

PROTOCOL ON MULTILATERAL COOPERATION IN SEISMIC DATA EXCHANGE

between the institutions:

**DEPARTMENT OF GEOPHYSICS,
FACULTY OF SCIENCES, UNIVERSITY OF ZAGREB, CROATIA**

**FEDERAL HYDROMETEOROLOGICAL SURVEY, CENTER FOR SEISMOLOGY
SARAJEVO, HYDROMETEOROLOGICAL SURVEY OF REPUBLIKA SRPSKA -
SECTOR FOR SEISMOLOGY, BANJA LUKA and
MINISTRY OF CIVIL AFFAIRS OF THE FEDERAL GOVERNMENT OF BOSNIA AND
HERZEGOVINA**

**INSTITUTE OF GEOSCIENCES, POLYTECHNIC UNIVERSITY OF
TIRANA, ALBANIA**

MONTENEGRO SEISMOLOGICAL OBSERVATORY

**SEISMOLOGICAL OBSERVATORY, FACULTY OF NATURAL SCIENCES,
UNIVERSITY "SS. CYRIL AND METHODIUS" SKOPJE, MACEDONIA**

and

SEISMOLOGICAL SURVEY OF SERBIA

July, 2008

In the framework of the NATO Science for Peace (SfP) Project No. 983054 "**Harmonization of Seismic Hazard Maps for the Western Balkan Countries**" (BSHAP), all stated institutions, wishing to improve already existing cooperative mutual professional and scientific relationships, especially to enhanced real-time seismic data exchange, have agreed as follows:

Article 1: Scope of the Cooperation

The cooperation can include any endeavor within the broad interdisciplinary area of **Environment and Human Security** offered at each institution as felt desirable and feasible by all sides to implement jointly.

Article 2: Objective of the Cooperation

The objective of the cooperation is to advance science and technology, capacity building in the stated fields (*Article 3*), to improve quality of urgent earthquake hypocenter parameters determination, to enrich existing national seismic data bases for the purpose of scientific research of the Earth crust structure, its seismotectonical and geological features, as well as to study focal mechanism of the earthquakes in the region.

The protocol is intended to establish cooperation margins enabling the above institutions to pull their resources towards advancement of science and the application of obtained results without disadvantaging either party.

Article 3: Consent of the Cooperation

Subject to technical availability and the approval of the Directors of stated seismological institutions, the cooperation is expected to be carried out by each of the contracting parties through the following activities:

1. Exchange of real time seismic data in a convenient data format;
2. Education of new generation of scientists;
3. Joint implementation of human capacity building activities (workshops, trainings, seminars, specialists courses) in the fields of particular interest;
4. Identification of areas of potential research and cooperation;
5. Co-partnership in the national, regional and international projects;
6. Exchange of expertise;
7. Joint authorship of publications in scientific journals and proceedings.

The term of such mutual assistance and the budget necessary for each activity implemented under this agreement should be discussed and agreed by all parties prior to the initiation of a particular program.

Article 4: Modes of Cooperation

Based upon the interest shown in the stated fields of cooperation activities (*Article 3*), all parties have agreed that the mode of mutual cooperation may be organized in one of the following manners:

1. Establishment of virtual seismic network by mutual providing of real-time or near real-time seismic data for the purposes of common interest;
2. Establishment of joint projects of common interest financed and supported by the governments of participating countries and/or other public and private institutions and organizations; and,
3. Establishment of joint bilateral or multilateral projects of common interest supported by United Nations agencies, the Commission of European Communities, or any other agencies and institutions with the same specific interest.

Article 5: Exchange of Data, Scientific Information

All institutions shall, at their own discretion, offer the other institution access to their real time seismic data and other materials of scientific nature relevant to the agreed consent of cooperation.

All institutions which are providing data are responsible for the quality and accuracy of data, specifically referring to:

- general data about the seismic station: coordinates, type of sensors, response characteristics, manufacturer, type and necessary technical data for A/D converters, seismic data sampling rate for every channel, geological conditions of the sensor basement, and all other necessary data that may be agreed mutually,
- data quality and calibration of instrument positioned on station,
- absence of any systematic time-errors in seismic data,
- malfunctioning of station or lack of data,
- minimization of seismic noise present at seismic signal to be exchanged
- institution seismic data-provider, according to bilateral agreement, will allow approach to the SeisComp data server, to the specific seismic channels that will be agreed according to the bilateral interest.

