



**Facilitating CARICOOS Goals and Activities
for Coastal Ocean Observing
in the US Virgin Islands**

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LONG-TERM GOALS

Facilitating CARICOOS goals and activities for coastal ocean observing in the US Virgin Islands while promoting maximum participation of USVI principals in all aspects of ocean, atmosphere and coastal observing and devising specialized approaches to address local needs.

MILESTONES / OBJECTIVES

In accordance with the Scope of Work approved for inclusion under CARICOOS grant # NA16NOS0120026, the following objectives have received primary focus during this performance period::

- (1) using the OCOVI structure to identify and engage both previously unengaged stakeholders and potential partners as a means of focusing the CARICOOS mission locally and bring a wider range of resources into its portfolio;
- (2) unifying observational efforts in the coastal zone with coastally relevant activities throughout CZM Tier-1 with initial attention to beach water quality, runoff, precipitation;
- (3) extending outreach and education activities in support of observational science and technology to previously unengaged organizations such as museums, youth science and technology clubs with marine orientations, and academic structures dedicated to promoting STEM disciplines that are ocean/atmosphere-related;
- (4) increased local awareness, usage and satisfaction with CARICOOS products and services by providing improved local access, with initial focus on localized web page access and publicity at events such as regattas, fishing tournaments, SCUBA , swimming and sailing competitions;
- (5) expanding observational assets and services for USVI stakeholders.

WORK COMPLETED

- advanced local governmental recognition of CARICOOS as the primary provider of already familiar products and services related to weather, navigation, marine recreation, etc. and an “invitation to the table” in governmental consideration of relevant issues;

- co-authored (with UVI faculty) a successful proposal for USGS Water Resource Research Institute funds to address climate, coastal water quality and drought issues;
- activated joint youth-development projects with the Children's Museum, VI Institute for STEM Education, Research & Practice, Camp Umoja (marine environmental youth program); and with two schools on St. Thomas and one on St. Croix;
- continued *pro bono* advisement on coastal hazards to stakeholders in the marine sphere, including emergency managers and marine transportation/shipping companies;
- assistance to CARICOOS headquarters as *ad hoc* matters arise (such as siting HF radar);
- established structures and understandings to support development of several program under consideration for the sub-region, including marine animal tracking (with VI National Park and UVI); AUV glider investigations in the VI Basin (with Rutgers University as primary); and near-real time beach water quality reporting (with the Magens Bay Authority as prime collaborator).

MAJOR OUTCOMES

Achieved: one of two museum exhibits; joint collaboration on expanding mesonet capabilities to monitor precipitation; webpage (www.ocovi.org) that responds to local day-to-day events and channels local attention to CARICOOS; a commitment from external partners to explore use of the Virgin Islands Basin as test site for AUV investigations.

Several important findings resulted during these pursuits:

The existence of previously unrecognized capabilities in the community that can be engaged, such as at UVI and at governmental resource management agencies. In addition, following new approaches to outreach revealed already-in-progress activities of environmental, marine and model robotics groups as well as considerable untapped local commitment and skill in activities related to ocean/atmosphere/coastal observation. Another important finding, believed essential to the successes achieved, was that local stakeholders with ocean/atmosphere/coastal interests are required to take a whole-island approach, wherein human activity and rainfall and inland problems (such as drought) must be recognized.

One new capability that is likely to remain useful is in our entry into preparing educational materials that address multiple cognitive levels and are more graphical, more animated and generally more user friendly.

RELATED PROJECTS

Demoted from priority as a prime project because of its expense, the global digital projection exhibit for capturing the attention of the broader USVI community and informing it and providing access to CARICOOS services remains under consideration

by persistent collaborators and OCOVI, which will continue seeking sponsors with resources.

Similarly planning for acquisition and deployment of ocean buoys for short-term, *ad hoc* usages, for which general IOOS support may not have been justified, has been suspended while invested third-party funders reconsider collaboration (in light of recent budget urgencies).

WORK PLAN FOR UPCOMING PERFORMANCE PERIOD (June 1 2017 – Nov 30 2017)

- Continuing of certain outreach/education projects: VI Children's Museum (expanded displays), STEM support with Hands-on ROV (new participants), Marine Technology Society (formal establishment of chapter);
- Collaborating with UVI and vested interest local partners to maximize buoy and mesonet coverage for all of the US Virgin Islands;
- Completion of mesonet enhancement with precipitation gauges to address weather, climate, run-off, *etc.*;
- Intensified effort to engage stakeholders to use their funds and third-party support for projects important to them such as: Magens Bay Authority (water quality), VI National Park (waves and water quality), *etc.*.
- Testing the approach of using short-term deployments of monitoring instruments to address special stakeholder observational needs;
- Trial demonstration project hosting AUV gliders in purposeful transects in the Virgin Islands Basin;
- Supporting regional participation in IOOS Animal Telemetry Network initiative and in local ATN projects such as those of the VI National Park and of UVI;
- Assisting CARICOOS headquarters in improving and enhancing CARICOOS assets in the subregion (*e.g.*, HF radar).