

ENVIRONMENTAL COOPERATION

GLOBE Program

Agreement Between the
UNITED STATES OF AMERICA
and MONGOLIA

Signed at Ulaanbaatar May 6, 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.”

MONGOLIA

Environmental Cooperation: GLOBE Program

*Agreement signed at Ulaanbaatar May 6, 1997;
Entered into force May 6, 1997.
With appendices.*

An Agreement between
the Government of the United States of America and
the Government of Mongolia
for Cooperation in
the GLOBE Program

PREAMBLE

The Government of the United States of America (hereinafter, the U.S. side) and
the Government of Mongolia (hereinafter, the Mongolian 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
program that will bring students, teachers, and scientists together to study the
global environment. GLOBE will create an international network of students in
grades K-12 (or equivalent) studying environmental issues, making environ-
mental measures, and sharing useful environmental data with the international
environmental science community.

ARTICLE 2 - RESPECTIVE RESPONSIBILITIES

A. The U.S. side will:

1. Designate the U.S. National Oceanic and Atmospheric Administration
acting on behalf of itself and the other U.S. Government agencies
participating in the GLOBE Program, as the designated authority for
the purpose of implementing this memorandum;
2. Identify U.S. schools that will participate in the GLOBE Program
(details regarding GLOBE schools in Appendix A);

3. Select, in consultation with international scientists and educators, the GLOBE measurements and types of measurement equipment (described in Appendix B);
 4. Select Principal Investigator Teams for the GLOBE environmental measurements, and support the U.S. members of the Team;
 5. Calibrate, if necessary, measurement equipment that cannot be calibrated by GLOBE teachers and students;
 6. Develop, in consultation with international scientists and educators, GLOBE educational materials;
 7. Translate GLOBE instructional materials related to measurement procedures and data reporting protocols into the six United Nations languages, and provide these plus all broader GLOBE materials to the Mongolian side for further reproduction as necessary;
 8. Conduct annual regional training sessions for GLOBE Country Coordinators and GLOBE teachers who will serve as trainers for additional GLOBE teachers in Mongolia, and provide a copy of GLOBE training materials to the Mongolian side;
 9. Design, develop, operate and maintain GLOBE data processing capabilities and other necessary technology and equipment;
 10. Provide GLOBE software, as necessary, for use on Mongolian GLOBE school computers. (To the maximum extent possible, textual material appearing on computer screens will be available in the student's choice among the six United Nations languages.);
 11. Accept environmental data reported from GLOBE schools around the world, and develop and provide resultant global environmental images (visualization products) to the Mongolian side; and
 12. Evaluate the overall GLOBE Program periodically, in consultation with international GLOBE Country Coordinators, and modify the overall program, as appropriate.
- B. The Mongolian side will:
1. Designate the Ministry of Science, Technology, Education, and Culture as the designated authority for the purpose of implementing this memorandum;
 2. Select Mongolian schools to participate in the GLOBE Program (details regarding GLOBE schools in Appendix A) and provide an updated list

of Mongolian GLOBE schools to the U.S. side at the beginning of each school year;

3. Ensure that Mongolian GLOBE schools conduct the fundamental activities of 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);
4. Name Mongolian Government Point of Contact responsible for policy-level communications with the Director of the GLOBE Program;
5. Name a Country Coordinator responsible for day-to-day management, oversight, and facilitation of the GLOBE Program in Mongolia;
6. Ensure that the Country Coordinator and some GLOBE teachers attend GLOBE regional training and in turn provide GLOBE training to at least one teacher in each Mongolian GLOBE school;
7. Ensure that GLOBE instructional materials related to measurement procedures and data reporting protocols are utilized in Mongolian GLOBE schools; and that broader GLOBE educational materials are area appropriately translated, adapted, reproduced, and distributed to all Mongolian GLOBE schools;
8. Ensure that Mongolian GLOBE schools have the necessary measurement equipment to take GLOBE environmental measurements (described in Appendix B);
9. Ensure that teachers and students in Mongolian GLOBE schools calibrate GLOBE measurement equipment according to procedures provided in GLOBE instructional materials;
10. Ensure that Mongolian GLOBE schools have the necessary computer communications systems (described in Appendix C) to report GLOBE environmental measurements and to receive and use GLOBE visualization products, to make agreed alternative arrangements for such reporting and receipt. (At a minimum, the Mongolian Country Coordinator will need access to Internet so that all measurement data from Mongolian GLOBE schools will be reported via Internet.); and
11. Evaluate GLOBE operations in Mongolia periodically and assist the U.S. side in conducting periodic evaluation 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 two sides.

ARTICLE 4 - EXCHANGE OF DATA AND GOODS

GLOBE environmental measurement data, visualization products, software and educational materials will be available worldwide without restrictions as to their use or redistribution.

ARTICLE 5 - RELEASE OF INFORMATION ABOUT
THE GLOBE PROGRAM

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

ARTICLE 6 - CUSTOMS AND IMMIGRATION

Each side will, to the extent permitted by its laws and regulations, facilitate the movement of persons and goods necessary to implement this agreement into and out of its territory and accord entry to such goods into its territory free of customs duties and other similar charges.

ARTICLE 7 - ENTRY INTO FORCE, AMENDMENTS, WITHDRAWAL

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 with three months prior written notice to the other side. This agreement may be amended by written agreement of the two sides.

Done at Ulaanbaatar in duplicate on May 6, 1997 in the English language.

For the Government of the
United States of America

For the Government
of Mongolia

Llewellyn H. Hedgbeth

D. Munkhjargal

APPENDIX A
GLOBE Schools

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

Students at all GLOBE schools throughout the world will conduct the following fundamental activities: they will 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 from 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 will be 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 the 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 dynamics 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 will be 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 to their skill level. Measurement equipment is not standardized; rather, functional and performance specifications are provided for GLOBE instruments.

Following is a list of GLOBE core measurements and equipment. The list has been developed and will be periodically updated as provided in Article 2.A.3. 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	Electrode-Type Conductivity Tester
Land Cover/Biology:	
Land Cover	Remote Sensing Image Multispec Software
Species Identification	Dichotomous Keys
Biometry	Measuring Tape Clinometer (Optional) Densimeter (Optional)

Soils:

Soil Moisture

Soil Sample Cans

Augur

Soil Moisture Meter (Optional)

Gypsum Blocks (Optional)

Soil Characterization

Color Chart

Graduated Cylinders

Augur (Optional)

APPENDIX C

GLOBE Computer and Communications Systems

In order to derive maximum benefit from the GLOBE Program, all schools are encouraged to use the Internet, along with classroom computers. The Internet/World Wide Web multi-media information-access capability has been selected to support the required GLOBE school activities of data entry, data analysis, and use of global environmental images.

The diversity of technology accessible by schools worldwide may require, in some cases, that environmental measurements be reported via e-mail or in hardcopy and that a variety of media, including e-mail and hardcopy, be used to distribute global environmental images. All schools that want to participate in the program will be accommodated.

Technology associated with the GLOBE Program will continually evolve to higher levels and participants will be encouraged to upgrade over time.