
Executive Summary of
Virgin Islands EPSCoR
Annual Report
For the First Year

June 2005

Goal 1. The Virgin Islands EPSCoR (VI-EPSCoR) program will catalyze incorporation of science and technology-based research into the culture of the territory.

Undergraduate research opportunities

VI-EPSCoR, through collaborations with the UVI Division of Science and Mathematics, has supported divisional undergraduate students as student researchers to assist and learn from faculty researchers. To date, nine students have filled this role.

VI-EPSCoR has linked with NIH funding programs to support opportunities for undergraduate research.

- **MARC** – NIH provides support for undergraduate students, MARC scholars and their mentors linked in research activity (5 MARC Scholars 2004-2005)
- **MBRS** – NIH supports students engaged in faculty-directed research in the MBRS program (9 MBRS-RISE students supported Summer 2004 and 10 students Fall 2004)
- **SCORE** – NIH provides support for joint faculty-student research in marine sciences and neuroscience. Two faculty received SCORE support in 2004.

The 4th UVI Annual Fall Research Symposium was sponsored by the UVI Division of Science and Mathematics as a part of the Emerging Caribbean Scientists Program and funded by the NSF and NIH. Thirty-five UVI undergraduate students presented research posters in Biological and Chemical Science, Psychology, Marine Science and Agricultural Science, Mathematics, Engineering, and Computational Sciences.

K-12 Outreach Activities

VI-EPSCoR supports the Science Awareness Saturday Academy, a K-12 STEM outreach program to enhance the science and math preparedness of college bound students interested in pursuing careers in science, math, engineering, technology, medicine and allied health professions. The Saturday Academy meets once or twice a month from September through May and currently has 60 Junior High School students (Grades 6-8) and 60 High School students (Grades 9-12).

VI-EPSCoR works with the Division of Science and Mathematics to support an array of Divisional outreach activities, including the Summer Science Enrichment Academy, a six-week residential program at UVI for 25 high school juniors and seniors. The program is project oriented and builds quantitative and reading skills.

VI-EPSCoR and the Center for Marine and Environmental Studies sponsored a visit for honors biology students from Eudora Kean High School in January 2005. Twelve students met with UVI researchers, faculty, and students to learn about research in Biology/Marine Science at UVI.

Professional development for K-12 teachers in math and science areas

EPSCoR is providing salary support for a new faculty position in mathematics with part-time responsibility for directing the new Masters-level program in mathematics for secondary school teachers.

Goal 2. VI-EPSCoR will establish and sustain nationally competitive research in Biocomplexity of Caribbean Coral Reefs.

VI-EPSCoR BCCR Advisory Board

VI-EPSCoR formed a BCCR Advisory Committee to help guide design and development of the BCCR research focus area. The Advisory Committee visited facilities on St. Thomas, St. Croix and St. John and interacted with local scientists, resources managers and environmental educators, before providing an advisory report to VI-EPSCoR on directions for design and implementation of the BCCR program.

VI-EPSCoR Seminar Series

During the academic year, VI-EPSCoR and the University's Center for Marine and Environmental Studies (CMES) host a weekly science seminar series with an emphasis on marine science. The series brings in speakers from UVI, other universities and research programs, and governmental and non-governmental organizations, and creates opportunities for VI researchers to interact and explore collaboration possibilities. The lectures are open to faculty, staff, students, and members of the community. All lectures are teleconferenced to St. Croix.

BCCR Incubator Research

The BCCR offers incubator grants to provide seed funding for research that is likely to lead to successful competitive funding and will encourage multi-investigator collaboration among UVI faculty. The grants provide faculty with release time for research. VI-EPSCoR provided funding for seven researchers between summer 2004 and 2005. Research areas included meteorology, coral reef studies, marine natural products chemistry, and data mining.

VI-EPSCoR-funded Research Faculty

VI-EPSCoR advertised in summer 2004 for two BCCR research positions. Dr. Nasseer Idrisi was selected for the Biological Oceanography position, and arrived in February 2005. Dr. Tamara Romanuk has been selected for the Invertebrate Biologist position, and is expected to arrive by Fall 2005.

