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Carbon Accounting Tools for Greening Navy Bases



Salt Marsh at Naval Base Ventura County Point Mugu. (Photo credit: Leslie Bolick)

OBJECTIVE

This project aims to evaluate carbon sequestration accounting tools, comparing, ranking, and prioritizing them for Department of Navy (DON) land managers to quantify carbon gains/losses efficiently and costeffectively, supporting the DON Climate Action 2030 sequestration goal.

PROBLEM STATEMENT

The Department of Defense (DoD) is addressing climate instability through initiatives like the Climate Adaptation Plan and the Plan to Reduce Greenhouse Gas Emissions. In response, the Navy's "Climate Action 2030" report targets a reduction of 5 million metric tons of carbon dioxide equivalents (CO₂e) annually by 2027 using nature-based solutions. Achieving this requires tools to quantify and track carbon sequestration.

DESCRIPTION

The project team will spend the first year of this effort building a Navy-focused knowledge base on the current coastal Blue Carbon landscape including available tools and methods for carbon accounting. Based on these results and engagement with installation stakeholders, several case-study sites will be selected for demonstration/application of existing carbon accounting tools identified through the initial review.

Using the data generated from the initial demonstration, the most promising carbon accounting tools will be identified and shared with Navy stakeholders. Collaborative meetings with stakeholders throughout this effort will allow the project team to enhance their understanding of the roles and requirements involved in carbon assessment, carbon sequestration scenario planning, and carbon accounting and reporting that is required at the installation level.

The second year of this effort will comprise of refining the list of tools selected based on the initial assessments. We aim to recommend a set of tools and guidance for the Demonstration Toolkit, which we'll test at one or more sites. We will gather feedback from these demonstrations to finalize our tool assessment and identify user needs. Additionally, we will create guides for Navy users and provide recommendations for improving the toolkit in our final report.

RETURN ON INVESTMENT

The toolset developed for this project will be applicable to all sites for selected carbon management activities, using readily available GIS and planning data for the base. This approach provides a life cycle cost advantage by developing a single, widely deployable carbon accounting toolset for the DON (2 person-years for this effort), rather than each installation individually selecting and adapting tools (>20 times greater cost). If project tools are implemented at 10 installations, we estimate a cost savings of \$1.05M over a 5-year period.

NAVY BENEFITS

There are no single, existing off-the shelf carbon accounting tools that

can be used to support planning and decision making by Navy land/natural resource managers. The tools produced by this project will allow carbon sequestration gains and co-benefits to be quantified and tracked at the installation level, enabling managers to adjust planning and strategically build on these gains and avoid costs associated with ad hoc or uninformed planning.

Additional benefits include expanded capabilities for limited natural resources management personnel, increased data quality to support effective Blue Carbon projects and improved wetlands management, and enhanced knowledge and processes at the installation level to support new reporting requirements at the regional and national levels.

TRANSITION DESCRIPTION

The development of the toolkit for carbon accounting will be demonstrated at representative installations such as Naval Base Ventura County Point Mugu and

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Marine Corps Base Camp Pendleton. Engagement with stakeholders at these installations from the onset of the project will allow for the assessment of their site-specific carbon accounting needs. We will continue collaboration with these stakeholders throughout the project to develop a toolset and guidelines that integrate into their planning processes and priorities, supporting a smooth transition. We will also make the toolset and methodologies available to a larger DON audience by presenting results in workshops and publications with links to downloadable tools and guidelines. Additionally, we will publish study results and products at national/ international conferences and publications, which have been demonstrated as an effective avenue to wider publicity and recognition.

CONTACT

For more specific information about this project, contact the Principal Investigator, at leslie.a.bolick.civ@us.navy.mil



ABOUT THE NESDI PROGRAM

The Navy Environmental Sustainability Development to Integration (NESDI) program is the Navy's environmental research and development demonstration and validation program, sponsored by Office of the Chief of Naval Operations (OPNAV) Compliance and Mission Readiness Division (N4I1) and managed by the Naval Facilities Engineering Systems Command (NAVFAC) from the Engineering and Expeditionary Warfare Center (EXWC) in Port Hueneme, CA.

The mission of the program is to provide solutions by demonstrating, validating and integrating innovative technologies, processes and materials; and by filling knowledge gaps to minimize operational environmental risks, constraints and costs while ensuring fleet readiness.

> For more information, visit the program's web site at <u>www.navfac.navy.mil/nesdi</u> or contact the NESDI Program Managers at NESDI.fct@navy.mil