



GLOBE Program Summary

GLOBE (Global Learning and Observations to Benefit the Environment) is a worldwide hands-on, primary and secondary school-based science and education program. Announced in 1994, GLOBE began operations on Earth Day 1995. Today, the international GLOBE network has grown to include representatives from 110 participating countries and over 100 U.S. Partners coordinating GLOBE activities that are integrated into their local and regional communities. Due to their efforts, there are more than 40,000 GLOBE-trained teachers representing over 20,000 schools around the world. GLOBE students have contributed more than 18 million measurements to the GLOBE database for use in their inquiry-based science projects. The goals of the GLOBE Program are to:

- Improve student achievement across the curriculum with a focus on student research in environmental and Earth system science;
- Enhance awareness and support activities of individuals throughout the world to benefit the environment;
- Contribute to scientific understanding of Earth as a system; and
- Inspire the next generation of global scientists.

Scientists and educators have developed environmental science educational materials as a resource for GLOBE teachers, including 54 scientific protocols, 60 Learning Activities, and many additional supplemental resources and activities.

GLOBE students measure and report physical, chemical and biological properties of Atmosphere and Climate, Hydrology, Soil, Land Cover/Biology and Phenology. The resulting global data sets are made freely available via the Internet at <www.globe.gov> to users including the worldwide environmental science community. GLOBE students also access these data for classroom studies, research, student-scientist partnerships, and worldwide school-to-school collaborations.

The current step in the evolution of the GLOBE Program, referred to as the “Next Generation GLOBE” (NGG), is aimed at increasing the number of student inquiry-based research projects focused on international large-scale science initiatives. The National Aeronautics and Space Administration (NASA) and the National Science Foundation (NSF) have identified 4 new Earth System Science Projects (ESSPs) to add to the suite of educational activities and resources GLOBE has offered to students and teachers since 1995:

- Watershed Dynamics
- From Local to Extreme Environments (FLEXE)
- Seasons and Biomes
- Carbon Cycle

The GLOBE Program provides opportunities for students, teachers, scientists, and community members to work together through the GLOBE Schools Network, the international GLOBE Alumni organization, and the GLOBE Parent Council in support of student learning and research.

GLOBE supports education by providing hands-on experience in authentic science. GLOBE students are doing science, not just learning about the work of others. Students begin with measurements of individual environmental parameters and build how to better understand, sustain and improve Earth’s environment at local, regional, and global scales.

NGG highlights GLOBE’s essential elements of being both education and Earth system science, a bridge between these two international communities, a worldwide collaborative community of practice, and a program that employs inquiry based educational activities that involve students in “authentic” hands-on science, the analysis of data and the use of scientifically-tested protocols.





Educational

GLOBE provides a variety of K–12 educational materials, from hands-on inquiry activities for classroom use to online interactive learning experiences and investigations using student-collected data.



GLOBE Teacher's Guide

The GLOBE Teacher's Guide provides the scientific and educational foundation for the first generation of GLOBE investigations: Atmosphere, Hydrology, Land Cover, Phenology, and Soil. It includes information necessary for accurate data collection such as measurement procedures, student lab and field guides, instrument specifications, and scientific background information. The Teacher's Guide also includes a variety of Learning Activities that complement data collection and extend student understanding of the Earth as a system through a hands-on and inquiry-based approach.

Elementary GLOBE

GLOBE has developed a suite of storybooks and learning activities specifically designed for grades K–4 that form the Elementary GLOBE Unit. This unit engages the youngest GLOBE students in an age-appropriate fashion. These standards-based and classroom-tested resources include five modules that each address parts of the Earth system while also building literacy skills.





