GLOBE Conference 1999: New York Students Hold First MUC-a-Thon

July 20, 1999

MUC-a-Thon Participants

In what GLOBE scientists are calling a groundbreaking precedent for the program, GLOBE students, teachers, and parents recently joined forces to spend an entire day classifying the land cover of an expansive area in the Mid-Hudson Valley region of New York. Logging over 1,000 miles, the GLOBE teams submitted 900 sets of data and snapped over 350 photographs, covering 92 sites.

The October 3, 1998, event was initiated and organized by Dutchess Community College GLOBE U.S. Partner Coordinators Dr. Art Pritchard and Patsy Cicala, who is also a GLOBE teacher at Poughkeepsie High School. Elementary, middle, and high school students from eight school districts participated.

MUC Day a Marathon Effort

To classify land cover, GLOBE students use an adaptation of the United Nations system called the Modified UNESCO Classification, or MUC system. Students record what trees, plants, and grasses cover a 15 km X 15 km study site, determining which species of vegetation are most common. The data the students report are used by scientists to validate satellite images of land cover.

As part of this first-ever regional classification effort, which organizers called a MUC-a-thon, students made observations at several study sites with the goal of providing scientists a regional picture of land cover.

Eleven teams of GLOBE students and teachers took responsibility for classifying a specific geographic location. MUC-a-thon organizers used a six-county multi-spec image to map out the data-collection sites. "Using this system, we were able to pinpoint a pond, a stream, or woods within probably a 10 meter error range," said Mr. Cicala.

Teams climbed on landfills, ventured into swamps and peat moss bogs, and made their way through corn fields, grassy knolls and fairways to get their data. In one case, MUC-ers found a newly plowed field where the multi-spec image had suggested a building complex.

Land Cover Photograph

The day's success was in large part thanks to a core group of high school students who had spent part of the summer at an ecological camp that uses GLOBE protocols. These students served as MUC experts and were instrumental in covering a lot of ground, in collecting good data, and in bringing a high level of enthusiasm to the project.

After hours working up an appetite in the crisp fall air, the student and teacher teams convened at midday to report their observations using 24 computers and five laptops.

GLOBE Scientists Cheer MUC-a-thoners

GLOBE land cover scientists are thrilled with the data generated by the MUC-a-thon.

"It's incredibly exciting for us as scientists because these students will be giving us a statistically valuable assessment of the status of land cover on a large scale in their region," said Dr. Russ Congalton, the principal investigator for the GLOBE land cover investigation.

Dr. Dixon Butler, GLOBE's chief scientist, said he believes the implications of the MUC-a-thon may be even greater than people realize. "For the first time, this pioneering work will push GLOBE above the critical mass of data in this area," Dr. Butler said. "This MUC-a-thon is a key example of the scientific contributions GLOBE teachers, students and their communities can make - and are making - to the understanding of our environment."

Based on the success of the October MUC-a-thon, organizers hope to expand the effort and perhaps eventually enlist GLOBE students in collecting MUC data for the entire state of New York. "Once teachers and students see how easy it is, and how much fun, everyone will want to do it. It's infectious!" Mr. Cicala reported.

GLOBE scientists are looking on with great interest and hope the idea will catch on elsewhere. "We've been cheering for these guys really hard!" Dr. Congalton exclaimed.