



**INGV**  
terremoti  
vulcani  
ambiente

ISTITUTO NAZIONALE  
DI GEOFISICA E VULCANOLOGIA

**Istituto Nazionale di Geofisica  
e Vulcanologia**  
**AOO INGV**  
**Protocollo Generale - U**  
N. 0014772  
del 07/11/2017



Direzione centrale  
Affari amministrativi  
e del Personale

Gestione WEB

Alla Segreteria della Presidenza  
Sig. Piergiorgio DE SIMONE

Oggetto: Pubblicità atti

Si notifica in copia l'allegata Delibera n. 462/2017 del 23/10/2017 – Allegato P al Verbale n. 11/2017 concernente: Memorandum of understanding (MOU) tra Istituto Nazionale di Geofisica e Vulcanologia e Escuela Politécnica Nacional dell'Ecuador.

IL DIRETTORE  
Tullio PEPE



# Istituto Nazionale di Geofisica e Vulcanologia

Delibera n. 462/2017

Allegato P al Verbale n. 11/2017

Oggetto: Memorandum of understanding (MOU) tra Istituto Nazionale di Geofisica e Vulcanologia e Escuela Politécnica Nacional dell'Ecuador.

## IL CONSIGLIO DI AMMINISTRAZIONE

- **VISTO** il Decreto legislativo 29 settembre 1999, n. 381, concernente la costituzione dell'Istituto Nazionale di Geofisica e Vulcanologia (INGV);
- **VISTA** la Legge 27 settembre 2007, n. 165, concernente la "Delega al Governo in materia di riordino degli Enti di Ricerca";
- **VISTO** il Decreto legislativo 31 dicembre 2009, n. 213, concernente il "Riordino degli Enti di Ricerca in attuazione dell'art. 1 della Legge 27 settembre 2007, n. 165";
- **VISTO** il Decreto legislativo 25 Novembre 2016, n. 218, recante "*Semplificazione delle attività degli Enti Pubblici di Ricerca ai sensi dell'art. 13 della Legge n. 124/2015*";
- **VISTO** lo Statuto dell'Istituto Nazionale di Geofisica e Vulcanologia approvato con delibera del Consiglio di Amministrazione, in data 11 novembre 2010 - pubblicato sulla Gazzetta Ufficiale della Repubblica Italiana – Serie Generale n. 90 del 19 aprile 2011, in particolare, l'art. 6, comma 8, lettera s), il quale prevede che il CdA ....approva le convenzioni e gli accordi quadro con le Università e con gli altri enti e organismi pubblici e privati, nazionali e internazionali;
- **VISTO** il Regolamento di organizzazione e funzionamento dell'Istituto Nazionale di Geofisica e Vulcanologia emanato con Decreto del Presidente n. 503 del 14/10/2016 e pubblicato sul sito istituzionale;
- **VISTO** il Regolamento di Amministrazione, Contabilità e Finanza pubblicato sulla Gazzetta Ufficiale della Repubblica Italiana – Serie Generale n. 113 del 18 maggio 2009;
- **VALUTATA** l'opportunità di sottoscrivere il Memorandum of understanding con l'Escuela Politécnica Nacional dell'Ecuador;
- **CONSIDERATO CHE** l'attività da espletare rientra tra i compiti scientifici e istituzionali dell'INGV;
- **TENUTO CONTO** dei pareri scientifici prodotti dai competenti Direttori di Struttura e di Sezione dell'INGV,

## DELIBERA

L'approvazione dello schema di Memorandum of understanding (MOU) tra l'Istituto Nazionale di Geofisica e Vulcanologia e l'Escuela Politécnica Nacional dell'Ecuador, allegato alla presente quale parte integrante e sostanziale (allegato 1).



# Istituto Nazionale di Geofisica e Vulcanologia

Viene dato mandato al Presidente alla sottoscrizione definitiva dell'atto in questione.

Letto, approvato e sottoscritto seduta stante.

Roma, 23/10/2017

La segretaria verbalizzante  
(Sig.ra Silvana TUCCI)

*Silvana Tucci*

IL PRESIDENTE  
(Prof. Carlo DOGLIONI)

*CD*

**MEMORANDUM OF UNDERSTANDING**  
(hereinafter referred to as "MOU")

between

**Istituto Nazionale di Geofisica e Vulcanologia**  
Via di Vigna Murata 605  
00143 Rome Italy  
(hereinafter referred to as "INGV")  
and the

**Escuela Politécnica Nacional**  
Ladrón de Guevara E11-253  
AP- 2759 Quito  
ECUADOR  
(hereinafter referred to as "EPN")

(hereinafter jointly referred to as the "Parties")

concerning

**Cooperation in the field of Geo-hazards Research**

**WHEREAS** the Parties, on the basis of this MOU, are mutually interested in developing and reinforcing their cooperation in the field of natural hazards and risk research, including education and training of specialists in this area;

**WHEREAS** this MOU establishes a framework for this cooperation in joint investigations, international projects, scientific exchanges and training of personnel in the field of geo-hazards, on other subjects of mutual interest and their applications, and;

**WHEREAS** the Parties are participating in this MOU with a view to reinforce and strengthen the institutional links between the two organizations.

