



The GLOBE Program

*Global Learning and Observations to Benefit the Environment
An International Environmental Science and Education Partnership*

GLOBE International Master Trainer Program

Overview

The International Master Trainer Program was created in an effort to assist regions to create cadres of highly-qualified GLOBE Trainers who are experienced in organizing Regional (international) GLOBE Workshops and can train one or more GLOBE investigation areas at regional training workshops without assistance from GLOBE Program Office staff in the United States. The benefits include more ownership of GLOBE by Regional GLOBE Consortia leading to self sustaining training efforts, greater independence of Regional GLOBE Programs from the GLOBE Program Office, as well as allowing resources at the GLOBE Program Office to focus on the new Integrated Earth System Science Projects (IESSPs) requiring intense programmatic attention and maintenance for the benefit of all GLOBE regions.

The GLOBE Program is working to ensure that a complete group of GLOBE International Master Trainers (MTs) representing all GLOBE regions are prepared to train specific GLOBE protocols identified within the GLOBE investigation areas to support regional efforts. This commitment supports GLOBE's key goal of promoting the sustainability of GLOBE activities in all regions. In an attempt to support the building of the International Master Trainer Program, the GLOBE Program Office has been covering the expenses associated with the attendance and participation of Master Trainer Candidates at the international training events while they are completing the MT Program (this includes expenses related to travel and lodging, but not honorarium or salary). In addition, the GLOBE Program Office maintains a database of all GLOBE MTs on the GLOBE Web site so that our Partners can easily locate and contact certified trainers to assist in their training and outreach events.

Prior to entering the International Master Trainer Program, MT candidates should decide whether they have enough flexibility in their jobs to commit the necessary time to GLOBE regional training activities. With this information, County Coordinators, working in conjunction with their associated Regional GLOBE Consortium, can select their candidates, taking into consideration how often, and under what circumstances, candidates who enter the International Master Trainer Program will be available to train at their regional workshops in the future.

Certified (MTs) know how to conduct high-quality GLOBE workshops and are authorized by the Country Coordinator and the associated Regional Consortium to train GLOBE Trainers, giving GLOBE countries and their regions the opportunity to increase the number of their GLOBE teachers and trainers quickly and independently of the GLOBE Program Office.

International Master Trainers by Region

The total number of GLOBE International Master Trainers is 64 as of 20 September 2005. The table below shows number of certifications in the Master Trainer Program (MT = Master Trainer; AT = Assistant Trainer). The actual number of individuals is less, especially for the U.S., where there are numerous trainers with multiple certifications and some with certifications in all investigation areas. For international, the difference in individuals and certifications is negligible.

MT / AT	REGION	ATMOS		HYDRO		LANDCOVER		SOIL	
		MT	AT	MT	AT	MT	AT	MT	AT
4 / 7	Africa	2	2	0	2	2	1	0	2
9 / 10	Asia	3	1	4	2	1	3	1	4
3 / 5	Central and South America	1	2	0	2	1	1	0	1
7 / 3	Europe	2	1	3	1	1	1	1	0
0 / 10	Middle East	0	3	0	3	0	2	0	2
5 / 0	Russia and CIS	1	0	1	0	2	0	1	0
34 / 1	North America	21	1	21	0	17 (includes 9 in Phenology)	0	21	0
113 / 37		32	10	29	10	27	8	25	9

Regional Master Trainer Policy

In response to our Partners' requests to have the capability to train GLOBE Trainers independent of the GLOBE Office and issues related to programmatic long-term regional sustainability, the concept of a GLOBE International Master Trainer was developed in 2001. This concept is also one part of a larger goal to create regional hubs throughout the world (for more details, see the White Paper on GLOBE Regionalization). It is our goal to establish groups or cadres of International Master Trainers in distinct regions who together can train the full set of GLOBE protocols independent of the GLOBE Program office. Additionally, Master Trainers who are able to train in one of the six U.N. languages relevant to the region is encouraged. The GLOBE Program Office maintains a database of individuals who have attained GLOBE Master Trainer status as a resource to Partners for their training workshops.

1. It is a goal of the GLOBE Program Office to certify Master Trainers in each of the GLOBE Investigation Areas in regions throughout the world. This goal was implemented after a series of discussions with our Partners. Partners requested to have the capability to train GLOBE Trainers independent of the GLOBE Program Office. The GLOBE Master Trainer Policy was therefore developed by the GLOBE Program Office in consultation with GLOBE's International Partners.
2. In order to insure that Master Trainers are qualified (follow the protocols, understand the science concepts, apply inquiry-based pedagogy (see the GLOBE Teacher's Guide, Implementation Guide, Appendix-8), work as a team member with other Master Trainers, and participate in pre- and post workshop activities), Master Trainer candidates are nominated by their Country Coordinators. It is envisioned that in the future, regions will

monitor their Master Trainers in order to maintain an active cadre of trainers for their region.

3. Currently, regional training teams are selected in a manner to maximize the number of certified regional Master Trainers, Assistant Master Trainers, and Master Trainer Candidates participating in each workshop, as well as minimize the number of workshop team members traveling from outside the region where the workshop is being held. Preferences will be given to those trainers with substantial GLOBE History, appropriate language skills, covering their own travel expenses, and proximity to workshop location.

GLOBE Master Trainer Requirements and Process

Definition of a Master Trainer

An individual who has completed the required criteria (see below) to become certified to train new GLOBE Trainers and Teachers in one or more of the five GLOBE science investigation areas which are broken into eight groups of GLOBE measurement protocols.

Criteria

1. Master Train Candidates must have demonstrated capability to effectively train the entire set of protocols in the specific GLOBE investigation areas in which (s)he hopes to train. This includes an understanding of the science content, use of data, and the ability to report and analyze data according to GLOBE procedures in the language(s) in which they are proficient.
2. The Country Coordinator must concur that the individual can enter the International Master Trainer Program. Regional concurrence is encouraged.

Nomination Process

Country Coordinators should submit recommendations for Master Trainer Candidates to the GLOBE Regional Desk Officer facilitating the international training. Supporting documentation reviewed by the Country Coordinator for selecting Candidates may include resume, CV, and special documentation of materials showing relevant experience for consideration.

NOTE: GLOBE science investigators, both Principal Investigators (PI's) and Co-Investigators (Co-I's) do not automatically qualify to train trainers in the area of their investigation. They must work with the GLOBE Science and Education Teams on an individual basis to ensure they have a clear understanding of GLOBE objectives and the GLOBE procedures for inquiry-based training prior to obtaining Master Trainer Status in the area of their investigation.

Protocol Groups for Trainers and Master Trainers

Atmosphere, Basic
Atmosphere, Advanced
Phenology
Hydrology
Soil, Basic
Soil, Advanced

Land Cover, Basic
 Land Cover, Advanced

NOTE: If a trainer wants to become a Master Trainer for more than one science investigations, these steps must be repeated for the second and subsequent investigation areas.

Requirements

Due to the need to provide quality Master Trainers around the world, GLOBE provides several paths to becoming an International Master Trainer. Traditional and Advanced Tracks are described below.

Traditional Master Trainer Track:

Step 1	Step 2	Step 3	Step4	Step 5	Step 6	Step 7	Step 8
Comprehensive Understanding of the GLOBE Program	Attend TTT	Train at 2 teacher workshops	Assist at TTT	Assessment I	Lead Trainer	Assessment II	Master Trainer

The traditional route mandates fulfilling the following requirements:

Step 1: Gain comprehensive understanding of the GLOBE Program. Before attending this training workshop, participant should already have a comprehensive understanding of the GLOBE Program and be familiar with the GLOBE Web site.

Step 2: Attend GLOBE Train-the-Trainer Workshop(s) and become certified as a GLOBE Trainer in one or more of the GLOBE investigation areas.

Step 3: Confirmation of Master Trainer Candidate. Country Coordinator nominates Master Trainer Candidate and provides confirmation that the trainer has trained GLOBE teachers in at least two teacher training workshops.

Step 4: Assistant Trainer: Serve as an Assistant Trainer at a GLOBE International Train-the-Trainer Workshop for a group of protocols. At the Workshop, the Assistant Trainer will train a **minimum of two protocols** using inquiry techniques (see the GLOBE Teacher’s Guide, Implementation Guide, Appendix-8) in addition to assisting the Master Trainer with other protocols in the investigation area and assist with set up/tear down of all activities related to training.

Step 5: Assessment I: The Master Trainer will evaluate the Assistant Trainer and provide written recommendations to the Assistant Trainer prior to proceeding to step 5 (e.g., learn more material, complete Web-based instruction, assist at a second GLOBE Train-the-Trainer Workshop, etc). The Master Trainer also provides this information to the Country Coordinator, Regional Consortium (if appropriate) and the GLOBE Regional Desk Officer.

Step 6: Lead Trainer: Serve as the Lead Trainer for a complete group of measurement protocols at a GLOBE International Train-the-Trainer Workshop. Following completion of the Workshop, the GLOBE Facilitator and Master Trainer will either certify the Lead Trainer

as a Master Trainer or make recommendations on what the Lead Trainer needs to do prior to becoming a Master Trainer (e.g., learn more material, be a Lead Trainer at a second GLOBE Train-the Trainer Workshop, complete Web-based instruction, etc.). This information is also provided to Country Coordinator, Regional Consortium (if appropriate) and the GLOBE Regional Desk Officer.

Step 7: Assessment II: The Master Trainer will evaluate the Assistant Trainer and provide written recommendations to the Assistant Trainer prior to becoming a Master Trainer (e.g., learn more material, complete Web-based instruction, lead at a second GLOBE Train-the-Trainer Workshop, etc). Successful completion of step 6 with the approval of the Country Coordinator results in Master Trainer Certification. Again, information is provided to all involved.

Advanced Track Master Trainer:

The Advanced Track provides some flexibility in how Candidates proceed through the Master Trainer Program. At the discretion of the Country Coordinator, Regional Consortia or GLOBE Program Office, a Candidate may more quickly be promoted through the steps based on their professional and work experience. This process is designed to allow Candidates with substantial scientific background (education, work experience, and/or GLOBE experience) to qualify early as Master Trainers. Advanced Track Master Trainers may be promoted to one of the first 4 steps based on the criteria outlined below:

Step 1	Step 2	Step 3	Step 4	Step 5	Step 6	Step 7	
Comprehensive Understanding of the GLOBE Program	Attend TTT	Train at 2 teacher workshops	Assist at TTT	Assessment I	Lead	Assessment II	Master Trainer
*MT Candidates may be promoted through these steps as determined by the GLOBE Science and Education Teams.							

Qualification Criteria for the Advanced Track

The criteria below are designed as important qualifications to being promoted to the Advanced Track. The list is not meant to be exhaustive, nor is the criteria the only way that one might advance. Criteria that best reflects the regional goals and objectives of GLOBE implementation should be followed.

1. Demonstrated Educational or Professional experience in a related field:
 - Equivalent of a Master’s or Ph.D. in a related science field.
 - At least 5 years work experience in a related science field.
 - Special one-on-one training prior to training at a workshop.
2. Participation at other GLOBE events (e.g. annual conference, GLC workshop, GLOBE symposium, etc).
 - Success completion as a participant of a Teacher Training Workshop.
 - Equivalent of 5 years or more of Teaching Experience.
 - Special one-on-one training prior to training at a workshop.