

NICE

NASA Innovations In Climate Education

*Engaging Minority University STEM Education
Professors In the Science of Climate Change*

(1) Title of the grant

**Engaging Minority University STEM Education Professors in
the Science of Climate Change**

(2) Type of report: Progress

(3) Name of the principal investigator

Dr. Linda Bailey Hayden

(4) Period covered by the report

September 2011 through August 2012

(5) Name and address of the recipient's institution

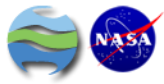
Elizabeth City State University

Box 672 1704 Weeksville Road

Elizabeth City, NC 27909

(6) Grant number

NASA NICE NNX11AM97A



Elizabeth City State University (ECSU) has joined with the University of New Hampshire (UNH) under the NASA Innovations in Climate Education (NICE) to empower faculty of education programs at Minority Serving Institutions (MSI) to better engage their pre-service teachers in teaching and learning about global climate change through the use of NASA Earth observation sets. This project is designed to impact teaching first on college campuses within science education classes. Second, as pre-service teachers transition into in-service, the impact will extend to elementary and secondary schools.

Year One Annual Progress Report

(1) A comparison of actual accomplishments with the goals and objectives established for the period, the findings of the investigator, or both. Whenever appropriate and the output of programs or projects can be readily quantified, such quantitative data should be related to cost data for computation of unit costs.

	Fall'11	Winter'11	Spring'12	Summer'12
Workshop Planning	X	X	X	
MSII Recruitment	X	X	X	
Summer Workshop				X
Program Evaluation		X	X	X
Quarterly Report	X	X	X	X
Follow-up and Help Desk			X	

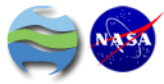
Green X indicates that the objective was not scheduled but actually took place. Black X indicates that the activity took place as scheduled. Red X indicates that the activity has not yet taken place but will occur on August 6-10th.

(OBJECTIVE 1: Workshop Planning): *ECSU faculty and graduate students will work with UNH faculty on implementation of the summer workshops. Travel for site visits, joint-planning meetings, and video conferencing is budgeted to ensure the cementing of partnership connections.*

Workshop Planning: ECSU, UNH and the evaluator met 4 times to plan the summer workshop. One meeting took place at ECSU during Research Week. A second meeting took place virtually. A third meeting took place during the Undergraduate Research Conference at UNH. The fourth meeting took place during the Tri-agency Climate Education Meeting. Descriptions of the meetings are detailed throughout this report.

(OBJECTIVE 2: MSI Recruitment): *Drs. Johnson and Sampson will recruit science education faculty from minority serving institutions for participation in the summer workshops. Logistical arrangements for summer workshops will be made during spring semester.*

Recruitment: On September 29, 2011, Dr. Darnell Johnson recruited at the STEM Conference at Johnson C. Smith University. This conference hosted representatives from institutions and related STEM programs to assist in developing answers to the many challenges related to “Enhancing Our Global Impact through STEM Innovation.” <http://nia.ecsu.edu/nice/2011/110929stem/>



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Recruitment: From September 27 -29, 2011, Dr. Linda Hayden recruited at the 5th Annual Minority Serving Institutions Technical Assistance and Capacity Conference in Dallas, Texas. <http://nia.ecsu.edu/ur/1112/110927msi/index.html>

Recruitment: On November 9-10, 2011, ten representatives from MSIs and area schools attended a Climate Change Workshop at Elizabeth City State University (ECSU). This workshop exposed participants to various research projects at ECSU by students and faculty. Another section of the workshop involved a presentation by Gloria Brown-Simmons who trains teachers for participation in the Global Learning and Observations to Benefit the Environment (GLOBE) Program. Participants were also taken on a tour of NASA Langley's Research Center. <http://nia.ecsu.edu/nice/2011/111109workshop/>

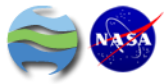
(OBJECTIVE 3: Summer Workshops): *We will conduct a 1-week workshop for 16-science education faculty from MSIs at ECSU during the first summer.*

Summer Workshops: This objective has not been completed. The workshop for MSI faculty will be held August 6-10, 2012 on the campus of ECSU. Sixteen participants have been identified to participate in the summer 2012 one-week. These faculty represent 11 universities including: Morgan State Univ., Virginia State Univ., Norfolk State Univ., Johnson C. Smith University, Hampton Univ., Jackson State Univ., Elizabeth City State Univ., Grambling State Univ., St. Augustine's College, Mississippi Valley State Univ. and Delaware State Univ. Participants completed the required application process, which included application form, stipend form, resume and essay. Accepted applicants have been notified of their participation status and travel arrangements are now being made. <http://nia.ecsu.edu/nice/2012/120806nice/>.

(OBJECTIVE 4: Program Evaluation): *Learning Innovations at WestEd will be contracted to perform the evaluation via a subcontract from Elizabeth City State University. The evaluation start and end dates are Sept. 18, 2011 to March 17, 2014.*

Program Evaluation: Jan and Feb 2012: Dr. Henderson circulated the draft scope of work and logic model to the team for comment prior to submitting to ECSU IRB for review. Comments were integrated in these documents and then re-circulated for discussion. A conference call was held by the evaluator to discuss the logic model with the ECSU/UNH team and to clarify any objectives, goals, or action steps prior to program implementation.