Article 6: Publication of Information and Results

All parties agree not to disclose to a third party, nor use for commercial profit, or publish, any scientific or technical information obtained from the other party or the results advanced through the joint cooperation, unless a written consent has been provided by the other party.

Original data in part or as a whole may not be published without the consent of the director of the signed institution whose data are used.

Article 7: Coordination of Cooperative Activities

Each collaborating Institution have appointed he liaison officer who is especially in charged to regularly and timely inform other data users about any change in terms of data accuracy as stated in the Article 5.

The collaborating institutions and the liaison officers in charge of coordinating the activities listed in the areas of cooperation are specified in the Annex of this Agreement.

Article 8: Validity of the Protocol

This protocol will become effective as from the date of its signing. It shall be approved by the authorities of the all parties according to their regulations and shall be valid for unlimited period of time.

In any time, any of institutions in the Protocol, can cancel this agreement (partially or generally) with the obligation to inform other side about the reason for that act.

In the case of conflict of the stated contents with the laws of the relevant countries, the laws shall prevail.

Article 9: Renewal of the Protocol

If neither of the parties submits a six months prior written notice to the other parties about termination of the protocol before its expiry date, the protocol for multilateral cooperation between stated seismological institutions considered to be automatically renewed for another three-year period.

Article 10: Amendment of the Protocol

Any article of the protocol may be subject to modification during the period of its validity provided an agreement has been reached between the parties and that it will not affect the ongoing cooperation activities.

Harmonization of Seismic Hazard Maps for the Western Balkan Countries

The Protocol can be amended by an exchange of letters between the participating Institutions. Such amendments, once approved by all parties, will become part of the Agreement.

Signed on the 30-th day of July 2008 in English language by (in alphabetic order):

DEPARTMENT OF GEOPHYSICS, FACULTY OF SCIENCES, UNIVERSITY OF ZAGREB, CROATIA


Prof. Davorka Herak, Director


Mr. Vlado Kuk, MS, Project Co-Director

FEDERAL HYDROMETEOROLOGICAL SURVEY - CENTER FOR SEISMOLOGY, SARAJEVO, HYDROMETEOROLOGICAL SURVEY OF REPUBLIKA SRPSKA - SECTOR FOR SEISMOLOGY AND MINISTRY OF CIVIL AFFAIRS OF THE GOVERNMENT OF BOSNIA AND HERZEGOVINA, COUNCIL OF MINISTERS


Mr. Amer Zoranić, Project Co-Director

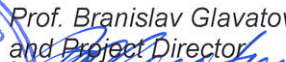

Mr. Enes Sarač, Director


Mr. Zoran Božović, Director

INSTITUTE OF GEOSCIENCES, POLYTECHNIC UNIVERSITY OF TIRANA



Prof. Ismail Hoxha, Director and Project Co-Director

MONTENEGRO SEISMOLOGICAL OBSERVATORY


Prof. Branislav Glavatović, Director and Project Director

SEISMOLOGICAL OBSERVATORY, FACULTY OF NATURAL SCIENCES, UNIVERSITY "SS. CYRIL AND METHODIUS" SKOPJE


Prof. Ljupčo Jordanovski, Director


Prof. Mihail Garevski, Project Co-Director

SEISMOLOGICAL SURVEY OF SERBIA


Slavica Radovanović, MS, Director


Svetlana Kovačević, MS, Project Co-Director

ANNEX 1

THE COLLABORATING INSTITUTIONS AND THE LIAISON OFFICERS IN CHARGE

The collaborating institutions and the liaison officers in charge of coordinating the activities listed in the areas of cooperation are:

Mr. Ivan Brlek, from Federal Hydrometeorological Survey - Center for Seismology, Sarajevo, Bosnia and Herzegovina,

Mr. Sveto Vrhovac, from Hydrometeorological Survey of Republika Srpska - Sector for Seismology,

Mr. Krešimir Kuk from Department of Geophysics, Faculty of Sciences, University of Zagreb, Croatia,

Mr. Hamza Reçi from Institute of Geosciences, Polytechnic University of Tirana, Albania,

Ms. Ljiljana Vučić from Montenegro Seismological Observatory,

Ms. Dragana Černih from Seismological Observatory, Faculty of Natural Sciences, University "Ss. Cyril and Methodius" Skopje, Macedonia and

Mr. Dejan Valčić from Seismological Survey of Serbia.

In case of any personnel changes, the corresponding institution is in obligation to appoint new liaison person and inform all other parties about that change.