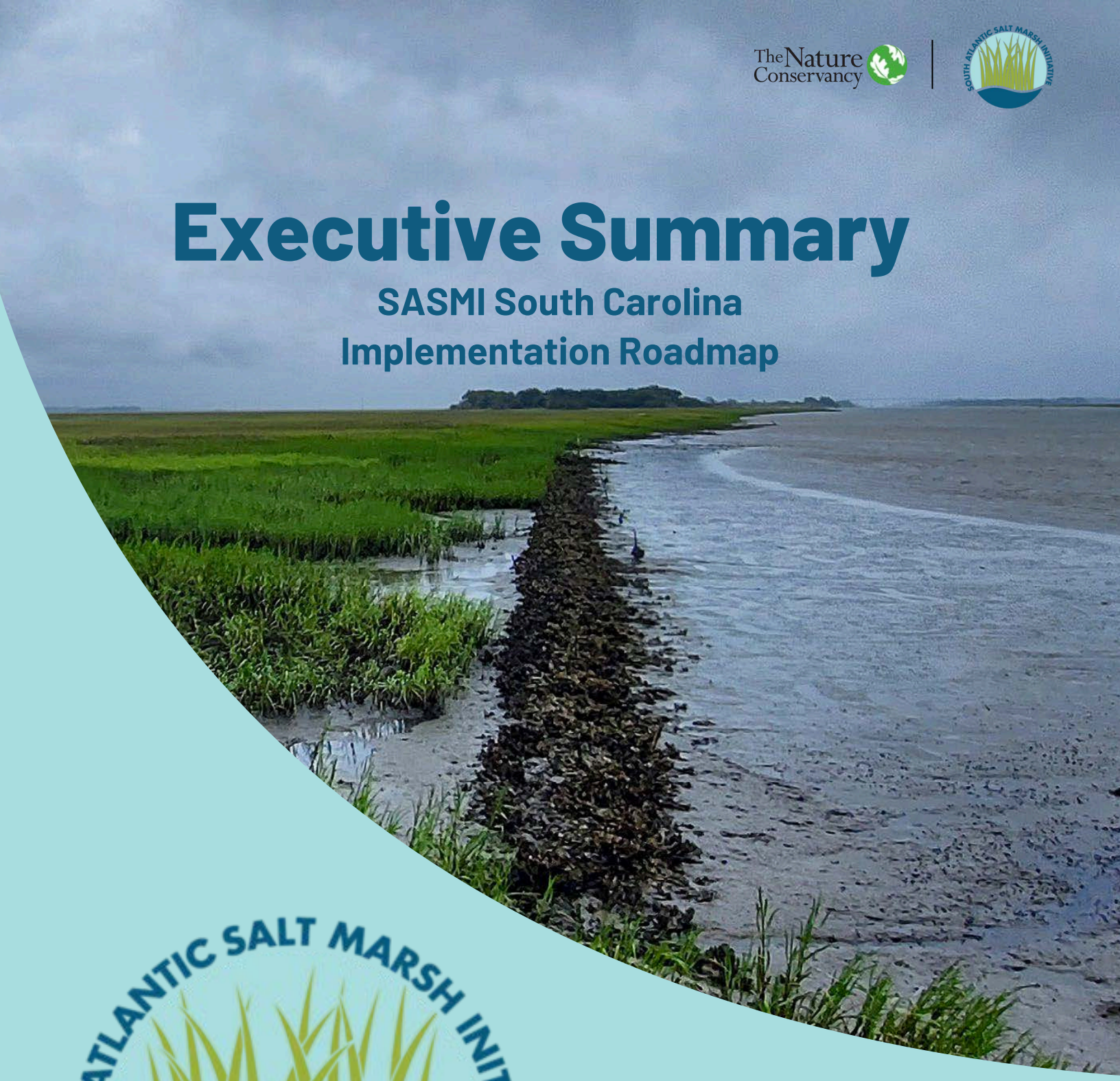
Executive Summary

SASMI South Carolina Implementation Roadmap



APRIL 2026

Photo Credit: Joy Brown, Legacy Works

South Atlantic Salt Marsh Initiative

South Carolina boasts roughly 344,500 to 350,000 acres of salt marsh, arguably more than any other state on the Atlantic Coast. These marshes are critical ecologically: they function as nurseries for fish, crabs, and other shellfish; provide vital habitat for birds and invertebrates; act as buffers against storm surge and flooding; filter sediments and pollutants from runoff; and support both recreational and commercial fisheries.

