

ENVIRONMENTAL COOPERATION

GLOBE Program

**Agreement Between the
UNITED STATES OF AMERICA
and PAKISTAN**

Signed at Islamabad November 18, 1997

with

Appendices



NOTE BY THE DEPARTMENT OF STATE

Pursuant to Public Law 89—497, approved July 8, 1966
(80 Stat. 271; 1 U.S.C. 113)—

“ . . .the Treaties and Other International Acts Series issued under the authority of the Secretary of State shall be competent evidence . . . of the treaties, international agreements other than treaties, and proclamations by the President of such treaties and international agreements other than treaties, as the case may be, therein contained, in all the courts of law and equity and of maritime jurisdiction, and in all the tribunals and public offices of the United States, and of the several States, without any further proof or authentication thereof.”

PAKISTAN

Environmental Cooperation: GLOBE Program

*Agreement signed at Islamabad November 18, 1997;
Entered into force November 18, 1997.
With appendices.*

**AGREEMENT BETWEEN THE NATIONAL OCEANIC
AND ATMOSPHERIC ADMINISTRATION OF
THE UNITED STATES OF AMERICA
AND THE MINISTRY OF ENVIRONMENT,
LOCAL GOVERNMENT AND RURAL DEVELOPMENT
OF THE ISLAMIC REPUBLIC OF PAKISTAN
FOR CO-OPERATION IN THE GLOBE PROGRAMME**

PREAMBLE

The Ministry of Environment, Local Government and Rural Development of Pakistan (hereinafter, the Pakistani side), and the U.S. National Oceanic and Atmospheric Administration, acting on behalf of itself and other U.S. Government agencies participating in the GLOBE Program (hereinafter, the U.S. side),

Intending to increase the awareness of students throughout the world about the global environment,

Seeking to contribute to increased scientific understanding of the Earth, and

Desiring to support improved student achievement in science and mathematics,

Have agreed to cooperate in the Global Learning and Observations to Benefit the Environment (GLOBE) Program as follows:

ARTICLE 1 - THE GLOBE PROGRAM

The GLOBE Program is an international environmental science and education programme that brings students, teachers, and scientists together to study the global environment. GLOBE has created an international network of students at primary, middle and secondary school levels studying environmental issues, making environmental measurements, and sharing useful environmental data with one another and the international science community.

ARTICLE 2 - RESPECTIVE RESPONSIBILITIES

A. The U.S. side will:

- 1. Identify U.S. schools that will participate in the GLOBE Program (details regarding GLOBE schools in Appendix A);**
- 2. Select, in consultation with international scientists and educators, the GLOBE environmental measurements & types of measurement equipment (described in Appendix B);**
- 3. Select Principal Investigator Teams for the GLOBE environmental measurements, and support the U.S. members of the Teams;**

4. Develop, in consultation with international scientists and educators, GLOBE educational materials;
5. Translate GLOBE instructional materials related to measurement procedures and data reporting protocols into six United Nations languages, and provide a copy of these plus all broader GLOBE educational materials to the Pakistani side for further reproduction as necessary;
6. Conduct regional training sessions for GLOBE Country Co-ordinators and GLOBE teachers who will serve as trainers for additional GLOBE teachers in Pakistan;
7. Design, develop, operate and maintain GLOBE data processing capabilities and other necessary technology and equipment;
8. Provide GLOBE software, as necessary, for use on Pakistani GLOBE school computers (to the extent possible, textual material appearing on computer screens will be accessible in the student's choice among the six United Nations languages);
9. Accept environmental data reported from GLOBE schools around the world, and develop and provide resultant global environmental images to the Pakistani side; and
10. Evaluate the overall GLOBE Program periodically, in consultation with International GLOBE Country Co-ordinators, and modify the overall program as appropriate.

B. The Pakistani side will:

1. Identify Pakistani schools that will participate in the GLOBE Program (details regarding GLOBE Schools in Appendix A) and provide an updated list of Pakistani GLOBE Schools to the U.S side at the beginning of each school year;
2. Ensure that the Pakistani GLOBE schools conduct the fundamental activities of the GLOBE Schools detailed in Appendix A (take GLOBE environmental measurements, report data, and receive and use resultant global environmental images, using GLOBE educational materials under the guidance of teachers trained to conduct the GLOBE Program);
3. Name a Pakistani Government Point of contact responsible for policy-level communications with the Director of the GLOBE Program;
4. Name a Country Co-ordinator responsible for day to day management, oversight, and facilitation of the GLOBE Program in Pakistan;

5. Ensure that the Country Co-ordinator and some GLOBE teachers attend GLOBE regional training and in turn provide GLOBE training to at least one teacher in each Pakistani GLOBE school;
6. Ensure that GLOBE instructional materials related to measurement procedures and data reporting protocols are utilized in Pakistani GLOBE schools, and that broader GLOBE educational materials are appropriately translated, adapted, reproduced, and distributed to all Pakistani GLOBE schools;
7. Ensure that the measurement equipment used by GLOBE schools to take GLOBE environmental measurements meets GLOBE specifications (described in Appendix B);
8. Ensure that teachers and students at Pakistani GLOBE schools calibrate GLOBE measurement equipment according to procedures provided in GLOBE instructional materials;
9. Ensure that Pakistani GLOBE schools have the necessary computer and communications systems to allow Internet/World Wide Web access in order to report GLOBE environmental measurements and to receive and use GLOBE environmental images; if such computer and communications systems are not available in Pakistani schools, make agreed alternative arrangements for such reporting and receipt (At a minimum, the Pakistani Country Co-ordinator will need access to the Internet so that all measurement data from Pakistani GLOBE schools will be reported via Internet.); and
10. Evaluate GLOBE operations in Pakistan periodically and assist the U.S side in conducting periodic evaluations of the overall GLOBE Program.

