

ENVIRONMENTAL COOPERATION

GLOBE Program

Agreement Between the
UNITED STATES OF AMERICA
and SOUTH AFRICA

Signed at Cape Town February 17, 1997

with

Annexures



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.”

SOUTH AFRICA

Environmental Cooperation: GLOBE Program

*Agreement signed at Cape Town February 17, 1997;
Entered into force February 17, 1997.
With annexures.*

Agreement between
the Government of the United States of America and
the Government of the Republic of South Africa
for Cooperation in the GLOBE Program

PREAMBLE

The Government of the United States of America and the Government of the Republic of South Africa (hereinafter jointly referred to as the "Parties" and in the singular as a "Party"),

INTENDING to increase the awareness of students throughout the world about the global environment;

SEEKING to contribute to increased scientific understanding of the Earth;

DESIRING to support improved student achievement in science and mathematics;

HAVE AGREED to cooperate in the Global Learning and Observations to Benefit the Environment (hereinafter referred to as 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 primary and secondary schools studying environmental issues, making environmental measurements, and sharing useful environmental data with the international environmental science community.

ARTICLE 2
COOPERATING AGENCIES

The agencies responsible for cooperation and coordination under this agreement shall be:

- a) for the United States of America, the U.S. National Oceanic and Atmospheric Administration, acting in conjunction with other U.S. Government agencies participating in the GLOBE Program; and

- b) for the Republic of South Africa, the Department of Arts, Culture, Science and Technology.

ARTICLE 3
RESPECTIVE RESPONSIBILITIES

- A. The United States of America shall:
1. Identify U.S. schools that will participate in the GLOBE Program (details regarding GLOBE schools are contained in Annexure A);
 2. Select, in consultation with international scientists and educators, the GLOBE environmental measurements and types of measurement equipment as described in Annexure B);
 3. Select Principal Investigator Teams for the GLOBE environmental measurements, and support the U.S. members of the Teams;
 4. Calibrate, if necessary, measurement equipment that cannot be calibrated by GLOBE teachers and students;
 5. Develop, in consultation with international scientists and educators, GLOBE educational materials;
 6. 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 educational materials to South Africa for further reproduction as may be necessary;
 7. Conduct annual regional training sessions for GLOBE Country Coordinators and GLOBE teachers who will serve as trainers for additional GLOBE teachers in South Africa, and provide a copy of GLOBE training materials to South Africa;
 8. Design, develop, operate, and maintain GLOBE data processing capabilities and other necessary technology and equipment;
 9. Provide GLOBE software, as necessary, for use on South African GLOBE school computers. (To the maximum extent possible, textual material appearing on computer screens will be accessible in the student's choice among the six United Nations languages.);
 10. Accept environmental data reported from GLOBE schools around the world, and develop and provide resultant global environmental images (visualization products) to South Africa; and

11. Evaluate the overall GLOBE Program periodically, in consultation with international GLOBE Country Coordinators, and modify the overall program as appropriate.
- B. The Republic of South Africa shall:
1. Select South African schools to participate in the GLOBE Program (details regarding GLOBE schools are contained at Annexure A) and provide an updated list of South African GLOBE schools to the U.S. at the beginning of each school year;
 2. Ensure that South African GLOBE schools conduct the fundamental activities of GLOBE schools detailed at Annexure A;
 3. Name a South African Government Point of Contact responsible for policy-level communications with the Director of the GLOBE Program;
 4. Name a Country Coordinator responsible for day-to-day management, oversight, and facilitation of the GLOBE Program in South Africa;
 5. 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 South African GLOBE school;
 6. Ensure that GLOBE instructional materials related to measurement procedures and data reporting protocols are utilized in South African GLOBE schools, and that broader GLOBE educational materials are appropriately translated, adapted, reproduced, and distributed to all South African GLOBE schools;
 7. Ensure that South African GLOBE schools have the necessary measurement equipment to take GLOBE environmental measurements (described in Annexure B);
 8. Ensure that teachers and students at South African GLOBE schools calibrate GLOBE measurement equipment according to procedures provided in GLOBE instructional materials;
 9. Ensure that South African GLOBE schools have the necessary computer and communications systems (described in Annexure C) to report GLOBE environmental measurements and to receive and use GLOBE visualization products, or make agreed alternative arrangements for such reporting and receipt. (At a minimum, the South African Country Coordinator will need access to Internet so that all measurement data from South African GLOBE schools will be reported via Internet.); and

10. Evaluate GLOBE operations in South Africa periodically and assist the U.S. in conducting periodic evaluation of the overall GLOBE Program.

ARTICLE 4

FINANCIAL AND LEGAL ARRANGEMENTS

Each Party shall bear the costs of fulfilling its respective responsibilities under this Agreement. Obligations of each Party 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 municipal law of the respective States.

ARTICLE 5

EXCHANGE OF DATA AND GOODS

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

ARTICLE 6

RELEASE OF INFORMATION ABOUT THE GLOBE PROGRAM

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

ARTICLE 7

CUSTOMS AND IMMIGRATION

The Parties shall, to the extent permitted by the municipal law of their respective States, 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 8

ENTRY INTO FORCE, AMENDMENTS, WITHDRAWAL

Each Party has complied with the constitutional requirements necessary for the implementation of this Agreement and this Agreement shall enter into force on the date here-of.

This Agreement shall remain in force until either Party decides to terminate it and notifies the other Party accordingly with three months written notice through the diplomatic channel.