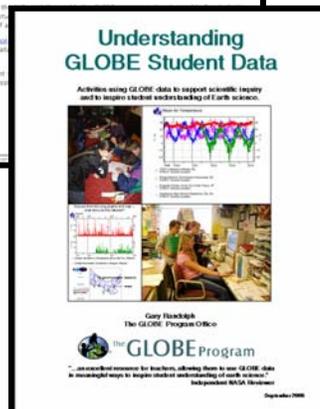
Online Teaching Modules

The GLOBE Program has developed Interactive online resources to promote understanding of GLOBE Program content and scientific protocols. Resources combine graphics and interactivity to promote understanding through a hands-on approach that has been established as a successful model for online learning. The Cloud Protocols module (shown here) promotes scientific understanding of cloud formation, content on identification of cloud types, and Interactive features to help online learners accurately collect data related to the GLOBE protocols.



Data Use Activities

Educational materials have been designed to encourage student analysis and interpretation of data. The data use activities foster student investigation of environmental data using the GLOBE Web site and its online graphing tools. GLOBE educational technologists are exploring additional learning models to encourage student interpretation of data in an online and inquiry-based format.





GLOBE Learning Expeditions

GLOBE Learning Expeditions (GLEs) are organized every several years in order to provide students around the world the opportunity to meet one another, establish friendships and develop collaborative partnerships that will enhance their future GLOBE experience. These conferences also provide teachers an opportunity to share ideas and challenges from their GLOBE experiences, to attend protocol and activity enrichment sessions, and to develop research partnerships between schools. GLEs have occurred in 1998 (Helsinki, Finland), 2000 (Arkansas, U.S.A.), and Šibenik, Croatia (2003). The most recent GLE was held 22-27 June in Cape Town, South Africa. For further information visit www.globe.gov/gle2008.



GLOBE Annual Conferences

GLOBE Annual Conferences bring together GLOBE Country Coordinators, U.S. Partnership Coordinators, Science and Education Principal Investigators, and Partnering Organizations from around the world to address key science and education issues. These events offer a unique opportunity for participants to learn about the latest scientific research, interact with the GLOBE community, and develop collaborative student research partnerships with scientists and schools from around the world. The next Annual Conference is scheduled for 2009 in Calgary, Alberta, Canada.





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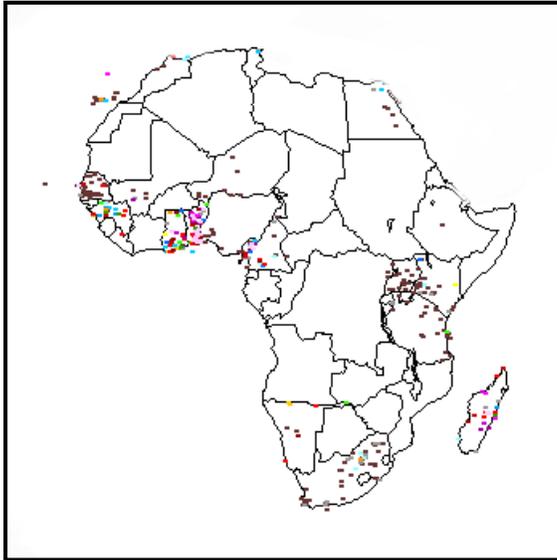


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Africa
Teachers: 1,057 Schools: 629
Data Reported: 1,017,479

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GLOBE PARTNER Newsletter

Africa Newsletters

- [GLOBE PARTNER Newsletter](#) GLOBE Newsletter 2006 Vol 2 (16 Oct 2006)
- [GLOBE PARTNER Newsletter](#) GLOBE Regional News in Africa 2006, Vol. 1 (2 May 2006)
- [GLOBE PARTNER Newsletter](#) Africa Newsletter (30 Sep 2005)
- [GLOBE PARTNER Newsletter](#) Africa Regional Spring Newsletter (31 Mar 2005)

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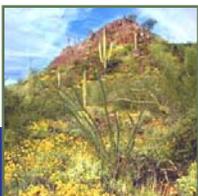
The GLOBE Program Newsletter 2006, Vol. 2

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Greetings!

