Climate Change and Sea Level Rise Initiative (CCSLRI)

“We must ensure our Navy is fully mission-capable and ready to meet national requirements in the future. That responsibility includes anticipating the impact of changing climatic conditions on mission requirements, force structure and infrastructure.”

Rear Adm. Dave Titley, Director of Task Force Climate Change and Oceanographer of the Navy

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“The city of Norfolk is sinking slowly into the water at the same time the sea level is rising, and so we are getting more and more water into the city every year.”

Norfolk Mayor Paul Fraim, August 25, 2010
Local Sea Level Rise – The Facts
Sea level in Hampton Roads is rising at a rate of 1.46 feet per century since measurements began in 1928. This is because:
• Land ice is melting into the ocean.
• The ocean is warming, and as it warms it expands. This has been going on for thousands of years.
• The land is sinking because of a process called glacial subsidence. There is strong evidence that the rate of sea level rise will increase. Federal agencies such as the U.S. Army Corps of Engineers, the U.S. Navy and the commonwealth of Virginia assume, for planning coastal construction, that sea level will rise around 3 feet by 2100.

Action at Old Dominion
• Faculty research
• Student engagement
• Community outreach

“Climate change has the potential to have large impacts on the Hampton Roads economy, but it may also provide some opportunities for the region.”
HRPDCC, Climate Change Report, 2010

Old Dominion University Expertise Related to Sea Level Rise and Climate Change

Public Policy
• Economics
• Risk perception
• Insurance
• Disparate impacts
• Public opinion
• Social justice
• Special populations
• Decision procedures

Sciences
• Extreme weather
• Climate change science
• Coastal landscape changes (erosion)
• Ecosystems (fisheries, wetlands, grasses, water quality, invasive species)
• Agriculture
• Human factors psychology

Engineering
• Infrastructure
• Transportation
• Land use
• Recreation and tourism
• Renewable energy

Education
• Communicating climate change and sea level rise
• STEM education
• Social marketing
• Special education
• Community leadership development
• Community education

John R. Broderick, President of Old Dominion University

Cynthia Tomovic, professor of STEM education and professional studies; Michael McShane, assistant professor in finance, focusing on insurance and risk management; Perumal Mathuram, assistant professor of psychology, focusing on decision making in complex environments; and Ariel Pinto, associate professor of engineering management, focusing on risk management.