Program Evaluation: April and May: A final logic model and scope of work were agreed upon and Dr. Henderson updated corresponding documents. A pool of potential items for the content assessment was circulated to the team and workshop instructors for review and submission to ECSU IRB. A set of instructional objectives were developed by the evaluator and distributed to the same group of individuals for review and inclusion in the IRB submission.



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Program Evaluation: With the assistance of the program evaluator, the IRB application was completed and submitted to the ECSU campus representative Dr. Kaur-Walker. Consultation with ECSU IRB representatives indicated the ECSU staff would have to complete SBR 101 REFRESHER MODULES 1-5 plus the How to complete CITI Refresher Course and Receive Completion Report module for this certification. Staff members have begun this process.

Program Evaluation: Dr. Darnell Johnson and Dr. Linda Hayden traveled to UNH in April 23-24 to meet with the UNH project staff and the program evaluator. Decisions were made regarding submission of the IRB application, graduate student training and organization of the summer 2012 one-week MSI faculty workshop.

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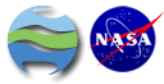
(OBJECTIVE 5: Quarterly Reports): *ECSU will assume responsibility for all reports required by the funding agency. Included in the reports will be the program activities and information from the evaluator's findings.*

Quarterly reports: Quarterly reports for the Engaging Minority University STEM Education Professors in the Science of Climate Change project have been submitted through the online NASA NICE website. This includes information on milestones.

(OBJECTIVE 6: Follow-up and Help Desk): *ECSU graduate students will provide Help Desk services to participants as they work to implement the climate change modules into the classes for pre-service teachers. Science and education experts on the team will serve as resources for the graduate students and as collaborators with the MSI faculty.*

Help Desk: Two ECSU graduate students traveled to UNH to train for the summer faculty workshop and to prepare to assist with help desk services in the fall of 2012. The training took place May 21-15, 2012. Two graduate students participated in a one-week training at the University of New Hampshire. Both are second year students pursuing Masters degree in Mathematics with a concentration in Remote Sensing. One was an African American Male and one was an African American Female. The training introduced them to concepts that will be taught during the summer faculty workshop. Each graduate student will work with the MSU faculty during the one-week summer workshop at ECSU and during the ensuing academic year as the faculty modify existing courses to include NASA content and data.

(2) Reasons why established goals were not met, if appropriate. N/A



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- (3) Other pertinent information including, when appropriate, analysis and explanation of cost overruns or high unit costs.

Plan of Activities for the next year: On September 17, 2012, The ECSU/UNH Engaging Minority University STEM Education Professors in the Science of Climate Change program will be one of the programs presenting during the NASA NICE Webinar. <http://nia.ecsu.edu/nice/2012/120927web/>

Plan of Activities for the next year: Climate Change training is scheduled for Nov. 8-9 at ECSU for the second cohort of MSI faculty.

Evidence of how project activities have furthered stakeholder priorities: A one day New NASA NICE PI Orientation Workshop was conducted by VSGC in Raleigh, North Carolina on October 12th, 2011 to assist this new set of PIs. This was a time for introductions between the NASA and VSGC management teams and the PIs. During this workshop subjects such as project recording, evaluations requirements, product review process, and website usage were covered. <http://nia.ecsu.edu/nice/2011/111012pi/>

Evidence of how project activities have furthered stakeholder priorities: The program evaluator traveled to the Tri-agency Climate Education Meeting and participated in a working session with NSF, NASA, and NOAA evaluators and staff to create a tri-agency logic model for climate education in response to an earlier GAO report suggesting a consolidation of efforts by the three agencies. At the same meeting Dr. Henderson also met with Drs. Johnson, Hale, and Martin to discuss recruitment, workshop planning, and current challenges and successes. <http://nia.ecsu.edu/nice/2012/120417pi/index.html>

Extent to which collaborations and/or partnerships have evolved: Dec 2011. Drs. Hayden and Hale participated in a planning call with the external evaluator Dr. Henderson. Dr. Henderson developed pre and post workshop survey instruments for participants. Dr. Henderson drafted a logic model and updated scope of work to be shared with the PI and ECSU/UNH team for comment.

Extent to which collaborations and/or partnerships have evolved: Co-PI Dr. Steve Hale traveled to ECSU on Feb. 7-8 for Research Week to discuss the NASA NICE partnership with ECSU faculty and students. <http://nia.ecsu.edu/ur/1112/rw12/rw12tuesday.html>

Extent to which collaborations and/or partnerships have evolved: Dr. Darnell Johnson and Dr. Linda Hayden traveled to UNH in April 23-24 to meet with the UNH project staff and the program evaluator. Decisions were made regarding submission of the IRB application, graduate student training and organization of the summer 2012 one-week MSI faculty workshop. <http://nia.ecsu.edu/ur/1112/120424unh/index.html>