Despite their current state level protections and ecological importance, South Carolina's salt marshes are under increasing stress. Sea level rise is a major threat, with development, infrastructure, and shoreline modification (bulkheads, roads, docks) often impeding migration. The National Oceanic and Atmospheric Administration identifies a 22% increase in developed land in the Carolinas since 1996, with 17,000 tideland development permits approved in South Carolina since 1990. Without sufficient vertical growth and lateral space, marsh areas are projected to drown or be lost in the coming decades.

Acknowledging these threats, The South Atlantic Salt Marsh Initiative (SASMI) was formed as a regional, voluntary, non-regulatory partnership focused on safeguarding the salt marsh ecosystem that stretches from North Carolina through east-central Florida. Advocating for the importance and value of salt marsh ecosystems across the South Atlantic, SASMI aims to protect, restore, and allow for migration of about 1 million acres of salt marsh for the benefit of people, communities, businesses, military installations, and wildlife.

SASMI identifies several major threats to these marshes: Sea-level rise, polluted runoff, coastal development, land use changes, erosion, and shoreline loss. The SASMI Regional Plan lays out key strategies, objectives, and actions for carrying out the ambitious goal of safeguarding the South Atlantic's 1-million-acre salt marsh ecosystem:

1. **Protecting and Restoring Existing Marshes**
2. **Conserving Marsh Migration Corridors**

Photo Credit: Clay Bolt, 2010

South Carolina Implementation Team

SASMI at work in your state.

The Regional SASMI Plan - *Marsh Forward: A Regional Plan for the Future of the South Atlantic Coast's Million-Acre Salt Marsh Ecosystem* was published May 2023. Recognizing that many of the recommended actions will take place at the state and local level, SASMI identified the need for state-level implementation teams in each of the SASMI states.

The **South Carolina Implementation Team (SCIT)** has been meeting since 2024 to develop a state-level implementation roadmap. Since its inception, the membership has grown to over 100 individual members representing key organizations and agencies planning and implementing salt marsh conservation in the state.

After over a year of development, the SCIT is pleased to introduce the **South Carolina Implementation Roadmap** as a tool and guide to continue to restore and protect South Carolina's greatest resource: salt marsh.

SCIT Working Groups

- Restoring Marsh
- Protecting Corridors
- Policy & Funding
- Communications, Community, & Culture

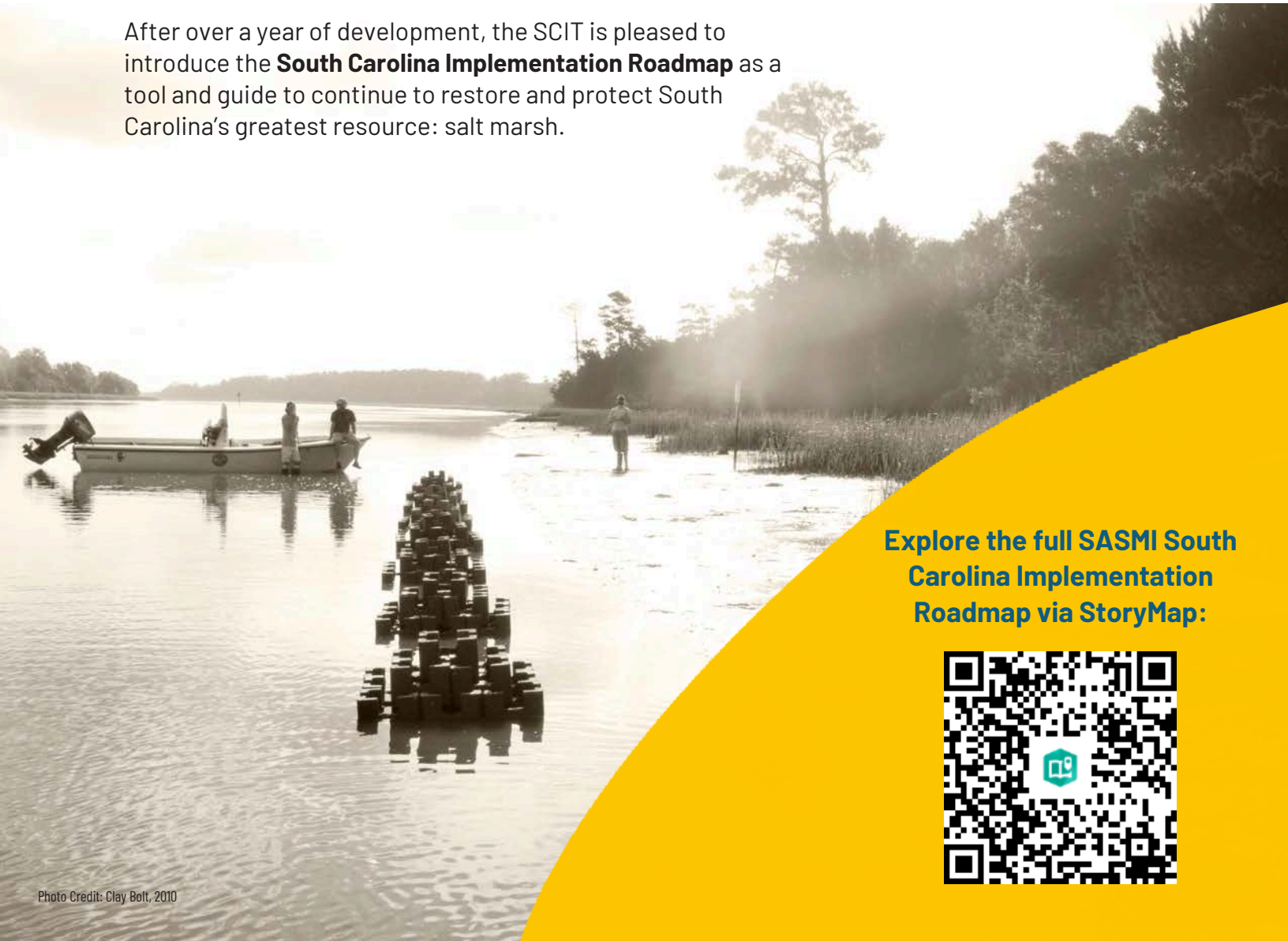


Photo Credit: Clay Bolt, 2010

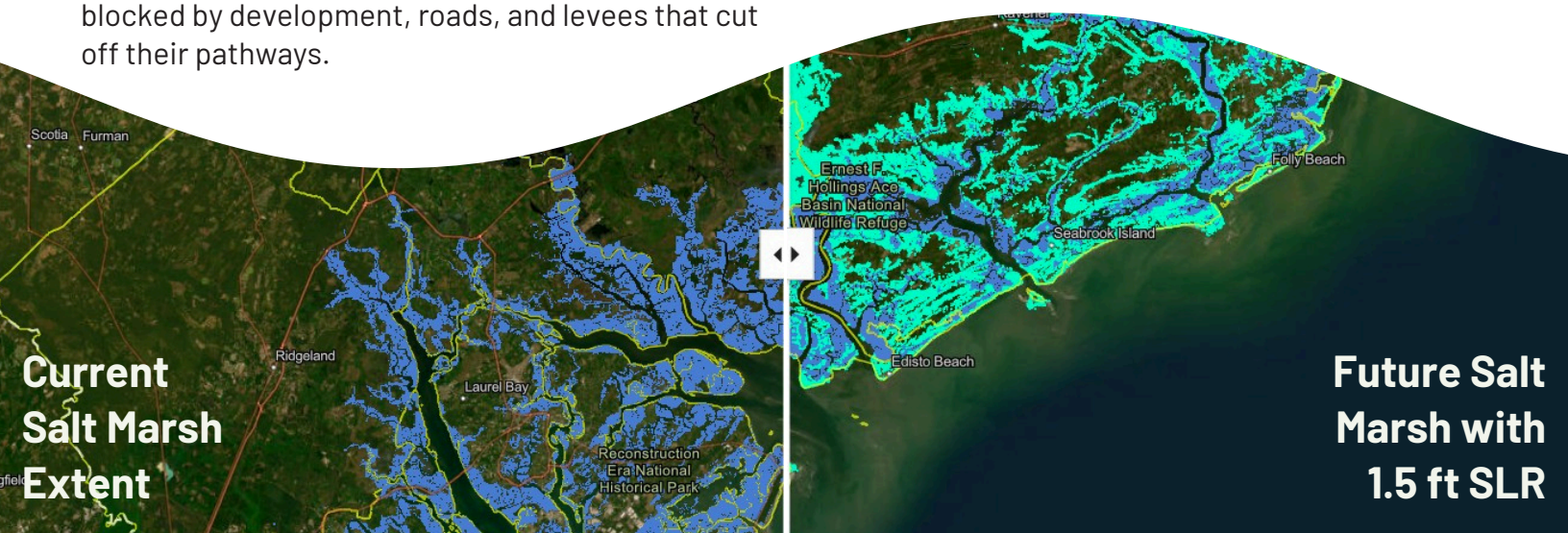
Explore the full SASMI South Carolina Implementation Roadmap via StoryMap:

Sea Level Rise and Salt Marsh Migration in South Carolina

Since 2009, the U.S. has lost 74,000 acres of salt marsh, part of a 70-year trend . The Southeast has the second highest rate of loss, primarily due to sea-level rise, coastal development, and flooding.

Projections suggest that by 2060, South Carolina could lose up to 23% of its existing salt marshes under intermediate sea level rise scenarios, and by 2100 losses might reach ~46% if current trends continue. However, as sea levels rise, salt marshes naturally migrate inland, but this process is often blocked by development, roads, and levees that cut off their pathways.

In a 1.5 foot sea-level rise scenario in South Carolina, it is expected that **257,937 acres** will be converted into salt marsh habitat. Future planning for this migration event will hinge on comprehensive plans of counties and local governments, land protection efforts, and the removal of barriers to allow for salt marsh migration.



SCIT Conservation Strategies

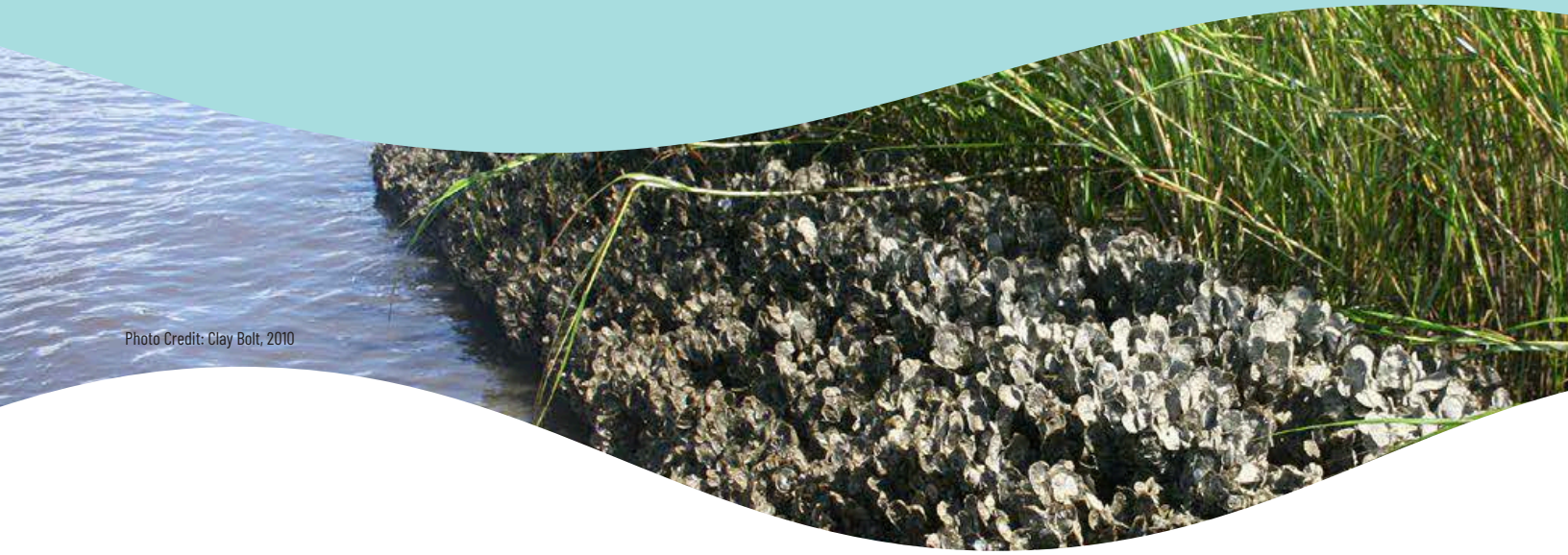


Photo Credit: Clay Bolt, 2010

To protect and restore existing salt marshes, and prepare for future salt marsh migration, the SCIT recommends pursuing and expanding on the following conservation strategies:

Protecting and Restoring Existing Salt Marshes:

Living Shorelines

Beneficial Use of Dredge Material

Conserving Future Salt Migration Corridors

Land Protection

Aquatic Barrier Removal

The following cross-cutting approaches will be utilized to advance SASMI's goals in South Carolina:

- Investing in monitoring, mapping, and research
- Implementing salt marsh-forward policy
- Funding Our Work
- Communicating Our Mission

Photo Credit: Susanna Hopkins, Audubon SC, Clay Bolt, Mike Wilkinson

SCIT Roadmap Recommendations

Conservation Strategies

Strategy 1: Protecting and restoring the health and functions of existing salt marshes.

Improving the accessibility of living shorelines in South Carolina:

1. Development of streamlined guidance documents for private residents and communities to better understand the living shorelines permitting process.
2. Prioritize public outreach campaigns aimed at educating communities and residents on the benefits and applicability of living shorelines and other nature-based solutions on their properties to address resilience issues.
3. Further refinement of the state-level permitting process, with special consideration aimed at reducing engineering and survey costs for the private landowner. This could be an elimination of the professional drawings requirement for small-scale standard projects.