This Agreement may be amended by mutual agreement between the Parties. An amendment mutually agreed to by the Parties shall enter into force on the date on which each Party has notified the other through the diplomatic channel of its compliance with the constitutional requirements necessary for the implementation of the relevant amendment.

IN WITNESS WHEREOF, the undersigned, being duly authorized by their respective Governments, have signed and sealed this Agreement.

Done at Cape Town on this 17th day of February, 1997, in duplicate in the English language.

FOR AND ON BEHALF OF
THE GOVERNMENT OF THE
UNITED STATES OF AMERICA

Al Gore

FOR AND ON BEHALF OF
THE GOVERNMENT OF THE
REPUBLIC OF SOUTH AFRICA

Thabo Mbecki

ANNEXURE 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 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 (visualization products) 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 visualization products to broader environmental topics. All of these activities will be 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 will detail procedures for taking environmental measurements and protocols for reporting data; explain the significance of the measurements; guide the use of the visualization products; and integrate the measurement aspects of the program into a broader study of the environment.

Schools throughout the United States and the rest of the world that are not GLOBE schools may become GLOBE Affiliate schools by observing the GLOBE Program in operation through the Internet. Students at these schools will benefit from the use of GLOBE visualization products and educational materials accessible on-line. All GLOBE Affiliate schools will be encouraged to become participating GLOBE schools.

ANNEXURE B

GLOBE Environmental Measurements and Equipment

GLOBE environmental measurements will contribute in a significant way to the scientific understanding of the dynamics of the global environment. Every GLOBE school will conduct a core set of GLOBE environmental measurements in the following critical areas: Atmosphere/Climate, Hydrology/Water Chemistry, and Biology/Geology. Where possible, a GLOBE school may coordinate its activities with those of other neighboring GLOBE schools, so that the complete set of GLOBE measurements will be available from a locality. As the GLOBE Program evolves, elective measurements not common to all GLOBE schools may be added in order to address local environmental issues.

Students at all age levels will be active participants in the GLOBE Program. The actual participation will be designed so as to be grade-appropriate for grades K-5, 6-8, and 9-12 (or equivalent). Younger students will make limited measurements which may be qualitative rather than quantitative. Older students will make additional measurements and more sophisticated measurements, as appropriate for their grade level. Measurement equipment will not need to be standardized; rather, performance specifications will be provided.

Following is an example list of core measurements and equipment. The full list will be initially determined and periodically updated as provided in Article 3.A.2, based on experience gained in implementing the GLOBE Program.

MEASUREMENTS**Atmosphere/Climate:**

Air Temperature

Precipitation

Cloud Cover/Type

Hydrology/Water Chemistry:

Water pH

Water Temperature

Soil Moisture

Biology/Geology:

Habitat Study

Tree Height

Tree Canopy

Tree Diameter

Species Identification

EQUIPMENT NEEDED

Max/Min Thermometer

Calibration Thermometer

Instrument Shelter

Rain Gauge

Cloud Charts

pH Paper, Pen, or Meter

Alcohol Thermometer

Gypsum Block Sensors

Soil Moisture Meter

Compass

Meter Measuring Tape

Surveying Markers or Stakes

Clinometer

Densimeter

Diameter Tape

Dichotomous Keys

ANNEXURE C

GLOBE Computer and Communications Systems

In order to derive maximum benefit from the GLOBE Program, all schools will be encouraged to use an international information network, initially using the Internet, along with classroom computers. The World Wide Web multi-media information-access capability has been selected as the basis for IBM-compatible and Apple Macintosh computer systems to support the required GLOBE school activities of data entry, data analysis, and use of GLOBE environmental images. Following is a description of GLOBE computer and communications systems consistent with current GLOBE requirements.

Overall attributes of the minimum GLOBE school computer configuration that can execute the necessary software are:

For IBM-compatible systems: a 386 SX or higher level processor; at least 4 megabytes of RAM memory (8 megabytes preferred); a VGA-capable monitor and display driver (Super VGA preferred); a hard disk storage system with as large a capacity as possible (preferably 300 megabytes or larger); and a direct Internet connection or dial-up capability that can use SLIP or PPP protocols with a 14,400 bps modem (preferably supporting V.42bis data compression which can enable 57,600 bps operation). The Windows 3.1 or later operating system is necessary. A printer is desirable.

For Apple Macintosh systems: a 68030 20 Mhz or faster processor; at least 4 megabytes of RAM memory (8 megabytes preferred); a hard disk storage system with as large a capacity as possible (preferably 300 megabytes or larger); and a direct Internet connection or dial-up capability that can use SLIP or PPP protocols with a 14,400 bps modem (preferably supporting V.42bis data compression which can enable 57,600 bps operation). A printer is desirable.

Software for a higher performance GLOBE school computer system is being developed that will operate on higher performance, multi-media IBM-compatible systems and on Apple Macintosh systems. For IBM-compatible systems: a 486/66 or faster processor; 16 megabytes of RAM memory; 500 megabytes of hard disk space; a Super VGA monitor; a double-speed CD-ROM reader; a Soundblaster-compatible sound card; and an MPEG animation speed-up board will be required. For Apple Macintosh systems: a PowerPC processor; 16 megabytes of RAM memory; 500 megabytes of hard disk space; and a double-speed CD-ROM reader will be required. A communications capability the same as or

better than for the minimum configurations above will also be required. A printer will be highly desirable.

It is recognized that there is a broad range of technological capabilities among potential GLOBE schools. The diversity of technology accessible by schools worldwide may require in some cases that environmental measurements be reported in hardcopy and that a variety of media be used to distribute visualization products, including photographs and broadcast television. 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.