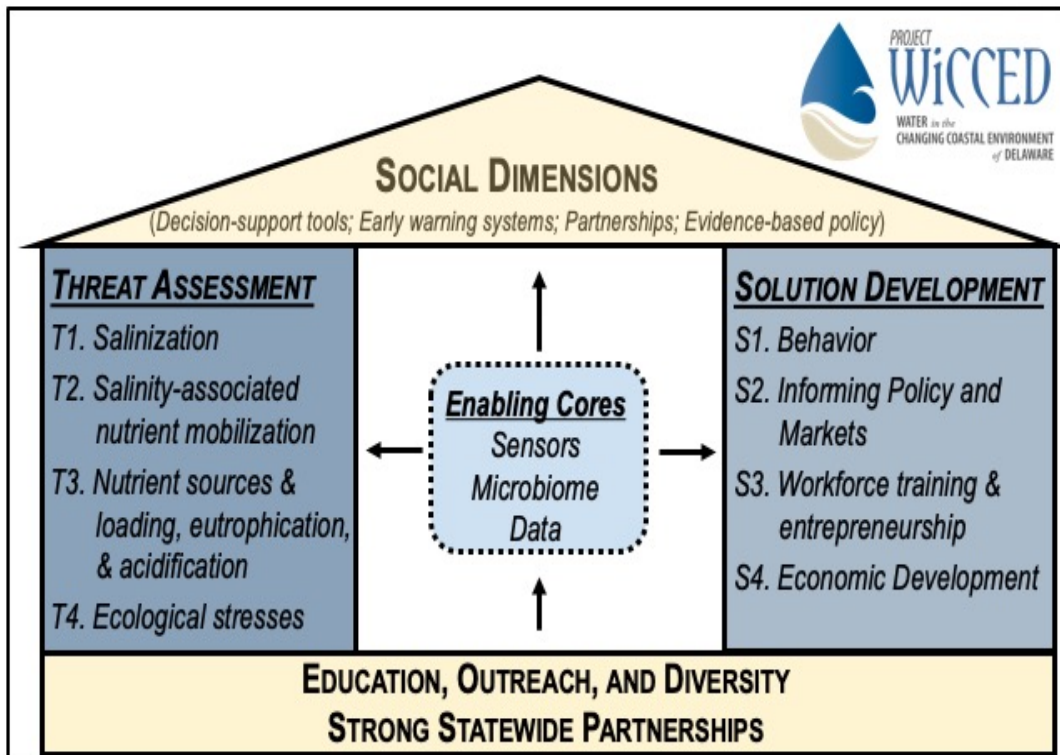


I. Goals and Objectives:

The scientific vision of this project, entitled, “Water in the Changing Coastal Environment of Delaware” (Project WicCED) is to assess threats and develop solutions to mitigate the human and natural pressures threatening water security in Delaware’s changing coastal environment. To achieve this vision, we seek answers to five interrelated research questions:

1. To what extent is Delaware’s water security threatened by water quality deterioration, and how do water use decisions and biogeochemical processes impact the effects?
2. What impacts does deteriorating water quality have on ecosystem health, and how can those impacts be mitigated?
3. How can evidence-based policies and programs be designed to induce landowners and homeowners to adopt more environmentally friendly approaches, and how much is the public willing to pay for improvements in water security?
4. How do we better engage a diverse group of students and professionals in solving these problems in a manner that catalyzes leading-edge research, technological innovation, and economic development?
5. How do we identify, develop, and prioritize cost-effective solutions that are best for society, and how does this research inform policy makers and other stakeholders and help them institute solutions to water security challenges?



II. Institutions Involved:

Project WiCCED is a partnership of four diverse institutions with complementary missions. The University of Delaware (UD) is a Carnegie institution with very high research activity and 23,000 students. Delaware State University (DSU) is a Historically Black College and University (HBCU) with a commitment to both teaching and research, with 4,500 students. Delaware Technical Community College (DTCC) is a two-year institution with a statewide focus on workforce training and 15,000 students, and Wesley College (Wesley) is a minority-serving liberal arts college with 1,500 students, with a focus on research by undergraduates.

III. Participants Involved:

Project WiCCED is projected to involve more than 62 individual faculty and professionals with funding for up to 30 postdoctoral researchers, 104 graduate students, 544 undergraduate students in internships, and 30 high school students. Students will be active participants in water security threats, solutions, and core research, with mentoring by faculty and postdoctoral researchers and more senior students, as well as government and industry partners. Additional students will be engaged in classroom and team research projects, laboratory support, and citizen science.

IV. History of EPSCoR success and funding:

Project WiCCED is supported by \$19.2 million from the National Science Foundation and \$3.8 million from the State of Delaware. The Delaware EPSCoR research network includes 319 participants at four Delaware institutions, including 21 faculty hired since the program's inception. The EPSCoR programs (NSF/NASA/DOE/DOD) and the State of Delaware have provided \$69 million in direct EPSCoR funding to Delaware to support capacity building. The support has resulted in an additional \$82 million in funding for 212 awards to EPSCoR faculty, including \$46M for 143 research awards, \$11M for 27 education awards, \$8M for 23 CAREER awards, \$14M for 4 center awards, \$1.5M for 9 innovation awards, and \$1.5M for 4 equipment awards. More than 889 journal articles have been published as a result of direct or indirect funding by EPSCoR. Additionally, Delaware EPSCoR faculty and students have submitted 72 invention disclosures and 11 patents have been awarded, six faculty-led startups have received assistance in moving from the laboratory to the marketplace.

For more information, contact

- Kent Messer, Principal Investigator of Project WiCCED (messer@udel.edu),
- Holly Michael, Co-PI Research Lead of Project WiCCED (hmichael@udel.edu),
- Malcolm D'Souza, Co-PI and Wesley Institutional lead (Malcolm.DSouza@wesley.edu),
- Venugopal Kalavacharla, Co-PI and DSU Institutional lead (vkalavacharla@desu.edu),
- Justina Sapna, DTCC Institutional lead jsapna@dtcc.edu,
- Donald Sparks, Co-PI DE EPSCoR Director (dlsparks@udel.edu), or
- Amy Slocum, DE EPSCoR Associate Director (als@udel.edu).
- Maddi Valinski, DE EPSCoR, Grants Manager (mvalinsk@udel.edu)