4. Increased flexibility within the state-level permitting process to efficiently process permits that include materials not originally considered under current regulations.
5. Continued investment in updating and promoting the Clemson Extension Living Shorelines 101 course, to align with current regulatory guidelines and educate contractors on the implementation of living shorelines in South Carolina.
6. The development of a state-level cost-share program for living shorelines (akin to NCCF's Living Shorelines Cost-Share Program).

Forging a pathway for the beneficial use of dredge material:

1. Development of a salt marsh health metric tool to determine priority areas for BUDM implementation.
2. Implementation of more small-scale pilot projects in a variety of locations across coastal South Carolina with a specific focus on fine-grain marsh projects.
3. Development of design recommendations to be used in BUDM projects (grain size target, target elevations for marsh platform enhancement) to provide to USACE during project planning.
4. Development of a guidance document for BUDM based on research from pilot projects in South Carolina.
5. Establishment of a BUDM permit based on guidance from research.

Photo Credit: Clay Bolt, 2010

Strategy 2: Conserving migration corridors and removing or retrofitting barriers to ensure salt marshes can shift as sea levels rise.

Continuing the legacy of land protection for salt marsh migration:

1. Develop educational materials for private landowners and their families to understand opportunities and voluntary incentives for land protection.
2. Integrate environmental advocacy groups into local comprehensive land-use planning.
3. Develop and define a standard definition of "Marsh Migration Corridor" to advocate for an established migration route for salt marsh.
4. Identify on a parcel-level priority opportunities for land protection to benefit salt marsh migration.
5. Develop a tool to better predict the impacts of impervious surface on adjacent properties.
6. Develop additional state level funding for land protection of marsh migration corridors.
7. Increase availability of low-interest loans for land protection.
8. Encourage state and local governments to adopt Green Space Sales Taxes or similar initiatives as a funding source for private land protection and public acquisition.
9. Tourist tax to contribute to salt marsh conservation priorities.
10. Explore the potential for marsh migration corridor restoration opportunities through SCOR's buyout programs.
11. Identify marsh restoration opportunities on private and public protected lands.
12. Establish zoning setbacks to prevent overdevelopment.

