

MEMORANDUM OF AGREEMENT  
BETWEEN  
THE U.S. GEOLOGICAL SURVEY, DEPARTMENT OF THE INTERIOR  
AND  
THE SMITHSONIAN TROPICAL RESEARCH INSTITUTE  
CONCERNING SCIENTIFIC AND TECHNICAL COOPERATION  
IN THE EARTH SCIENCES

The **Smithsonian Tropical Research Institute**, hereinafter referred to simply as STRI, is a bureau of the Smithsonian Institution headquartered in Panama, dedicated to understanding the tropical world through its studies of geology, biology, paleontology, and anthropology. The Smithsonian Institution, a trust instrumentality established by Act of the United States Congress on August 10, 1946 (102 USC 41 *et seq.*), and represented herein by the Director of the Smithsonian Tropical Research Institute, Mr. Ira Rubinoff, who is fully subject to the provisions of Decree No. 93,872 of December 23, 1986, of Law No. 8,666 of June 21, 1993, as applicable, and of Directive No. 01 of January 15, 1997, issued by the National Treasury Secretariat, an agency of the Ministry of Finance; and

The U.S. Geological Survey, hereinafter referred to simply as USGS, was established by the Organic Act of March 3, 1879 (20 Stat. 394, 43 U.S.C. 31 *et seq.*) which provided for "The classification of the public lands and the examination of the geological structure, mineral resources, and products of the National Domain" and represented herein by Acting Director, Mr. P. Patrick Leahy.

Have agreed to conclude this Agreement, under the following terms and conditions:

### **I. Purpose**

STRI and the USGS enjoy a cooperative relationship and agree to continue working together in areas of scientific, technical and educational cooperation in the earth sciences of common concern and capability. This Memorandum of Agreement (MOA) provides a framework within which activities of mutual concern can be pursued.

It is the intent of both agencies to consider and develop STRI and USGS collaborations on geologic, hydrologic, biologic and geospatial studies, including through impact on society or through natural hazards.

### **II. Areas of Cooperation**

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 the environment;
- B. Biology, biological investigations and technical developments;
- C. Geographic and geospatial data applications;

- D. Water resources and other hydrologic investigations;
- E. Information systems; and
- F. Education.

Forms of cooperation under this Memorandum may consist of exchanges of technical information, visits, training, and cooperative research consistent with ongoing programs of either the USGS or STRI.

STRI and USGS agree to provide technical and logistical assistance to each other on a mutually agreeable basis.

STRI and USGS agree, as appropriate, to exchange and coordinate training and educational programs.

STRI and USGS shall share and/or develop educational displays highlighting on going collaborative research and projects.

### **III. Administration of the Agreement**

Cooperation under this Agreement shall be achieved through general visits at one another's facilities and through specific projects which shall be outlined in annexes to this Agreement following the general guidelines explained below and agreed upon by STRI and USGS. The initial program under this agreement will be the Global Seismic Monitoring and Data Exchange.

It is understood that there may be unusual circumstances requiring special negotiations and arrangements not specified in this document.

STRI and USGS can invite other organizations to participate in Project Agreements.

The STRI Deputy Director and the USGS Associate Director for Geology are assigned the responsibility to discharge this agreement, identify additional areas of mutual interest. They, or their designates, should develop appropriate agreements and review the progress of the Agreement and its Projects. Review should be done yearly, and may be via exchange of electronic Memos.

Each agency will provide such support as required to implement this agreement.

### **IV. General Guidelines**

Project agreements shall include, but not be limited to, the following items:

- (a) Identification of the activities to be carried out;
- (b) Description of the methods to be used, the anticipated results, where the activity will be carried out and how the data will be analyzed;
- (c) Human and material resources needed for the activity;
- (d) Technical, administrative, legal, and support-related requirements for the activity;
- (e) Specific provisions on the length, cancellation, suspension, or interruption of the activity being carried out;

(f) Expected (if any) educational materials to be developed from the activity.

#### **V. Period of Validity and Termination**

This Agreement shall enter into force as of the date of signature, and shall remain valid for a period of five years, which may be extended for equal periods of time, following evaluation of its operation and results, and after each participants has specifically expressed its desire to extend the Agreement at least 60 days in advance.

This Agreement may be revoked by common agreement of the participants, or terminated by means of written notification sent at least 30 days in advance, once all necessary measures have been taken to protect the work already carried out, or at any time owing to the occurrence of events or on legal grounds, and in case of noncompliance with any of the provisions of this Agreement, if said noncompliance is not corrected by the infringing party within fifteen (15) days upon receiving proper notice of its existence, in writing, by the other party.

If this Agreement is revoked or terminated, activities pending or work being carried out shall be determined and resolved by means of Completion Arrangements that delineate and attribute responsibilities in terms of the conclusion or cancellation of each activity and pending action, including ownership rights in works in progress; restrictions on the use of resulting goods and methods; and the disclosure of information gathered that is available to the participants.

#### **VI. Publicity**

Publicity stemming from the actions, programs, works, services, and campaigns developed under this Agreement must be educational, informative, or community-oriented, and must be approved by both STRI and USGS. In cases where publicity has been approved by both parties, equal credit and recognition shall be given to STRI and USGS.

#### **VII. Signatures**

Having agreed to the above, the participants hereby sign this Agreement in three copies of equal content and form, producing all legal, technical, and administrative effects required for the accomplishment of its purposes, in the presence of the witness identified below, who have also affixed their signatures thereto.

*(Original Signature on File)*

Dr. Ira Rubinoff  
Director  
Smithsonian Tropical Research Institute  
Box 2072  
Balboa, Republic of Panama

Date: April 27, 2006

*(Original Signature on File)*

Dr. P. Patrick Leahy  
Acting Director  
U.S. Geological Survey, MS 100  
12201 Sunrise Valley Drive  
Reston, Va. 20192, USA

Date: 6/7/06

Witness:  
Government of Panama

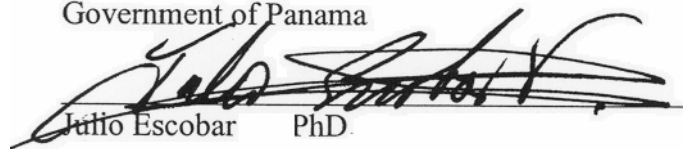
*(Original Signature on File)*

Julio Escobar V., PhD.  
Secretario Nacional de Ciencia,  
Tecnología e Innovación  
Apartado 7250, Panamá 5, Panamá

Date:

Witness:

Government of Panama

A handwritten signature in black ink, appearing to read 'Julio Escobar', is written over a horizontal line. The signature is stylized and somewhat cursive.

Julio Escobar PhD.

Y.,]

Secretario Nacional de Ciencia, Tecnología e Innovación -Ciudad del Saber, Edificio 213  
Apartado 7250, Panama 5, Panama

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Date: