



# GLOBE

## In MACEDONIA

Issue 2, Autumn 2000

### Minister of Environment and U.S. Ambassador Visit Niko Nestor

Niko Nestor, one of the most successful GLOBE schools in Macedonia, was visited this April by the Minister of Environment and the American Ambassador. The purpose of this visit was to recognize the school for their implementation of GLOBE, particularly in regards to their hydrology measurements. The GLOBE Program at Niko Nestor was given the "Chief Scientist Honor Roll" distinction that is a recognition for their high number of data submitted.

Minister, Toni Popovski together with the American Ambassador, Michael Einik visited the GLOBE students and instructors at Niko Nestor. During the visit, Ambassador Einik personally congratulated the students by giving them the award from GLOBE and encouraged them to continue in their work. The GLOBE students gave a tour to the Minister and the Ambassador, which included the atmosphere station and the GLOBE classrooms where measurements are performed and results are discussed. The conclusion from both sides was that the students have an abundance of interest and motivation and despite possible complications the students have a vision to work towards new success. Having this in mind we believe that the future of GLOBE at this school is headed in a positive direction.

Kliment Sanjakoski  
DCY "Niko Nestor"- Struga

### GLOBE Students and Professors Share Experiences with GLOBE in Croatia

From the 27th-30th of June in Labin, Croatia, representatives from the GLOBE schools in Valandovo, Struga, and Prilep and a US Peace Corps Volunteer, had the opportunity to participate in the National Student's GLOBE Conference in Croatia. This trip was made possible through the support of the U.S. Embassy and the Ministry of Environment and Physical Planning.

During their stay the Macedonian representatives learned about the method of implementation for the GLOBE Program in Croatia. The characteristics for this program in Croatia is that it is an optional program for the students perhaps because of this many of the schools in Croatia are implementing the GLOBE Program. Due to the large number of schools it is necessary for the schools to provide their own the equipment for the GLOBE protocols. Most of the schools have their own sponsor (most often some local company) to help in providing the necessary materials.

During the conference in Labin, all the GLOBE schools had an opportunity to present their work. From these presentations we could observe that the students are very involved in the GLOBE Program. At the conclusion of the conference, the best projects were awarded with prizes. Even though the schools from Macedonia were invited as guests they had the opportunity to make a presentation. The students from the High School in Valandovo presented their work with photographs. The presentation was well received by the Croatian schools. The participants returned with new knowledge about the GLOBE Program and look forward to future cooperation with the Croatian GLOBE Program.

Maja Organjjeva  
DCY "Gose Delchev"- Valandovo

### Macedonian Representatives attend Training of Trainers Conference



**The Macedonian team practices the Atmosphere Protocols**

GLOBE Ukraine organized an International Training of Trainers Seminar this August from the 6<sup>th</sup>-17<sup>th</sup> in the city of Kiev, Ukraine. With the start of this new school year, the trainers who attended this seminar will start implementing the GLOBE Program in their schools.

Teachers from different countries in South Eastern Europe along with their U.S. Peace Corps Counterparts were trained at this seminar. The Macedonian group consisted of High School teachers, Peace Corps Volunteers, and a representative from the Ministry of Environment. The trainers were GLOBE instructors from the United States. During the opening they presented the structure of the GLOBE Program on the school level and an overview of the program worldwide. The first five days consisted of training in the different basic GLOBE protocols in atmosphere, hydrology, soil, and land cover.

All the protocols were presented and then participants had hands-on practice in each area which was a useful and practical experience for the seminar participants. These exercises also included work with the computer. Participants learned how to search on the GLOBE internet site as well as the methods for correct data entry. This data is necessary for the realization of the GLOBE Program. Participants were also trained in the use of computer programs to interpret satellite images for the land cover protocols. In addition there were training exercises in the use of Graphic Positioning Systems (GPS).

At the end of the seminar the National Ukrainian GLOBE Coordinator presented the GLOBE Program in the Ukraine and the Macedonian participants presented the implementation of the GLOBE Program in Macedonia and their future planned activities and tasks for the continuation of the program. Presentations from the other country representatives were also included.

The participants in the seminar were presented with certificates that designate them as GLOBE Trainers. As trainers, they are certified to train future GLOBE instructors within the Republic of Macedonia. In addition, the daily functions of the GLOBE Program will be more easily performed due to the knowledge gained at the seminar and through the contacts established with GLOBE instructors from other nations.

Irena Panovska and Joellen Reineck

Ministry of Environment and  
Physical Planning of the Republic of Macedonia

## Calendar

October/November 2000  
School Visits by GLOBE Staff

December 2000/January 2001  
Information and registration  
materials for Research Competition

February 2001  
Local schools' GLOBE  
research competitions

March 2001  
Local schools' GLOBE  
research competitions

Day of Ecology - Day of Spring

April, 2001  
National GLOBE Research Competition-Skopje

Earth Day

## GLOBE Hints

### Taking Measurements

#### **Remember: Every Measurement Counts!**

For example, this means that when recording daily atmosphere readings during July and you have a zero (0) for the snowfall reading, this value will be counted toward your total data submitted.

#### **Remember: For missing data enter an M!**

If, on a certain day, you are not measuring one of required protocols and a data input is required on the GLOBE data input pages you should enter **M** for "missing data."

## GLOBE Server Update: Changes for Data Entry

The next time you log onto the GLOBE website at [www.globe.gov](http://www.globe.gov) notice the changes to the site. The page for data entry has been updated to include new protocols.

At this time we will not be adding the new protocols for ozone, barometric pressure, etc but we will be looking into the possibility of acquiring the materials needed for these protocols.

However, instructors and students should be aware of changes that have been made to the "Cloud Cover" Protocol. These changes will affect the way you record and enter cloud cover observations. We will be mailing you the updated data entry sheets in both Macedonian and English. They have re-defined some of the terms used to classify the cloud covers.

You still have the option of entering data in the old format but this option will only be available until August 30, 2001. Therefore we encourage you to change over to the new terminology as listed in the data sheets as soon as possible.

## GLOBE School Reports

Prilep- Pere Toshev  
5199 Atmosphere measurements

Resen- Goce Delchev  
1986 Atmosphere measurements

Skopje- Dimitar Miladinov  
596 Atmosphere measurements

Struga- Niko Nestor  
5452 Atmosphere, Hydrology,  
& Land Cover measurements

Valandovo- Goce Delchev  
3765 Atmosphere, Hydrology, & Land Cover  
measurements

## Training in the Soil Protocol

There are currently eight GLOBE Instructors trained in the soil protocols. These protocols were a part of the learning activities that our participants had the opportunity to study in the Ukraine. The schools in Probistip, Kavadarci and Strumica will be developing a soil site and working with the soil protocols at their schools. The soil protocol has a variety of activities, some of which require a drying-oven to extract the moisture from the soil. While some of the other activities require less equipment. Please contact us here at the Ministry if you and your students are interested in training in the soil protocols. We will then arrange for trainers to come to your school to work with you and your colleagues.

**Strasho** an instructor for biology from Strumica is pictured taking soil samples during GLOBE training in Kiev.

## Student Research Fair

The Ministry of Environment in conjunction with the Ministry of Education will be sponsoring the First National GLOBE Research Fair. Students working as individuals or as teams will be presenting their research projects for judging at the National Competition to be held in **April 2001**. Students will work with GLOBE data to analyze environmental phenomena within Macedonia and around the world. Registration information will be available in December.



## Conference of the European GLOBE Coordinators

From the 8th-9th September in Santorini Greece the Annual European meeting of National GLOBE Coordinators was held. Twenty-eight member countries from Europe were in attendance including the Macedonian National GLOBE Coordinator Svetlana Gjorgjeva. The conference included a workshop on *Ecological Education in Schools* dealing with the topic of air quality. The current status of air quality in Europe along with sustainable development were also discussed. The Danish representatives presented a new concept for environmental education, called "Green Access to the Danish Educational System." The GLOBE presenters also unveiled the new GLOBE Atmosphere Protocols which will be sent out this year to all GLOBE schools.