Technical Assistance to Connectivity in the Western Balkans
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SERBIA

Revision of the Analysis of Options and Update of the Cost Benefit Analysis including sensitivity tests on the Niš - Belgrade railway in Serbia, section Stalać - Djunis

Partners:
- Ministry of Construction, Transport and Infrastructure of Serbia (MoCTI)
- Serbian Railway Infrastructure JSC (SRI)
- European Investment Bank (EIB)

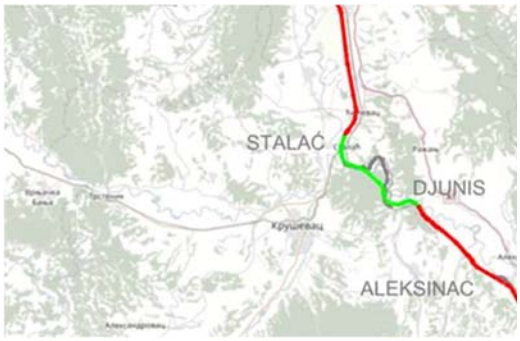
Budget of Technical Assistance:
- Euro 70,000

EU contribution[1]:
- As above (100%)

Technical Assistance provided by:
- CONNECTA (Technical Assistance to Connectivity in the Western Balkans)

Transport

Originally constructed in 1884, the Belgrade - Niš railway line is the oldest in Serbia and an important part of railway Corridor X. In November 2016, the IPF Consortium completed a feasibility study and preliminary design to reconstruct and modernise the Stalać - Djunis section. The alignment deviates from the route of the existing railway line [to allow for] new double track with speeds of up to 160 km/h.



Overview map – existing and new alignment on Stalać - Djunis section

An application under WBIF Investment Grant round IV to construct this new section was rejected due to a need for further elaboration of the defined technical solution. The IPF3 team were asked to update the original option analysis to answer concerns regarding potential underestimation of the tunnelling costs in the preliminary design and review the economic justification and financial affordability of such an expensive solution for a relatively small section of the corridor in the context of the wider investment needs of the network. The expiration of the contract with IPF3 meant that, in the end, only a benchmark analysis for tunnel construction costs was submitted.

CONNECTA was asked to prepare a revised option analysis to include a sensitivity and risk analysis of the tunnelling costs for the Stalać - Djunis section and an updated cost benefit analysis comparing rehabilitation of the existing line with two upgrading options.

The **overall objective** was to carry out an up-to-date comparison of the main alternatives - for speed to 160 km/h and 120 km/h - of the entire Belgrade - Niš line, predominantly in economic terms, in order to review/reconfirm the preferred investment option.

Results achieved by the TA:

The analysis, which was carried out along the entire Belgrade - Niš railway line, produced the following deliverables:

- Traffic assessment, providing traffic forecasts for all alternative options;
- Cost benefit analysis in both economic and financial terms, considering Capex and Opex, operation benefits and a residual value at the end of the appraisal period;
- Sensitivity and risk analysis including, among others, the risk related to the tunnelling costs for the Stalać - Djunis section. This risk refers to the geological uncertainties associated with the new tunnels might increase costs during construction;
- Option analysis of the two main investment alternatives; and
- Recommendation of the preferred option in light of the report findings.

[1] EU contribution concerns only Technical Assistance services for project development

Key recommendations - further actions:

- No further actions recommended as CONNECTA work on this sub-project was suspended.

Key Conclusions:

- Both investment alternatives result in modal shift from road to rail; and
- According to the option analysis, Alternative 1 corresponding to the upgrade of the line to serve speed up to 160 km/h is the optimal one.

Existing railway track, line Stalać – Djunis, by river Južna Morava

Footnote:

The work on this project was almost completed with the final inception report, the cost estimations and traffic forecasts report, as well the methodology and draft results of the cost benefit analysis and the option analysis submitted to all stakeholders. At a meeting held on 12 August 2020, the Serbian authorities informed the participants that the construction of the railway will be done using Chinese funds. As a result, CONNECTA services, which are closely connected to EIB, are no longer required and CONNECTA suspended its work on the sub-project from the date of that meeting.

Benefits expected due to Technical Assistance:

- Enable the Serbian authorities to further apply for an investment grant under WBIF;
- Enable the Serbian authorities to make a formal request to EIB for financing execution of the works on the Stalać - Djunis section;
- Economic justification of the proposed upgrading of the speed to 160 km/h; and
- Subsequent construction of an upgraded and modernised line Belgrade - Niš.

Impacts anticipated:

- Eventual provision of faster travel times on the Belgrade - Niš line;
- Modal shift to environment friendly and safer transport modes; and
- Contribution to the reduction of emission of climate change gases.