

**Agreement between the  
National Aeronautics and Space Administration (NASA)  
of the United States of America  
and the  
Geophysical Institute of Peru (IGP)  
for  
Cooperation in the Aerosol Robotic Network (AERONET)**

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The present Agreement is signed on one hand by the GEOPHYSICAL INSTITUTE OF PERU (IGP) which, for its purposes is numerated as legal document number 20131367008. GEOPHYSICAL INSTITUTE OF PERU has the legal address on street Badajoz N°169, Mayorazgo Urbanization Stage IV, district of Ate Vitarte, province and department of Lima, duly represented by its President Hernando Jhony Tavera Huarache con with national identity document number 10831063, designated by Supreme Resolution number 002-2027-MINAM who will hereinafter be called “IGP”. On the other hand, the other Party to this inter-institutional cooperation Agreement is the NATIONAL AERONAUTICS AND SPACE ADMINISTRATION established in Washington, DC 20546 USA, and is duly represented by Gilbert R. Kirkham, Director, Science Division, which hereinafter will be called “NASA”.

Both parties sign this document, pursuant to the following the terms and conditions:

#### **THE PARTIES**

**IGP** is a public executing agency, attached to the Ministry of the Environment, created by Legislative Decree No. 136 and its purpose is scientific research, teaching and training, the provision of services and the carrying out of studies and projects in the various areas of geophysics. Its main function is to study all the phenomena related to the infrastructure, physical conditions and evolutionary history of the earth and it has the capacity to serve the needs of the country in areas as important as seismology, spatial geodesy, volcanology, variability and change. climatic among others.

**NASA** is a U.S. government agency that is responsible for science and technology related to air and space. NASA was established on Oct. 1, 1958. The agency was created to oversee U.S. space exploration and aeronautics research. NASA's Headquarters is in Washington, D.C.

#### **SCOPE AND OBJECTIVES**

NASA's scientific goals include a more detailed understanding of global atmospheric change phenomena with emphasis on climate research and the assessment of air quality. To these ends, NASA has established a global network of sun photometers, called AERONET (AErosol RObotic NETwork), in cooperation with a wide range of international partner agencies and institutions. These devices are used to measure water vapor and aerosol optical properties, which are necessary measurements as well as being essential for ground-based validation for aerosol measurements taken by satellites.

For the proposed arrangement, the National Aeronautics and Space Administration (NASA) and the Geophysical Institute of Peru (IGP) will establish sun photometer stations at mutually agreed sites. The inclusion of these stations within the global AERONET will significantly improve the understanding of the properties and concentration of aerosols and their relationship to aerosols on both global and regional scales. Another objective of this cooperation is to encourage scientists from both the United States and Peru to develop research programs using data collected in Peru along with aerosol data available from the global AERONET database located at NASA's Goddard Space Flight Center (GSFC) in Greenbelt, Maryland.

## **RESPONSIBILITIES**

Under this agreement, NASA shall use reasonable efforts to:

1. Provide to the Geophysical Institute of Peru (IGP), on a long-term loan basis, one or more sun photometer systems and/or associated equipment for continuous operation at mutually agreed sites;
2. Provide technical installation support, major maintenance, training, and spare parts for the NASA sun photometer systems hardware and software;
3. Provide for automated data retrieval by all participants in the AERONET program of all processed sun photometer data from an open global data bank accessible through the Internet (Information on the system is available on the project homepage <https://aeronet.gsfc.nasa.gov/>)
4. Provide, upon mutual agreement, upgrade of AERONET analysis software for the IGP servers, the database browser developed by NASA, and any software to be used in the operation of the stations;
5. Encourage scientific collaboration between U.S. and Peru scientists in the area of sun photometry, aerosol research, and related sciences;
6. Coordinate with investigators globally for a cooperative program of continuous sun photometer systems measurements for the determination of global aerosol properties and concentration; and
7. Assist in integration of ground-based aerosol concentrations and properties for EOS-era validation of satellite aerosol retrievals as a part of the international federated sun photometer network, AERONET, by making available NASA civil service and/or contractor personnel for mutually agreed time periods.

Under this agreement, the Geophysical Institute of Peru (IGP) shall use reasonable efforts to:

1. Provide utilities (electricity and communications), security, and housing for the instrument(s) and data acquisition setup at mutually – agreed location(s);
2. Provide personnel necessary for the installation, full time operation, and nominal maintenance of the station(s);
3. Use the equipment only as intended under this agreement and make no modifications to NASA-provided equipment unless approved in writing or requested in writing by NASA;

4. Encourage scientific collaboration between scientists in the area of sun photometry, aerosol research, and related sciences, especially with dust storms;
5. Send the loaned equipment to NASA, at NASA's expense, on an 18-month rotation for maintenance and calibration and at the end of this cooperation, return the loaned equipment to NASA in as good condition as received, except for normal equipment use and aging; and
6. Cooperate with investigators globally in the federated AERONET program for ground-based sun photometer observations of aerosol concentrations and properties.

## **POINTS OF CONTACT**

The points-of-contact responsible for the coordination and execution of this agreement are:

For NASA:

**Principal Investigator**

Brent Holben

Project Manager

NASA/GSFC Code 923

Greenbelt Road

Greenbelt, MD 20771

USA

Phone : 301-614-6658

Fax : 301-614-6695

E-mail : brent.n.holben@nasa.gov

For IGP:

Director (a)

Subdirección de Ciencias de la Atmósfera e Hidrósfera

Instituto Geofísico del Perú

Calle Badajoz N° 169 Urb. Mayorazgo IV Etapa

Ate, Lima 15012

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Phone: +51-1-3172300

Email: imontes@igp.gob.pe

Responsable técnico

Luis Suarez Salas

Instituto Geofísico del Perú

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## **FINANCIAL ARRANGEMENTS**

Each Party shall each bear the costs of discharging its respective responsibilities, including travel and subsistence of personnel and transportation of all equipment and other items for which it is responsible. Further, the obligations of NASA and the IGP are subject to the availability of appropriated funds. Should either Party encounter budgetary problems which may affect the activities to be carried out under this Agreement, the Party encountering the problems shall notify and consult with the other Party as soon as possible.

## **INTELLECTUAL PROPERTY RIGHTS**

1. Nothing in this Agreement shall be construed as granting, either expressly or by implication, to the other Party any rights to, or interest in, any inventions or works of a Party or its Related Entities made prior to the entry into force of, or outside the scope of, this Agreement, including any patents (or similar forms of protection in any country) corresponding to such inventions or any copyrights corresponding to such works.

2. Any rights to, or interest in, any invention or work made in the performance of this Agreement solely by one Party or any of its Related Entities, including any patents (or similar forms of protection in any country) corresponding to such invention or any copyright corresponding to such work, shall be owned by such Party or Related Entity. Allocation of rights to, or interest in, such invention or work between such Party and its Related Entities shall be determined by applicable laws, rules, regulations, and contractual obligations.

3. It is not anticipated that there will be any joint inventions made in the performance of this Agreement. Nevertheless, in the event that an invention is jointly made by the Parties in the performance of this Agreement, the Parties shall, in good faith, consult and agree within 30 calendar days as to:

- (a) The allocation of rights to, or interest in, such joint invention, including any patents (or similar forms of protection in any country) corresponding to such joint invention;
- (b) The responsibilities, costs, and actions to be taken to establish and maintain patents (or similar forms of protection in any country) for each such joint invention; and
- (c) The terms and conditions of any license or other rights to be exchanged between the Parties or granted by one Party to the other Party.

4. For any jointly authored work by the Parties, should the Parties decide to register the copyright in such work, they shall, in good faith, consult and agree as to the responsibilities, costs, and actions to be taken to register copyrights and maintain copyright protection (in any country).

