doboj – Banja Luka</td>
<td>19,1</td>
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<tr>
<td>2.</td>
<td>Reconstruction of the track section Sarajevo – Bradina and tunnel „Ivan“</td>
<td>25,4</td>
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<td>3.</td>
<td>Interlocking stations system on the section Sarajevo – Bradina</td>
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<tr>
<td>4.</td>
<td>Procurement and installing of the optical fiber from Bradina station to the Čapljine border crossing station</td>
<td>2,4</td>
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</table>
FUTURE INFRASTRUCTURE PROJECTS

Indicative Extension of the TEN-T Comprehensive/Core Network to the Western Balkans

Priority investments

Rail and Seaport Projects

Seaport Projects for Preparation
Rail Projects for Preparation
Core Rail Network
Comprehensive Rail Network

EEETO Network Development Plan 2016
<table>
<thead>
<tr>
<th>Railway section</th>
<th>L(km)</th>
<th>Status of technical documentation</th>
<th>ŽRS</th>
<th>ŽFBiH</th>
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<tr>
<td><strong>Corridor Vc</strong></td>
<td></td>
<td></td>
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<tr>
<td>Šamac-Doboj</td>
<td>63</td>
<td>Main design (M/D) and Feasibility study (F/S) for overhaul</td>
<td>60</td>
<td>-</td>
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<tr>
<td>Doboj–Maglaj</td>
<td>2x23</td>
<td></td>
<td>40</td>
<td>10</td>
<td>50</td>
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<tr>
<td>(2 tracks)</td>
<td></td>
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<td></td>
<td></td>
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<tr>
<td>Maglaj–Jelina</td>
<td>2x63,7</td>
<td>Conceptual design and Prefeasibility study for overhaul, M/D and F/S is planned by the EU IPA 2017</td>
<td>-</td>
<td>120</td>
<td>120</td>
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<tr>
<td>(2 tracks)</td>
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<td></td>
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<td></td>
<td></td>
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<tr>
<td>Jelina-Zenica</td>
<td>9</td>
<td>Main design and Feasibility study for overhaul</td>
<td>-</td>
<td>10</td>
<td>10</td>
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<tr>
<td>Zenica-Podlugovi</td>
<td>55,2</td>
<td>Conceptual design and Prefeasibility study for overhaul, Preparing of the M/D and F/S is planned by the EU IPA 2017</td>
<td>-</td>
<td>54</td>
<td>54</td>
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<tr>
<td>Podlugovi-Sarajevo</td>
<td>24</td>
<td>Main design and Feasibility study for overhaul</td>
<td>-</td>
<td>25</td>
<td>25</td>
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<tr>
<td>Visoko-Konjic (solving the bottleneck of tunnel Ivan)</td>
<td>66</td>
<td>Conceptual design and Prefeasibility study for new railway section is finished. Preparing of the M/D and F/S is planned by the EU IPA 2017</td>
<td>-</td>
<td>740</td>
<td>740</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td></td>
<td>100</td>
<td>959</td>
<td>1059</td>
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<table>
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<th>Railway section</th>
<th>L(km)</th>
<th>Status of technical documentation</th>
<th>ŽRS</th>
<th>ŽFBiH</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Route 9a (parallel to Corridor X)</strong></td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>BanjaLuka-Prijedor-Novigrad-Dobrljin</td>
<td>110</td>
<td>Preparing of the Conceptual design and Prefeasibility study for overhaul and signalization was planned by the EU IPA 2017</td>
<td>105</td>
<td>-</td>
<td>105</td>
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<tr>
<td>Doboj-Petrovo-Novotuzla</td>
<td>60</td>
<td>Conceptual design and Prefeasibility study for overhaul, electrification, t/c and signalization are finished. Preparing of the M/D and F/S is planned by the EU IPA 2017</td>
<td>38</td>
<td>45</td>
<td>83</td>
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<tr>
<td>Živinice-Caparde-Zvornik (incl. tunnel Križevići)</td>
<td>45</td>
<td>Conceptual design and Prefeasibility study for overhaul, electrification, t/c and signalization are planned by the EU IPA 2017. Preparing of the M/D and F/S is planned by the EU IPA 2019</td>
<td>54</td>
<td>36</td>
<td>90</td>
</tr>
<tr>
<td>Brčko-Banovići</td>
<td>87,3</td>
<td>Conceptual design and Prefeasibility study for overhaul, electrification, t/c and signalization are finished. Preparing of the M/D and F/S is planned by the EU IPA 2017</td>
<td>5</td>
<td>131</td>
<td>136</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td></td>
<td>199</td>
<td>212</td>
<td>411</td>
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Corridor Vc is the shortest and the most efficient connection between Mediterranean ports and Central Europe;