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GLOBE Online Newsletters



Highlights of GLOBE Activities in Africa

GLOBE Africa Consortium (GAC):

- On 26 April 2007, 17 African countries met in Riversdale, South Africa, to establish a Memorandum of Understanding (MOU) formalizing the Africa Regional Consortium. The goals of the consortium are:
- To promote and strengthen regional and international functions and relations among students and teachers in GLOBE countries;
- To develop strategies that encourage scientific communities to collaborate and increase environmental education awareness for sustainable development;
- To promote and apply quality science that will improve on the quality of life for local Communities; and
- To encourage the GLOBE Program approach, “learning by doing,” into national curricula.

Regional Events/Collaboration:

- The Annual GLOBE Africa Meeting was held 20-21 June 2008 in Cape Town, South Africa. Representatives from GLOBE partner countries Benin, Cameroon, Ethiopia, Guinea, Madagascar, Namibia, Rwanda, Senegal, South Africa, Tanzania, and Uganda presented country status reports, and developed strategies to expand national and regional implementation.

Regional Conferences with GLOBE Representation:

- Sahel Conference 2007: Improving Lives by Understanding Weather, Ougadougou, Burkina Faso.
- Multilateral Initiative for Malaria. Yaoundé, Cameroon, November, 2005.
- African Monsoon Multidisciplinary Analysis (AMMA), Dakar, Senegal, November 2005
- World Meteorological Organization (WMO) Brazzaville, Congo, November 2004

Recent Regional Workshops:

- Teacher Workshop, Yaounde, Cameroon, September 2007, August 2008
- Teacher Training Workshop, Niamey, Niger, August 2007
- Teacher Workshop, Riversdale, South Africa April 2007
- Teacher Workshop, Osun State, Nigeria, April 2007
- International Master Training Workshop, Kampala, Uganda, 2006

GLOBE Africa has 19 Master Trainers, 12 Assistant Master Trainers, 202 Trainers, and 1057 teacher participants. To access the list of Trainers, please visit the following URL:

<http://globe.gov/fsl/workshop/MasterList.pl>.





Highlights of GLOBE Stars and News and Events in Africa



Benin, Committed GLOBE Partner, Hosts First GLOBE International Atmosphere Symposium

May 23, 2001

In April this year, the West African nation of Benin celebrated six years of strong growth in the GLOBE program as host of the First GLOBE International Atmosphere Symposium.

In April 1995, eight Beninese schools joined GLOBE. This year, Benin supports more than 75 schools that regularly report GLOBE data and conduct GLOBE activities.

Benin's Minister of Education, Mr. Damzen Z. Alahassa, and



Ghana's Lively Program Expands

January 08, 2002

More than 90 teachers from across Ghana convened for the country's first GLOBE Teachers Conference, which included a launch of the recently added ozone and aerosol protocols. Trainers and trainees also tested the deep red clay and sandy soils, which contrasted mightily with the equally deep greens of the area's vegetation. Clothing of lovely patterned fabrics, added to the striking beauty of the surroundings. The colors were matched by strong feelings of energy and enthusiasm among the group.

Ghana's GLOBE Country Coordinator Reverend Emmanuel Kingley Dadebo echoed that sense of energy. "The black star in the flag of Ghana will rise high in the sky with GLOBE data," he said. Ghana and 36 secondary schools joined the GLOBE program three years ago. There are now three GLOBE-trained teachers at each of the GLOBE schools and the program.



Nigerians Participate at Texas Workshop

Strong connections are being made between the Ministry of Education in Nigeria, the University of North Texas and North Lake College, Texas. Twelve mathematics, physics, biology, and chemistry teachers from throughout Nigeria participated at a workshop held at the University of North Texas between January 12 and 31, 2005. A grant received by Rafiq Durodoye from Allied Consulting and Educational Partnership of Texas allowed this unique opportunity to occur. This is the second workshop at which Nigerians came to the United States; the first workshop was held at the University of North Texas and North Lake College during November 15-30, 2002.



South African School Recognized for Environmental Initiatives

March 17, 2006

On 30 January 2006 the South African Indwe Secondary School received an Eco-Flag in recognition for their efforts towards environmental awareness.



