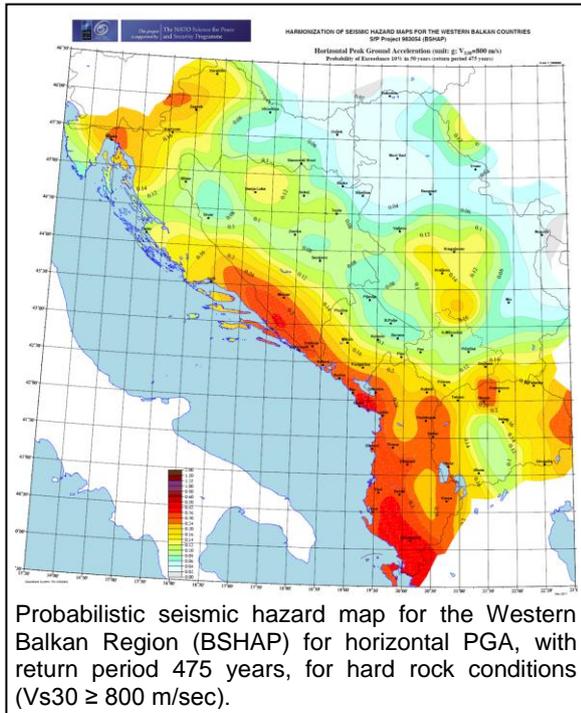


NATO SfP Project No. 983054
“Harmonization of Seismic Hazard Maps for the Western Balkan Countries” (BSHAP)

SUMMARY

The NATO SfP Project No. 983054 “Harmonization of Seismic Hazard Maps for the Western Balkan Countries” (acronym BSHAP) through a four year period (2007-2011) involved twelve leading seismological and earthquake engineering institutions with 48 key scientific members and its institutional staff, from seven Balkan countries: Albania, Bosnia and Herzegovina, Croatia, FYR Macedonia, Montenegro, Serbia and Turkey. This Project brought very valuable professional experience, but also improved a good spirit of full regional cooperation and strengthened professional relationships in the seismological community of the whole Western Balkan region.



The seismic hazard maps for the Western Balkan region, as one of the crucial outputs of the BSHAP Project can be accepted as a basic, but also a significant step towards improving seismic safety and implementing the Eurocodes into national practice of all countries involved in the Project.

The new generation of probabilistic seismic hazard maps for all the BSHAP Region has been assessed by implementing of computation methodology based on the spatially smoothed seismicity approach and on a logic tree, to fully characterize the seismic hazard and its associated uncertainties. The results were expressed in terms of peak horizontal ground acceleration (PGA) for 95 and 475 years return periods, that correspond to probability of exceedance of 10% in 10 years, and 10% in 50 years, respectively (for rock conditions with average velocity of shear waves $V_s \geq 800$ m/sec in the upper 30 meters of soil).

The equipment purchased in the framework of the BSHAP Project significantly improved the complete seismic monitoring capacity of the Western Balkan region, as the entire national seismic and strong motion networks of the countries involved in the Project. Through the Project implementation, 13 new broadband seismic stations and 36 strong motion stations were established in all involved countries. Besides that, additional valuable equipment for operation of seismic stations was implemented (seismic signal digitizers, seismic sensors, communication devices, etc.), as well as computers and GIS software.

In the framework of the Project, all institutions involved in the Project have signed a Protocol on understanding, to improve existing mutual professional and scientific cooperation, especially to enhance the real-time seismic data exchange. Also, young scientists from all the participating countries were professionally trained on the course workshops and dedicated trainings.

Shortly, this Project represents an achievement in the methodology and the practice of seismic hazard assessment of the Western Balkan region, and it sets the basis for a modern policy of earthquake risk mitigation in the region. The obtained results should be treated as very valuable for the wide spectrum of national and local authorities, as well as for interested institutions and individuals involved in spatial planning and management, earthquake-resistant structure design, etc. Also, establishment of new national building codes for all these countries, reflecting the new hazard model is recommended. This will ensure the smooth integration of state-of-the-art knowledge as well as response to changing needs of the user community.