Modernization and reconstruction of the existing (Corridor parallel to Corridor X) and construction new rail lines (Čapljina-Trebinje-Nikšić as a part of Adriatic Ionian corridor) of the BH Railway Network could be major job creation source as well as economic growth accelerator;

Future connections to the Mediterranean corridor as a key of the economic potential
The importance of the Vc corridor would be increased if the container transport of goods at the port of Ploce were diverted to the railway. Infrastructure managers would greatly benefit from collecting fees for transit of goods across BiH.

Investments in the modernization and reconstruction of the Corridor Vc need to be continued, especially in the sections Samac-Doboj, Doboj-Maglaj, Maglaj-Zenica and Zenica-Sarajevo.

The main infrastructure challenge of the Vc corridor is the 'Bradina Ramp', with its rise of 23-25 ppm. This problem should be mitigated by the construction of a new 66km long Visoko-Konjic section, where the slope would go up to a maximum of 15 ppm.

The preliminary estimate of the necessary funds for the realization of this investment is about 740 Mil.Euro.

Preliminary analyzes provide a solution that is not cheap (a large number of bridges, viaducts, tunnels), and which indicate the need to purchase special system locomotives.

Tender procedures are underway to select a Designer for the Main Design and Feasibility Study.

Route 9a, geographically, can be viewed as an alternative to the RFC 10 rail freight corridor.

The Brcko District Assembly has made a decision to fund key improvements to the Brcko Port infrastructure that will benefit the entire BiH economy and its citizens. This is an important step in the implementation of the Connecting Agenda in BiH through the creation of a multimodal transport corridor on the Sava River, a priority river navigation linking BiH with Croatia and Serbia, and subsequently with the entire EU.

Significant funds are needed to rebuild the Doboj-Tuzla, Tuzla-Zvornik and Tuzla-Brcko lines.
The Una railway is a railway that connects Zagreb and Split through the territory of BiH and extends along the Una River in one part.

In the pre-war period, one and a half million passengers and four million tons of cargo were carried annually on this line.

Most of the freight traffic was on the Una railway, because it was a shorter and lowland route of the railway that allowed higher speeds than the Lika railway.

There is interest in railway companies in BiH and also in the Croatian ports of Split, Šibenik, Zadar for the transport of goods by the 'Una' railway.

It is also possible to transport oil and oil products from / to Sisak Refinery to Croatian ports.

The distance between Zagreb and Split by the 'Una' railway is about 35km shorter than the "Lika" railway line and about 60 km from the Sisak refinery.

In addition to the reduced travel time to the Adriatic Sea and back, the Una railway is also interesting from the aspect of tourism development as part of the economy of that region.

UNECE by agreement on the Main International Rail Lines (AGC) and the Agreement on Important International Lines for Combined Transport and Related Installations (AGTC), the Zagreb-Sunja-Volinja-Dobrljin-Bihać-Ripač-Strmica-Knin-Split railway line has been given the international designation as strip number E751.

The Čapljina-Trebinje-Nikšić railway is part of the planned Adriatic-Ionian transport corridor, the goals of which are expressed through the "Adriatic-Ionian Initiative". The primary objective of this initiative is to build links with the trans-European corridors.

It is expected that the construction of this railway line will be extremely important for the whole region, i.e. that it will contribute to sustainable regional development (based on tourism and agriculture) and accelerate the development of intermodal transport in the region.
CONNECTIVITY WITHIN THE DANUBE REGION THROUGH RIVER PORT BRČKO
CONNECTIVITY WITHIN THE PAN EUROPEAN CORRIDORS
FUTURE CONNECTION TO THE MEDITERRANEAN TRANSPORT CORRIDOR
CONCLUSIONS & RECOMMENDATIONS

• Rehabilitation and modernization of the existing railway network and construction of new sections;
• Improving of the regional and international cooperation through corridor connectivity and intermodality;
• EU integration with a view to obtaining candidate status that would provide access to funds for the design and construction of railway infrastructure
• Implementation of the Transport Community Treaty
• Opening up the rail market and establishing competitiveness for the benefit of the state, service providers and users
Thank you for your attention

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