Ouverture au Cameroun du Centre régional GLOBE pour le Développement professionnel et création de l'Association camerounaise des enseignants scientifiques

Riviera 17, 2006

Globe Cameroun s'impose de plus en plus comme un pôle régional de perfectionnement pédagogique pour les enseignants africains des sciences, des mathématiques et de technologie de l'Afrique sub-saharienne. Sous la houlette de madame Margaret BESONG, coordinatrice nationale du GLOBE Programme au Cameroun, GLOBE a ouvert dans ce pays un Centre régional des Conférences pour le développement professionnel. Par ailleurs, à l'instar des Associations des enseignants scientifiques du Nigeria (STAN), du Ghana, et de l'Association africaine des enseignants scientifiques (NSTA), madame BESONG et l'équipe des Inspecteurs pédagogiques nationaux ont œuvré à la création de l'Association camerounaise des enseignants des sciences (CAMSTA).



De gauche à droite TAMBO Ivo, Secrétaire général du Ministère des enseignements secondaires, et ZOUA Abraham, Secrétaire général du Ministère de l'Éducation de base.



Ten Countries Participate in GLOBE International Training Workshop Regional Meeting

January 10, 2006

An International Training Workshop took place in Niamey, Niger, during the week of 21 November 2005. The Niger Ministry of Education and the United Nations Development Programme (UNDP) graciously hosted the workshop at the Ecole des Mines, de l'Industrie et de la Géologie (EMIG). The training team came from Benin, Cameroon, Cape Verde, Congo (Brazzaville), Gabon, Mali, Mauritania, Niger, Senegal, and the United States. Nearly 70 participants attended, including primary and secondary school teachers, school inspectors, school administrators, and Ministries of Education officials. In addition, there were participants from Peace Corps, World Meteorological Organization (WMO), and two regional science centers, the Institute International de Recherche sur les Cultures des Zones Tropicales Semi-arides (ICRSAT) and the African Center of Meteorological Applications for Development (ACMAD).



Madame Djibrilou Safia Moustapha, GLOBE Country Co-ordinator for Niger, organized an outstanding workshop for French-speaking Africa. Many thanks are extended to Madame Djibrilou, her staff and Monsieur Hamma Harouna, Ministre de l'Éducation de Base et de l'Alphabétisation.

The workshop provided the forum to bring together many teachers, administrators and



The GLOBE Program office wants to hear stories of projects and people who shine. These are our 'Stars', the bright lights that spark our imagination and inspire us with news of GLOBE at work in the world. Tell us about the stars in your universe. Write to your desk officer about students, teachers, schools, projects or awards that you would like to bring to the attention of the worldwide GLOBE community.



For more information contact:

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GLOBE Africa Alternate Chair:
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GLOBE Africa Past Chair:
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For more information on GLOBE Alumni activities in the African Region contact the regional representative: <africa-alumni-regionalrep@globe.gov>

For more information from the GLOBE Program Office regarding activities in the African Region contact the GLOBE Regional Desk Officer at: <africa@globe.gov>



GLOBE was the winner of the 2004 Goldman Sachs Foundation Prize for Excellence in International Education in the Media and Technology Category.

The Goldman Sachs Foundation and the Asia Society stated that GLOBE was selected *“for the unique reach of its work around the world and its ability to bring international education to life through the process of scientific inquiry. GLOBE serves as inspiration and a model of excellence to schools and programs seeking to bring the world into our classrooms.”*



Featured in the Phi Delta Kappan International Studies Resource Guide – November 2004 • Volume 86 • Number 3
www.pdkintl.org/kappan/k_v86/k0411ka3.htm



GLOBE is an interagency program funded by the U.S. National Aeronautics and Space Administration (NASA) and the U.S. National Science Foundation (NSF), supported by the U.S. Department of State, and implemented through a cooperative agreement between NASA, the University Corporation for Atmospheric Research (UCAR) in Boulder, Colorado, and Colorado State University in Fort Collins, Colorado.