5. Subject to the provisions of Transfer of Goods and Technical Data clause and Release of Results and Public Information clause, each Party shall have an irrevocable royalty free right to reproduce, prepare derivative works, distribute, and present publicly, and authorize others

to do so on its behalf, any copyrighted work resulting from activities undertaken in the performance of this Agreement for its own purposes, regardless of whether the work was created solely by, or on behalf of, the other Party or jointly with the other Party.

## **RELEASE OF RESULTS AND PUBLIC INFORMATION**

1. The Parties retain the right to release public information regarding their own activities under this Agreement. The Parties shall coordinate with each other in advance concerning releasing to the public information that relates to the other Party's responsibilities or performance under this Agreement.
2. The Parties shall make the final results obtained from the AERONET project available to the general scientific community through publication in appropriate journals or by presentations at scientific conferences as soon as possible and in a manner consistent with good scientific practices.
3. The Parties acknowledge that the following data or information does not constitute public information and that such data or information shall not be included in any publication or presentation by a Party under this article without the other Party's prior written permission:
  - (a) Data furnished by the other Party in accordance with the Transfer of Goods and Technical Data clause of this Agreement which is export-controlled, classified, or proprietary; or
  - (b) Information about an invention of the other Party before an application for a patent (or similar form of protection in any country) corresponding to such invention has been filed covering the same, or a decision not to file has been made.

## **TRANSFER OF GOODS AND TECHNICAL DATA**

The Parties are obligated to transfer only those technical data (including software) and goods necessary to fulfill their respective responsibilities under this Agreement, in accordance with the following provisions, notwithstanding any other provisions of this Agreement:

1. All activities under this Agreement shall be carried out in accordance with the Parties' national laws and regulations, including those laws and regulations pertaining to export control and the control of classified information.
2. The transfer of technical data for the purpose of discharging the Parties' responsibilities with regard to interface, integration, and safety shall normally be made without restriction, except as required by paragraph 1, above.
3. All transfers of goods and proprietary or export-controlled technical data are subject to the following provisions:

(a) In the event a Party or its Related Entity (defined as contractors, subcontractors, grantees, or cooperating entities, or any lower tier contractor, subcontractor, grantee, or cooperating entities of a Party) finds it necessary to transfer such goods or data, for which protection is to be maintained, such goods shall be specifically identified and such data shall be marked.

(b) The identification for such goods and the marking on such data shall indicate that the goods and data shall be used by the receiving Party and its Related Entities only for the purposes of fulfilling the receiving Party's or Related Entities' responsibilities under this Agreement, and that such goods and data shall not be disclosed or retransferred to any other entity without the prior written permission of the furnishing Party or its Related Entity.

(c) The receiving Party or Related Entity shall abide by the terms of the notice and protect any such goods and data from unauthorized use and disclosure.

(d) The Parties to this Agreement shall cause their Related Entities to be bound by the provisions of this provision through contractual mechanisms or equivalent measures.

4. All goods exchanged in the performance of this Agreement shall be used by the receiving Party or Related Entity exclusively for the purposes of the Agreement. Upon completion of the activities under the Agreement, the receiving Party or Related Entity shall return or otherwise dispose of all goods and marked proprietary or export-controlled technical data provided under this Agreement, as directed by the furnishing Party or Related Entity.

## **CUSTOMS CLEARANCE**

In accordance with its laws and regulations, each Party shall facilitate free customs clearance and waiver of all applicable customs duties and taxes for goods necessary for the implementation of this Agreement. In the event that any customs duties or taxes of any kind are nonetheless levied on such equipment and related goods, such customs duties or taxes shall be borne by the Party of the country levying such customs duties or taxes.

## **MOVEMENT OF PERSONS AND GOODS**

To facilitate implementation of the activities conducted under this Agreement, the Parties may support the exchange of a limited number of personnel (including contractors and subcontractors from each Party), at an appropriate time and under conditions mutually agreed between the Parties.

