We need resilient coasts

In the United States, 19 out of 20 major cities are located on the coast.

Coastal communities contribute 45% of U.S. GDP, including 51 million jobs.

Coastal populations are experiencing the effects of a changing climate, including severe storms and sea-level rise.

Coastal wetlands, which provide critical habitat and flood protection, are rapidly disappearing due to development.
Coastal populations and critical infrastructure are experiencing the effects of a changing climate, including severe storms and sea-level rise.
Reducing risk

Natural coastal systems can provide protective services:

• Wave attenuation
• Flood storage capacity
• Erosion control
Multiple Lines of Defense

11. Evacuation Route
10. Elevated Building
  9. Pump Station
  8. Levees
  7. Flood Gates
  6. Highways
  5. Natural Ridge
  4. Marsh Landbridge
  3. Sound
  2. Barrier Islands
  1. Offshore Shelf

Healthy Estuary
Building resilience

- Understand shoreline changes in the broad, regional context of natural systems
- Integrate green and gray solutions for coastal protection
- Engage sectors and stakeholders, and build partnerships

Enter a *Systems Approach to Geomorphic Engineering*
What is SAGE?

SAGE adapts the coastal landscape to address a wide array of changing conditions.

SAGE understands shoreline changes in the broad, regional context of natural systems.

SAGE builds partnerships among multiple sectors to research, plan, design, and fund projects that increase the resilience of coastal communities.
SAGE is a community of practice

A collaborative effort between Federal and State agencies, non-governmental organizations, academia, and private business & engineering firms.
SAGE Goals

Create and maintain healthy coastal economies, communities, and ecosystems.

Reduce risks from changes in coastal storm intensity, sea level, and precipitation patterns.

Utilize the full range of “green” nature-based and “grey” structural techniques for coastal protection.

Become a source of sound scientific knowledge, tools, and best practices.

Foster intergovernmental, multi-sector, and multi-disciplinary collaboration.
SAGE Community of Practice

SAGE Leadership Team

Federal Agencies | States | NGO | Academia | Financial | Private

SAGE Management Team

Policy

Technical

Communications

Financial

Pilot Projects

Science/Research

Engineering

Website

States Webinar

Brochure & 1-pagers

Engagement Strategy

Business & Finance Plan

San Francisco

Philadelphia/Barnegat Bay

Jacksonville

New York

Seattle

Sectors

Work Groups

Activities
What is SAGE doing?

Compile, assess, and strengthen body of research on combined green and grey approaches

Build partnerships in pilot regions.

Identify public and private financing mechanisms.

Compile project data

Create communication processes and tools
Understanding natural solutions

Under what circumstances can the natural environment provide coastal protection?

What affects an ecosystem’s ability to provide protection?

Can we value the suite of ecosystems services for cost-benefit analyses?

What are the maintenance costs?
Is SAGE in your region?

San Francisco Bay
New York City
Northeast Florida
Puget Sound
Barnegat Bay
SAGE: Connect projects with funding

Address reliance on federal dollars

Create sustainable business model

Identify alternative financing mechanisms

Build public-private partnerships

Generate investment from the private sector
Build new partnerships

Access to multi-disciplinary knowledge base

Leverage ideas and resources

Generate interest and investment in natural approaches to risk reduction that benefit communities, ecosystems and economies
SAGE Website

http://www.sagecoast.org/index1.html

Launching early July

Collaborative effort at CCRM/ VIMS

Sage Communications workgroup.
Systems Approach to Geomorphic Engineering

Integrating green and grey solutions in coastal landscape transformation

SAGE ... is a Community of Practice of Federal, State, and Local Agencies, non-governmental organizations, academic institutions, engineers, and private businesses working together to:

- Lead and promote green-gray approaches to assure coastal community and shoreline resilience;
- Broaden science, engineering, policy and marketing activity both domestically and internationally;
- Engage community partners in regional demonstrations.

Featured Tools

- Searchable Project Database: Multiple project types and sources
- Interactive Map: Projects with known locations

Spotlights

SAGE Living Shoreline Brochure (pdf)
Numerous SAGE partners contributed to the content in this informative brochure that provides a helpful overview of the different types of shoreline solutions. This document is a great handout to help people learn about natural and...
SAGE Database and Mapper

SAGE Searchable Project Database

To Search The Database

- To select a contiguous group of files or folders, click the first item, press and hold down the Shift key, and then click the last item.
- To select non-contiguous files or folders, press and hold down the Ctrl key, and then click each item that you want to select.

This database contains multiple coastal resilience projects around the nation, including Living Shorelines for shoreline stabilization, habitat restoration, and floodplain management. Each project includes a variety of site, design, and partner information. Use the pull-down lists or a Key Word search to find certain project names, partners, and other unique information.

SAGE partners at the US Army Corps of Engineers Institute for Water Resources and the Virginia Institute of Marine Science, College of William & Mary collected project records from a variety of sources like the NOAA Restoration Atlas, the COPRI Living Shorelines Database, state and local agencies, watershed organizations, private foundations, and...
Get Involved

Contact us for more information and to join the SAGE Community of Practice

About our logo and brand
The SAGE logo is the official emblem of the SAGE project. It may only be used in conjunction with SAGE endorsed or sponsored activities, or within the context of providing information about SAGE.

The SAGE logo may not be distorted, displayed in alternative colors, cropped or otherwise altered. It may however, in black and white applications where color is not an option, be displayed in grayscale.

Register to receive SAGE information and updates
Your email address

Your first name

Your last name

Affiliation/business

Reason for your interest in SAGE

Management Team
SAGE’s Management Team is responsible for day-to-day development, implementation and coordination of SAGE activities. Please contact a management team representative within your practice to find out how to get plugged into SAGE.

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