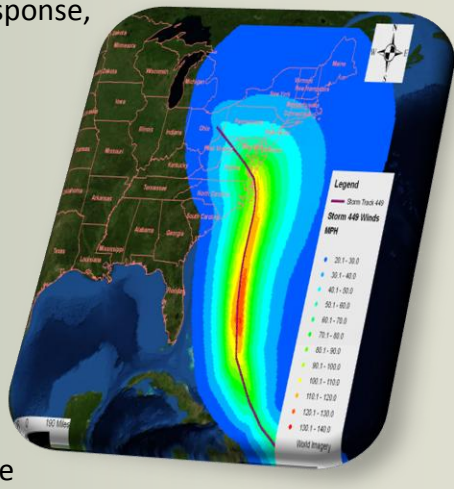
Risk Quantification for Sustaining Coastal Military Installation Assets and Mission Capabilities (SERDP RC-1701)

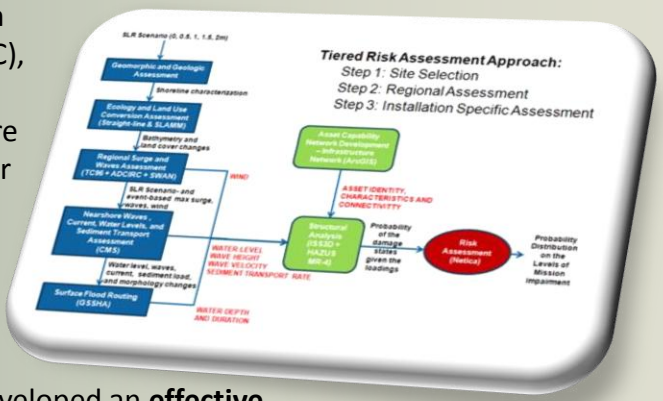
Problem

The best available scientific evidence indicates that climate change is occurring at an unprecedented rate. As the oceans warm and glaciers melt, an overall increase in ocean volume will be realized. In response, tropical storms will increase in frequency and intensity, erosion and shoreline change will accelerate, saltwater will intrude into aquifers, water tables will rise, and tidal prisms will change. These effects will act as hazards to coastal military installation assets and capabilities, and as such pose a non-stationary risk to our nation's security. While commanders may be situationally aware of their installation's vulnerabilities, demonstrable risk-based assessments are needed to proactively adapt military systems, processes, and protocols in the face of sea level rise. What the military needs is a r**obust, scientifically defensible approach** that quantifies risks of climate change to mission sustainability in a transparent, meaningful, and actionable manner.

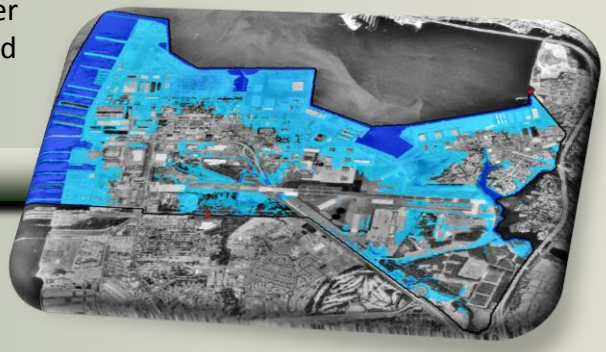


Study Description

With funding from the *Strategic Environmental Research and Development Program* (SERDP) , and using advanced technology developed by scientists from the US Army Engineer Research and Development Center (ERDC), the ***RC-1701 project*** examines the risks to critical infrastructure and mission performance under a prescribed series of sea level rise scenarios (0,0.5, 1,1.5, & 2m) in combination with tropical and extra-tropical storms (1, 10, 50 & 100-yr).



In essence, the RC-1701 has developed an **effective coastal hazard risk assessment framework** that manages sea level rise uncertainties and communicates the risk of mission impairment to end-users and policymakers in a meaningful manner that supports mission adaptation and sustainability into the long-term.



For More Details Contact:

Ms. Kelly Burks-Copes
US Army Engineer Res. & Dev. Ctr.
Phone: (601) 618-5565
Email: Kelly.A.Burks-Copes@usace.army.mil