Removing barriers and retrofitting structures for marsh migration:

1. Complete a full barrier and dam inventory of South Carolina's coastal areas to understand the locations and conditions of structures across South Carolina's coastal watersheds.
2. Prioritize inventoried barriers for removal, replacement, or retrofit to encourage salt marsh migration.
3. Develop outreach materials highlighting the importance of removing barriers for salt marsh migration and encouraging local landowners and planning sectors to consider replacement of structures with resilient designs which encourage hydrologic connectivity.
4. Collaborate with landowners and maintainers of roads and structures to implement resilient design standards.
5. Establish the facilitation of salt marsh migration as a resilient goal of local governments and state agency planning to allow for the adoption of "daylighting culverts" for salt marsh migration and aquatic connectivity.
6. Develop design standards which define parameters for "daylighting culverts" and other road crossing structures. Include resilient design standards in comprehensive planning efforts moving forward.
7. Include local governments in culvert removal and replacement projects, as a learning opportunity to demonstrate resilient design implementation.

SCIT Roadmap Recommendations

Cross-Cutting Approaches

Invest in Mapping and Monitoring of South Carolina's Salt Marshes

1. Invest in and expand the NERR salt marsh migration mapping effort to the entire coast of South Carolina using methodology established by NERR and SCDNR researchers.
2. Complete an inventory of marsh ecosystems in the state analyzing data including marsh platform, oyster beds, shoreline conditions, and associated biodiversity to understand current and projected future salt marsh health.
3. Identify degraded and vulnerable salt marshes today and for future SLR scenarios.
4. Determine protection/restoration measures best suited to vulnerable salt marshes identified.
5. Invest in ongoing monitoring and maintenance of salt marshes and associated restoration projects in the state.

Adopting Salt Marsh Forward Policy in South Carolina

1. Advocate for state and local policies to protect existing salt marshes and protect existing salt marsh migration corridors.
2. Support state and local governmental entities to plan, identify, and fund activities to protect current salt marshes, restore degraded marshes, and plan for marsh migration.
3. Collaborate with state governments in applying legal tools—such as zoning, buyouts, and setbacks—through existing regulatory frameworks (e.g., coastal zone management, floodplain ordinances, land-use policies).
4. Support coastal county and municipal staff to create salt marsh management plans.
5. Adopt for all coastal planning and decision-making NOAA's Intermediate-High projected rate of future sea-level rise.
6. Advocate for local natural resource protection ordinances where opportunities exist.
7. Develop a REPI Resilience Strategy.
8. Analyze and prioritize existing programs and incentives to coordinate funding for large-scale projects having landscape-scale impact and that protect marsh migration corridors.
9. Develop a Private Coastal Lands and Equitable Economic Incentive Strategy.
10. Support Local Governments in Adopting Salt Marsh Friendly Initiatives.
11. Develop a SASMI Salt Marsh Model Wetlands Ordinance.

Communicating Our Mission: Salt Marsh for Everyone

<u>State Level Communications & Engagement</u>

1. Encourage state-level decision makers to understand the SASMI coalition and see the value of protecting and conserving salt marsh .
2. Encourage agencies to align engagement efforts across coastal communities and share lessons learned to promote effective and supportive outreach efforts.
3. Identify avenues SASMI can deepen engagement between communities and decision-makers and provide meaningful support.

<u>Community Level Communications & Engagement</u>

1. Encourage SC residents to understand the SASMI coalition and see the value of protecting and conserving salt marsh in their own communities.
2. Identify avenues SASMI can deepen engagement between communities and organizations and provide meaningful support.
3. Co-develop solutions related to salt marsh conservation within coastal communities to promote resilience.

