

## Study of the International Traffic with North-South Direction on Danube Bridges



The study was commissioned by the Ministry of Transport at the end of 2007. Its aim was to obtain data and models of traffic on future Danube bridges. The results will be used by the Directorate of Road Infrastructure Planning and Control at the MT in the decision making process related to planning the development of road infrastructure.

Transit freight traffic is essential for bridges on the Danube, therefore the survey is focused on the study and prediction of the growth and redistribution of transit cargo flows.

The classification of the benefits from the construction of the bridges along the Danube is based on two main aspects - increasing the mobility of people and goods, and regional development.

The specialized traffic modeling software *Magelan*, developed by the Transport Research Institute was used for the modeling of the transport network and traffic assignment. The modeling included specific scenarios for infrastructure development, in particular at the border crossing with Romania, as well as the different options for toll-crossing. Traffic

assignment was performed in each scenario, and the output of this are forecasts for passenger and cargo traffic for the different bridges. Two options have been considered, with 7 and 4 bridges, respectively.

Analysis of available data and the results showed that the bulk of traffic flows uses three connection points - Ruse, Vidin and Silistria. Construction of the bridges Silistria - Calarasi, Orlyahovo - Bechet, and Nikopol - Turnu Magurele, appears to be the most cost-effective in the short term. Their realization will increase the cross-border accessibility and will help the development of the regional economy and the social and economic relations of Bulgaria and Romania.

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