



*This project
is supported by:*

The NATO Science for Peace
and Security Programme

Seismic Upgrading of Bridges in South East Europe by Innovative Technologies (ref. 983828)

Scientists from Germany, the former Yugoslav Republic of Macedonia¹, Albania, Bosnia & Herzegovina and Serbia are cooperating in developing an advanced method for the seismic upgrading technology of bridges in Southeastern Europe. Most of 15000 existing bridges in the region, which must guarantee continuous functionality of the road networks, are constructed as non-seismic and are older than 40 years. They are highly vulnerable to seismic loads and require immediate, reliable and cost-effective seismic upgrading. Major objectives of the project comprise the development and testing of a new bridge seismic isolation system integrating innovative concepts of Multi-Level Multi-Directional Seismic Energy Dissipation and Globally Optimized Seismic Energy Balance (ML-GOSEB-System), as the establishment of a new regional seismic innovation network (ReSIN) for the development and promotion of advanced technology for seismic protection of structures.

Being in its beginning, the initial focus of the group is the compilation of bridge inventory data in all the participating countries and selection of prototype bridges for the study. Test models of bridge prototypes with and without the new ML-GOSEB system have started and for the following months the development of the method for the seismic upgrading technology is anticipated. Tests of bridge models on seismic shaking table will also take place, with the design of Multi-Level Multi-Directional (ML-MD) hysteretic energy dissipation devices. For the implementation of the results, end-users in Macedonia comprise: 1) the Government in General and 2) the Ministry of Environment and Physical Planning; in Albania: 1) the Ministry of Public Works, Transport and Telecommunication, and 2) the Ministry of Environment, Forest and Water Administration; in B&H: 1) the Federal Ministry of Transport and Telecommunication, and 2) the Ministry of Environment and Tourism; and in Serbia: 1) the Government in General, and 2) the Provincial Secretariat for Architecture, Planning & Civil Engineering.

Project Co-Directors:

- Prof. Dr. Uwe Dorka, University of Kassel, Kassel, Germany (NPD)
- Prof. Dr. Danilo Ristic, IZIIS, Skopje, FYR Macedonia¹ (PPD)
- MSc. Arian Lako, Civil Engineering Faculty, PUT, Tirana, Albania
- Prof. Dr. Damir Zenunovic, FMGCE, Tuzla, Bosnia & Herzegovina
- Prof. Dr. Radomir Folic, Faculty of Techn. Sciences, Novi Sad, Serbia

Approval Date: 15/12/2009

Effective Start Date: 08/02/2010

Duration: 3 years; expected completion by February 2013

Web site: <http://isubridge.vacau.com>

¹ Turkey recognises the Republic of Macedonia with its constitutional name.