<u>Combined SC Communications Recommendations:</u>

1. Identify SC SIT partners and programs best positioned to effectively disseminate information about salt marshes and ways to protect them.
2. Develop tailored products and presentations for coalition members to use at existing meetings and events. These resources will introduce state agencies, legislators, and local staff to the conservation plan, outline agency-specific roles, and identify areas of coordination to execute the regional and state plans.
3. Highlight current successful SASMI coalition projects and partners within SC. Emphasize the ecological and community benefits of coastal wetland restoration, conservation, and migration, while highlighting the threats and stressors these ecosystems face.
4. Prioritize communication strategies that encourage collaborative, mutually beneficial policy adoption over individual attitude shifts.
5. Partner with SIT members to host workshops with state, municipal, and county staff. These sessions will address the critical need for salt marsh conservation, outline shared goals and opportunities, and define local government roles. Focus areas include state-specific conservation priority areas, existing laws and policies protecting marsh, setback and buffers, shoreline stabilization, and permitting processes.
6. Offer training on mapping tools, data visualization, and model resilience plans to support informed decision-making. Leverage established networks such as state municipal associations, county government associations (e.g., COGs), and National Estuarine Research Reserves Training and Engagement Programs (T&E).

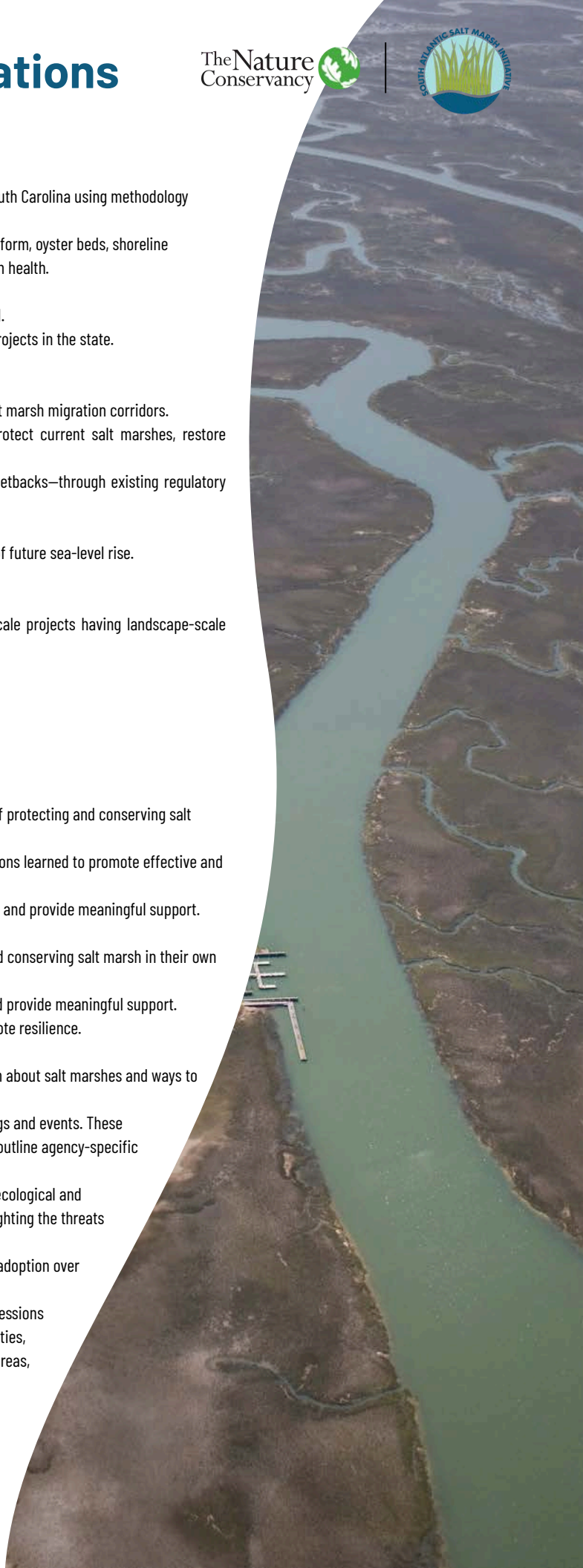


Photo Credit: Clay Bolt, 2010

Special Thanks

to the South Carolina State Implementation Team for contributing to the development and refinement of the SASMI SCIT Implementation Roadmap:

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Photo Credit: Susanna Hopkins, TNC

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