Renovations

VI-EPSCoR is supporting renovations of the MacLean Marine Science Center on STT to strengthen research, teaching, and outreach. Renovations were started in Fall 2004 to improve classroom and lab facilities and construct a scuba compressor building. Renovations are underway to increase office space to accommodate new VI-EPSCoR faculty and to create a conference/educational facility with 'smart classroom' and videoconferencing capability. A new research support vessel should be delivered shortly.

VI-EPSCoR is supporting renovations of the Virgin Islands Environmental Resources Station on St. John to create a computer lab, library, and environmental education center. Two new computers were donated by the Lieutenant Governor's office. It is expected that renovations will begin in Summer 2005, once a land permit is approved by VI CZM.

Goal 3. VI-EPSCoR will provide support for the creation of new nationally competitive research areas in the Territory.

VI-EPSCoR Incubator Awards

The VI-EPSCoR incubator awards foster promising new research areas that might stimulate economic growth in the Virgin Islands. The incubator grants provide opportunities for potential researchers to develop research ideas into small research projects with the potential to lead to larger competitive grants. The incubator grants encourage researchers to collaborate with other universities and research institutions and to include research opportunities for undergraduates and K-12 students. Support may include release time for concept development and proposal writing, tutelage under nationally recognized experts, support for contacting external mentors, modest equipment needs, and support for student involvement. The program is open to the entire Virgin Islands community and is widely advertised throughout the Territory. After a competitive search, five incubator projects were funded this year, including topics such as conservation of bird habitats, research by K-12 students on earthbox farming of tomatoes, and coral reef studies.

Travel Grants for Emerging Faculty

Virgin Islands EPSCoR's Travel Grants provide emerging science and mathematics faculty the opportunity to travel to collaborate with other researchers in their field and present their research in national or international forums. Several faculty received grants this year for:

- **Invited Presentations** –travel expenses to give plenary or major invited talks at national or international meetings.
- **VI-EPSCoR Expertise Exchange Program** –travel expenses for visits to collaborate or exchange knowledge with personnel from national research laboratories or industrial research facilities.

Reducing obstacles to faculty involvement in research

UVI has implemented a new intellectual property policy and a conflict of interest policy. Initial work on both of these policies was started prior to VI-EPSCoR, but because of EPSCoR's existence there was more interest in the policies than in the past and therefore they were developed with University-wide input.

Goal 4. VI-EPSCoR will enhance the Virgin Islands' ability to acquire and manage the resources and culture of competitive research grants.

VI-EPSCoR Leadership Team

The VI-EPSCoR Leadership Team participated in the NSF EPSCoR national project directors and project administrators meetings in 2004 and 2005. The Outreach Coordinator attended a course on Applying for Federal Grants and Cooperative Agreements.

Strategic Planning 2005-2010

VI-EPSCoR brought in consultants from the American Association for the Advancement of Science to help formulate a strategic plan. The VI-EPSCoR strategic plan has been carefully coordinated with the university's on-going strategic planning process. The VI-EPSCoR Strategic Plan was finalized and submitted to NSF in May 2005.

Grant Management Workshop

In order to enhance the Virgin Islands' ability to acquire and manage competitive research grants, VI-EPSCoR offered a three-day grant management course on the St. Thomas campus of UVI. The workshop included participants from St. Thomas and St. Croix UVI campuses and the Virgin Islands DPNR and Dept. of Education.

Information Technology Infrastructure Improvements

VI-EPSCoR began upgrading IT facilities at UVI with the ultimate goal of enhancing research and education capabilities and ability to participate in interactive, real-time activities in support of research, education and business.

Libraries and Information Services

VI-EPSCoR has partnered with the UVI Library to strengthen science and mathematics resources. A science librarian was recruited and arrived in September 2004. Library staff have been conducting needs assessments to identify priority resource needs, and conducting training in science and math-related areas.