The Parties, therefore have reached the following understanding:

**Background**

INGV's main purpose is monitoring the processes governing the solid and fluid Earth and developing science focusing on the understanding of the Earth main mechanisms, the assessment of the main natural hazards and contributing to their reduction as well as to collaborate with national and international research entities that are working in this field.

EPN's Instituto Geofisico main purpose is to reduce the impact on population and infrastructure caused by geological processes in Ecuador, through the permanent monitoring, research and the use of technology to promote and to generate a risk prevention mentality in the country.

### Article One

The objective of this MOU is to establish a framework for cooperation between the Parties on the basis of equality, overall reciprocity and mutual benefits.

### Article Two

This MOU is general in nature and is neither comprehensive nor exhaustive. When the Parties intend to undertake a form of cooperation as described in this MOU, they will discuss an Implementing Arrangement that will set forth the timing and scope of the specific form of cooperation and any other matters such as funding, intellectual property, and liability on which special agreements will be required.

### Article Three

Cooperation under this MOU may include the following areas of interest where appropriate:

#### **Volcanology:**

Design and development of Observation Systems: multi-parametric monitoring of active volcanoes (seismic, geodetic, geochemical, infrasonic, radar, etc.)

Assessment of Volcanic Hazards: hazard Assessment of the Ecuadorian volcanoes (eruptive scenarios, ash dispersion, hazard maps, etc.)

#### **Seismology and Earthquake Geology:**

Development of Observation Systems: multi-parametric monitoring of active faults (seismic, geodetic, geochemical, geological, satellite, etc.)

Seismic Hazard: Hazard Assessment in Seismic active areas (hazard maps, risk communication etc.).

Tsunami hazard: Tsunami inundation scenarios and validation through historical and geological data.

#### **Environment:**

Ionosphere – Global Navigation Satellite System - Space Weather: Monitoring and Modeling of the equatorial ionosphere for navigation and positioning precise applications.

Structure and Geodynamics of the Andes: paleomagnetic studies of tectonic deformation in the Andean belt.

Environmental monitoring: airborne geophysics for volcanological, seismo-tectonic.

#### **International Cooperation in Earth Sciences:**

GeoHazards Supersites: Collaborations for the development of Earth Observation Systems within GEO (Group on Earth Observations) - both Italy and Ecuador host Supersites.

Development of research infrastructures: Integration of the observation and monitoring systems for Earth Sciences.

### Article Four

The cooperation under this MOU shall be subject to and shall depend on the availability of funds and resources from each Party, and may include the following forms:



1. Exchange visits of individual professional staff, scientists or students;
2. Training of research personnel;
3. Collaboration on individual research projects of mutual interest, and the study of techniques and methods;
4. Exchange of information, ideas, and approaches from research projects on geohazards and risk assessment; and;
5. Other forms of cooperation as may be mutually agreed upon by the Parties.

#### **Article Five**

The scientific and technical results of cooperative projects conducted under this MOU will be shared and published together (each Party has author rights on his data) or held in confidence. However, the overall goal is that both INGV and Instituto Geofisico use results in developing research in the fields mentioned in article three, and to support knowledge transfer.

#### **Article Six**

In order to implement cooperation under this MOU, the Parties have designated the following representatives to identify cooperative activities and the details of their implementation:

Representatives for INGV: Dr. Augusto Neri (Volcanology)  
Dr. Daniela Pantosti (Seismology and Earthquake Geology)  
Dr. Leonardo Sagnotti (Environment)  
Representative for Instituto Geofisico - EPN: Dr. Daniel Andrade (IGEPN)

#### **Article Seven**

Each Party shall bear expenses related to the implementation of this MOU. No cost incurred by one Party shall be assumed by the other Party unless otherwise agreed to in writing under an Implementing Arrangement pursuant to this MOU.

#### **Article Eight**

Unless otherwise agreed to under an Implementing Arrangement, any and all property or equipment of whatever nature or kind furnished by either Party in connection with work under this MOU is and will remain the property of the Party furnishing such property and equipment.

#### **Article Nine**

This MOU will become effective upon signing by both Parties of both versions and remain in effect four (4) years, unless extended or terminated. This MOU may be amended or extended by mutual written agreement, and may be terminated

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at any time by either Party upon three (3) months written notice to the other Party.

Termination of this MOU does not affect development of any existing Implementing Arrangements between the Parties. Termination or amendment of the Implementing Arrangements will be in accordance with the provisions of each specific Arrangement.

#### Article Ten

This MOU does not create any legally binding obligations between the Parties. Parties shall not be liable for injury to or death of the personnel or for damage to or for loss of the each other property during or after the implementation of the MOU, and they shall hold harmless each other from any and all such claims.

In witness whereof, the Parties have caused this Memorandum of Understanding to be duly signed by their authorized representatives in two copies each of which shall be deemed as an original.

Accepted on behalf of EPN by:	Accepted on behalf of INGV by:
Ing. Jaime Calderón Segovia Rector Escuela Politécnica Nacional Quito – Ecuador	Prof. Carlo Doglioni Presidente Istituto Nazionale di Geofisica e Vulcanologia Roma - Italy