ARTICLE 3 - FINANCIAL ARRANGEMENTS

Each side will bear the costs of fulfilling its respective responsibilities under this agreement. Obligations of each side pursuant to this agreement are subject to its respective funding procedures and the availability of appropriated funds, personnel, and other resources. The conduct of activities under this agreement will be consistent with the relevant laws and regulations of the United States and Pakistan.

ARTICLE 4 - EXCHANGE OF DATA AND GOODS

GLOBE environmental measurements data, global environmental images, software, and educational materials will be available world wide without restriction as to their use or redistribution.

ARTICLE 5 - RELEASE OF INFORMATION ABOUT THE GLOBE PROGRAM

Each side may release information on the GLOBE Program as it may deem appropriate without prior consultation with the other.

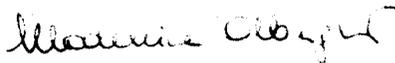
ARTICLE 6 - CUSTOMS AND IMMIGRATION

Each side will use its best efforts to facilitate the movement of persons and goods into and out of its territory and to accord entry to such goods into U.S. and Pakistani territory free of customs duties and other similar charges, as is necessary to implement this agreement, to the extent permitted by the laws and regulations of the United States and Pakistan.

ARTICLE 7 - DURATION

This agreement will enter into force upon signature of the two sides and will remain in force for five years. It will be automatically extended for further five-year periods, unless either side decides to terminate it and so notifies the other side with three months written notice. This agreement may be terminated at any time by either side upon three months prior written notice to the other side. This agreement may be amended by written agreement of the two sides.

DONE at Islamabad, Islamic Republic of Pakistan, on the 18th day of November, 1997, in duplicate.



**(MADELEINE K. ALBRIGHT)
U.S. SECRETARY OF STATE
FOR THE GOVERNMENT OF
THE UNITED STATES OF
AMERICA**



**(GOHAR AYUB KHAN)
MINISTER FOR FOREIGN AFFAIRS
FOR THE GOVERNMENT OF
THE ISLAMIC REPUBLIC OF
PAKISTAN**

APPENDIX A GLOBE Schools

Each partner country is responsible for identifying its participating schools. Schools should be selected so as to satisfy the objectives of the GLOBE Program. In particular, countries should emphasise the selection of schools that will maximise the number and geographic distribution of students world wide participating in the program. Also, countries should consider involving schools in locations that will yield measurement data that is important to the international science community.

Students at all GLOBE schools throughout the world conduct the following fundamental activities: they make environmental measurements at or near their schools; report their data to a GLOBE data processing site; receive vivid graphical global environmental images created from their data and the data of other GLOBE schools around the world; and study the environment by relating their observations and the resulting images to broader environmental topics. All of these activities are conducted under the guidance of specially trained teachers (GLOBE-trained teachers).

GLOBE educational materials are used in GLOBE schools under the guidance of GLOBE-trained teachers. These materials contain instructional materials detailing procedures for taking environmental measurements and protocols for reporting data; they also explain the significance of the measurements, guide the use of global environmental images, and integrate the measurement aspects of the program into a broader study of the environment.

APPENDIX B

GLOBE Environmental Measurements and Equipment

GLOBE environmental measurements contribute in a significant way to the scientific understanding of the global environment. Every GLOBE school is encouraged to conduct the core set of GLOBE environmental measurements in the following critical areas: Atmosphere/Climate, Hydrology, Land Cover/Biology and Soils. As the GLOBE Program evolves, specialized measurements not common to all GLOBE schools may be added in order to address local environmental issues.

Students at all skill levels are active participants in the GLOBE Program. The actual participation is designed so as to be appropriate for primary, middle and secondary school levels. Younger students make limited measurements which may be qualitative rather than quantitative. Older students make additional measurements and more sophisticated measurements, as appropriate for their skill level. Measurement equipment is not standardised; rather, functional and performance specifications are provided for GLOBE instruments.

Following is the list of GLOBE core measurements and equipment. This list has been developed and will be periodically updated as provided in Article 2.A.2, based on experience gained in implementing the GLOBE Program.

MEASUREMENTS	EQUIPMENT NEEDED
Atmosphere/Climate:	
Air Temperature	Max/Min Thermometer Calibration Thermometer Instrument Shelter
Precipitation	Rain Gauge
Cloud Cover/Type:	Cloud Charts
Hydrology:	
Water pH	pH paper, Pen, or Meter
Water Temperature	Organic Liquid-Filled Thermometer
Dissolved Oxygen	Dissolved Oxygen Kit
Alkalinity	Water Alkalinity Kit
Electrical Conductivity	Electride-Type Conductivity Tester
Land Cover / Biology:	
Land Cover	Remote Sensing Image Multispec Software
Species Identification	Dichotomous Keys

Biometry

**Measuring Tape Clinometer(Optional)
Densiometer (Optional)**

Soils:

Soil Moisture

**Soil Sample Cans
Augur
Soil Moisture Meter (Optional)
Gypsum Blocks(Optional)**

Soil Characterization

**Color Chart
Graduated Cylinders
Augur (Optional)**