Geographic Information System

VI-EPSCoR is supporting GIS specialists at the UVI Conservation Data Center to provide researcher training and technical assistance. In the past year the GIS manager provided technical assistance to several research projects and helped develop a proposal to integrate existing data on coastal conditions in the Virgin Islands in a GIS format.

Goal 5. VI-EPSCoR will help create a foundation of science and technology-based research capability to stimulate and sustain economic development in the Virgin Islands.

VI-EPSCoR Governing Committee

The VI-EPSCoR Governing Committee represents the greater Virgin Islands community as well as the broadest interests of the University in advising the Project Director and in garnering community support for the activities of VI-EPSCoR. In the first year the Governing Committee held quarterly meetings to advise VI-EPSCoR. An annual meeting is planned for September 2005, including an Assembly of Community Advisors and Planning Committee members.

The Fall quarterly meeting of the Governing Committee was held in conjunction with the VI-EPSCoR Community Kickoff event. The Honorable Governor of the Virgin Islands, Charles W. Turnbull, in collaboration with UVI's President Ragster, hosted the Virgin Islands EPSCoR kickoff at Government House on St. Thomas, in October 2004. This event celebrated the successful Research Infrastructure Improvement (RII) award and was intended to publicize the VI-EPSCoR program to the entire Virgin Islands community.

VI-EPSCoR Communication Outreach

The VI-EPSCoR newsletter is being published on a quarterly basis and distributed by email to a wide variety of VI-EPSCoR stakeholders, in addition to being posted on the UVI Website. The next newsletter will be published at the end of the summer.

We have also produced a number of publications describing the VI-EPSCoR program in detail for distribution throughout the UVI and local community. Our publications include:

- VI-EPSCoR Brochure
- Fact Sheet – Research focus on Biocomplexity in Caribbean Coral Reefs
- Fact Sheet – Capacity Building Initiatives
- Fact Sheet – VI-EPSCoR Program Goals
- Fact Sheet – Incubating Research

VI-EPSCoR is now developing a website with help from Ansano Design of St. Thomas. The website will be online by late summer. It will provide information about our research, education, and outreach activities, provide technical assistance on grant management to the VI research community, and provide the latest information on upcoming events.

In order to increase awareness in the community about the VI-EPSCoR program, the Outreach Coordinator joined an on-air discussion with marine science faculty, staff and students on the marine sciences programs at UVI, the VI-EPSCoR program, and our research focus area Biocomplexity of Caribbean Coral Reefs. The discussion was aired by TV station WTJX in November 2004.

The VI-EPSCoR program jointly sponsored an Environmental Educators Meeting with the Virgin Islands Marine Advisory Service. The meeting was held to inform members of the VI Environmental community about the VI-EPSCoR program and to discuss the status of environmental education programs on St. Thomas and St. John.

The VI-EPSCoR Outreach Coordinator has been working closely with NSF EPSCoR to arrange NSF outreach visits to support VI-EPSCoR researchers seeking funding support. Mr. John Cruikshank of NSF's Educational and Human Resources Directorate visited in Spring 2005 to interact with VI-EPSCoR/BCCR researchers, UVI Science faculty, incubator proposal investigators, and members of the local community with proposal ideas. Targeted, small group discussions covered grant funding opportunities, program solicitations, grant administration, proposal processing, and new and emerging areas of interest for NSF.

Other current VI-EPSCoR Outreach Activities

- Student Research Day for Virgin Islands Legislators
- Invited Speakers and Visiting Scholars
- Traveling Career Day for Middle Schools & High Schools
- VI-EPSCoR Annual Conference
- Virgin Islands Food and Agricultural Fair
- UVI Afternoon on the Green
- A workshop on Water Resource issues in the VI co-hosted with the UVI Water Resources Research Institute in February 2005.

As mentioned earlier, VI-EPSCoR Leadership team is building contacts with other EPSCoR programs through visits and the annual NSF meeting.

And a number of activities have been mentioned earlier that are helping link VI researchers with other universities and with major grant programs and research initiatives, such as the VI-EPSCoR seminar series. The support from NSF mentors such as Mr. Cruikshank has been particularly important in this regard.