Access by the Parties to each other's facilities or property, or to each other's Information Technology (IT) systems or applications, is contingent upon compliance with each other's respective security and safety policies and guidelines including, but not limited to: standards on badging, credentials, and facility and IT system application/access.

## **ENTRY AND RESIDENT DOCUMENTATION**

Subject to its laws and regulations, each Party shall facilitate provision of the appropriate entry and residence documentation, if required, for the other Party's nationals who enter, exit, or reside within its territory in order to carry out the activities under this Agreement.

## **OWNERSHIP OF EQUIPMENT**

Equipment provided by NASA pursuant to this Agreement shall remain the property of NASA. Equipment provided by the Geophysical Institute of Peru (IGP) pursuant to this Agreement shall remain the property of the Geophysical Institute of Peru (IGP). Each Party agrees to return any of the other Party's equipment in its possession to the other Party at the conclusion of the project.

## **CONSULTATION AND DISPUTE RESOLUTION**

The Parties agree to consult promptly with each other on all issues involving interpretation, implementation, or performance of the Agreement. An issue concerning the interpretation, implementation, or performance of this Agreement shall first be referred to the appropriate points of contact named above for the Parties. If they are unable to come to Agreement on any issue, then the dispute shall be referred to the Agreement signatories or their designated representatives for joint resolution.

## **LIABILITY**

1. Each Party hereby waives any claim against the other Party, employees of the other Party, the other Party's Related Entities (including but not limited to contractors and subcontractors at any tier, grantees, investigators, customers, users, and their contractors or subcontractors at any tier), or employees of the other Party's Related Entities for any injury to, or death of, the waiving Party's employees or the employees of its Related Entities, or for damage to, or loss of, the waiving Party's property or the property of its Related Entities arising from or related to activities conducted under this Agreement, whether such injury, death, damage, or loss arises through negligence or otherwise, except in the case of willful misconduct.

2. Each Party further agrees to extend this cross-waiver to its Related Entities by requiring them, by contract or otherwise, to waive all claims against the other Party, Related Entities of the other Party, and employees of the other Party or of its Related Entities for injury, death, damage, or loss arising from or related to activities conducted under this Agreement. Additionally, each Party shall require that their Related Entities extend this cross-waiver to their Related Entities by requiring them, by contract or otherwise, to waive all claims against the other Party, Related Entities of the other Party, and employees of the other Party or of its Related Entities for injury, death, damage, or loss arising from or related to activities conducted under this Agreement.

## **AMENDMENTS**

This Agreement may be amended or extended at any time by mutual written agreement.

## CONTINUING OBLIGATIONS

The obligations of the Parties set forth in the Liability and Risk of Loss; Intellectual Property Rights; and Transfer of Goods and Technical Data provisions of this Agreement shall continue to apply after the expiration or termination of this Agreement.

## CHOICE OF LAW

U.S. Federal law governs this Agreement for all purposes, including, but not limited to, determining the validity of the agreement, the meaning of its provisions, and the rights, obligations and remedies of the parties.

## ENTRY INTO FORCE AND TERMINATION

This Agreement will enter into force upon the date of the last signature and will remain in effect for a period of 5 years. This Agreement will automatically extend for further five-year periods. The Parties may amend this Agreement at any time by written agreement. Either Party may terminate this Agreement at any time by giving the other Party at least 60 days' written notice of its intent to terminate. In the event of termination, the terminating Party will endeavor to minimize any negative impact of such termination on the other Party.

For NASA:



Gilbert R. Kirkham  
Director  
Science Division  
Office of External Relations

01 JULY 2021  
Date

For the Geophysical Institute of Peru  
(IGP):



Dr. Hernando Tavera Huarache  
Executive President  
Geophysical Institute of Peru

June 10, 2021  
Date



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