Modelling Tool for Coastal Adaptation to Sea-level Rise

Blue Marble Geographics (USA) has been selected by the New England Environmental Finance Center (NEEFC) from the Edmund Muskie School of Policy Research at the University of Southern Maine to develop the software interface for a coastal climatic-disruption modelling tool entitled COAST. The tool will be used to create a GIS model of cost-avoidance strategies to protect against asset damage from sea-level rise due to storm surge and coastal flooding.

The tool is being beta-tested in Portland, Maine and coastal New Hampshire and additional software development for the project has already been planned.

Under the direction of CTO Victor Minor, Blue Marble's Professional Services team is working closely with Dr. Sam Merrill, Associate Professor from NEEFC at USM. Merrill, in conjunction with Paul Kirshen of the Ocean Process Analysis Laboratory at the University of New Hampshire, has developed a GIS modelling technique to assist municipalities and government agencies with making the most cost effective decisions in responding to sea level rise and coastal flooding from storm surge events. The technique assigns financial values to assets located in the potential flooding area as well as the costs of building such structures as sea walls, levees or other protective structures intended to protect against these events. Municipalities can then forecast the various scenarios, along with investments and potential damage avoidance and resulting cost savings in a visual, GIS analytical software interface.