

PROTOCOL  
BETWEEN  
THE U.S. GEOLOGICAL SURVEY  
OF THE  
DEPARTMENT OF THE INTERIOR,  
THE NATIONAL SCIENCE FOUNDATION, AND  
THE NATIONAL INSTITUTE OF STANDARDS AND TECHNOLOGY  
OF THE  
UNITED STATES OF AMERICA, JOINTLY,  
AND THE  
CHINA EARTHQUAKE ADMINISTRATION AND  
NATIONAL NATURAL SCIENCE FOUNDATION  
OF THE  
PEOPLE'S REPUBLIC OF CHINA, JOINTLY,  
CONCERNING  
SCIENTIFIC AND TECHNICAL COOPERATION  
IN THE  
EARTHQUAKE AND VOLCANO SCIENCES

ARTICLE I. SCOPE AND OBJECTIVES

1. The U.S. Geological Survey (hereinafter "USGS"), the National Science Foundation (hereinafter "NSF"), and the National Institute of Standards and Technology (hereinafter "NIST") of the United States of America (jointly, the U.S. Party) and the China Earthquake Administration (hereinafter "CEA") and the National Natural Science Foundation (hereinafter "NSFC") of the People's Republic of China (jointly, the Chinese Party) hereby agree to pursue scientific and technical cooperation in the earthquake and volcano sciences in accordance with this Protocol.
2. Activities and programs will be jointly coordinated for the U.S. Party by USGS, the Engineering and Geosciences Directorates of NSF, and the Building and Fire Research Laboratory at NIST, which is the lead U.S. government agency for the National Earthquake Hazards Reduction Program (NEHRP), and for the Chinese Party by the Department of International Cooperation of the CEA, and the Department of Engineering and Material Science of NSFC.
3. The purpose of this Protocol is to provide the Parties with a framework for the exchange of scientific and technical knowledge and for the augmentation of scientific and technical capabilities of the USGS, NSF, NIST, CEA, and the NSFC with respect to the earthquake, volcano and earth sciences.
4. This Protocol is subject to and governed by the Agreement between the Government of the United States of America and the Government of the People's Republic of China on Cooperation in Science and Technology, signed at Washington January 31, 1979, as amended and extended (hereinafter referred to as the "S&T Agreement").

5. The Parties shall encourage and facilitate, where appropriate, the development of direct contacts and cooperation among government agencies, universities, research centers, institutions, private sector companies and other entities of the Parties.

6. Each Party may, with the consent of the other Party and to the extent permitted by the laws and policies of each Party's Government, invite other government entities or agencies of the United States and China, and other entities, including scientists, technical experts, governmental agencies and institutions of third countries or international organizations, to participate in activities undertaken pursuant to this Protocol, subject to such terms and conditions as the Parties may specify.

## ARTICLE II. COOPERATIVE ACTIVITIES

1. Forms of cooperation under this Protocol may consist of exchanges of technical information, visits, and cooperative research consistent with ongoing programs of the Parties. Specific areas of cooperation may include, but are not limited to, such areas of mutual interest as:

- A. Earth-science investigations including hazards, resources, and environment;
- B. Earthquake engineering, post-earthquake investigations of buildings and lifelines performance, emergency management, and supporting social sciences;
- C. Geospatial data applications;
- D. Information systems;
- E. Investigations and techniques for earthquake precursors, forecasting, prediction, and earthquake early warnings;
- F. Investigations of intra-plate active faults and earthquakes;
- G. Cooperative research projects on deep crustal structure;
- H. Deployment of very long period seismographic stations (IDA); and
- I. Exchange of electronic data and films of seismograms and accelerograms.

2. Activities under this Protocol shall be undertaken in accordance with the laws, regulations, and procedures applicable to each Party.

## ARTICLE III. AVAILABILITY OF RESOURCES

Cooperative activities under this Protocol shall be subject to the availability of personnel, resources, and appropriated funds. This Protocol shall not be construed to obligate any particular expenditure or commitment of resources or personnel. In accordance with Article VIII below, the Parties shall agree in writing on specific Project Annexes before the commencement of each activity pursuant to this Protocol.

timeliness of such notifications and warnings. The Parties agree to promote the open exchange of real-time seismic data within their national structures, in order to provide maximum social and scientific benefits of such data.

#### ARTICLE IX. PROJECT ANNEXES

Any activity carried out under this Protocol shall be agreed upon in advance by the Parties in writing. Whenever more than the exchange of technical information or visits of individuals is planned, such activity shall be described in an agreed Project Annex to this Protocol, which shall set forth, in terms appropriate to the activity, a work plan, staffing requirements, cost estimates, funding sources, and other undertakings, obligations, or conditions not included in this Protocol. In case of any inconsistency between the terms of this Protocol and the terms of a Project Annex, the terms of this Protocol shall control.

#### ARTICLE X. RESEARCH SAFETY

The Parties shall establish and implement policies and practices to ensure and provide for the safety of their employees, the public, and the environment during the conduct of cooperative activities and subject to applicable national laws and regulations. If any cooperative activity involves the use of dangerous or hazardous materials, the Parties shall establish and implement an appropriate safety plan.

#### ARTICLE XI. ENTRY INTO FORCE AND TERMINATION

This Protocol shall enter into force upon signature by both Parties and remain in force for five (5) years. This Protocol may be amended or extended by written agreement of the Parties. Either Party may terminate this Protocol upon ninety (90) days written notice, through diplomatic channels, to the other Party. Unless otherwise agreed, the termination of this Protocol shall not affect the validity or duration of projects under this Protocol that are initiated prior to such termination.

Signed in Washington D.C. in quintuplicate, in the English and Chinese languages, both texts being equally authentic.

FOR THE U.S. GEOLOGICAL  
SURVEY OF THE DEPARTMENT  
OF THE INTERIOR OF THE  
UNITED STATES OF AMERICA:

Suzette R Kimball  
Signature

Suzette Kimball  
Name

Acting Director  
Title

15 October 2009  
Date

FOR THE CHINA EARTHQUAKE  
ADMINISTRATION OF THE PEOPLE'S  
REPUBLIC OF CHINA:

Yin Chaomin  
Signature

Yin Chaomin  
Name

Vice-Administrator  
Title

2009年10月15日  
Date

FOR THE NATIONAL SCIENCE  
FOUNDATION OF THE UNITED  
STATES OF AMERICA:

Arden Bement  
Signature

Arden Bement  
Name

Director  
Title

Oct 15, 2009  
Date

FOR THE NATIONAL NATURAL  
SCIENCE FOUNDATION OF THE  
PEOPLE'S REPUBLIC OF CHINA:

Shen Wenqing  
Signature

Shen Wenqing  
Name

Vice President  
Title

2009年10月15日  
Date

FOR THE NATIONAL INSTITUTE OF  
STANDARDS AND TECHNOLOGY OF  
THE UNITED STATES OF AMERICA:

Patrick Gallagher  
Signature

Patrick Gallagher  
Name

Deputy Director  
Title

16 OCT 2009  
Date

I certify that this is a true copy of the original Memorandum of Understanding.

Rebecca A. Kenny  
Rebecca A. Kenny  
International Program Specialist  
U.S. Geological Survey  
Office of International Programs

28 OCT 09  
Date