



**NatureServe**

A Network Connecting Science With Conservation

# COASTAL AND MARINE STRATEGY



## THE NEED

Ocean acidification, overfishing, habitat destruction, pollution, invasive species, energy development, climate change—the threats to the health of world’s marine species and environments are global and pervasive. The ocean’s resources, and the essential benefits they provide to people around the world, urgently need conservation, protection, and management.

Effective coastal and marine conservation requires high-quality biodiversity information. Knowledge about coastal and marine species and habitats provides the principal indicators of ecosystem health and resilience at a time when oceans face accelerating and unprecedented environmental changes.

Practitioners and policy-makers need marine biodiversity information and associated physical data to support resource assessments, emergency response, assessment of and adaptation to climate change impacts, conservation and resource planning, and ecosystem-based management.

Marine conservation practitioners and policy-makers require information about vulnerable species and ecosystems, where they are located, their risk of extinction, the major threats to their survival, the trends in their distribution and condition, and how to assess the health of a given occurrence over time. They also need to know how ecosystems function, how systems are connected, and what benefits humans derive from a given ecosystem. This knowledge guides priorities for conservation, strategies for protection or risk abatement, and plans for management and restoration of biodiversity resources.

Partners and stakeholders interested in coastal and marine science and conservation include:

- Managers of economically important coastal resources
- Advocates for coastal conservation
- Managers of marine protected areas
- Coastal communities facing rapid change
- Proponents of offshore energy development
- Emergency responders
- Businesses and communities dependent on coastal ecosystems

By expanding on NatureServe’s core strengths and complementing the work of others, we will provide the information, methods, and tools needed to reduce threats to and ultimately improve conservation of coastal and marine biodiversity.

# OUR APPROACH

The NatureServe network is uniquely positioned to bring together the methods, tools, and scientific data needed to respond to disasters, understand and abate threats, restore ecosystems, and rebuild resilient coastlines.

NatureServe is a leader in developing the methodologies and tools for terrestrial and freshwater species and ecosystem assessment in a variety of geographies, ecosystem types, and scales from local to national to global. Our overall assessment methodology includes developing classifications; mapping; assessing conservation status, threats, and responses to threats; and establishing metrics for assessing and monitoring condition. We will expand and adapt these core methods and tools for coastal and marine environments during the next five years.



We will also capitalize on our experience in developing and coordinating networks and partners to synchronize efforts among the many organizations working to plan and protect coastal and nearshore marine ecosystems and species. We will establish flexible tools and standards that permit groups to meet their own objectives, helping to ensure efficient and effective use of the limited funds available for marine conservation. As we expand our work in this realm, we will focus on adding value—particularly by developing analyses and syntheses that inform key coastal and marine conservation challenges—while avoiding competition and duplication of efforts wherever possible.

Our goal is to initiate or continue ongoing work and make significant progress in each of these areas over the next five years. Some of the core activities that will guide our work—identified in the complete strategy (available at [www.natureserve.org/coastal-marine-strategy](http://www.natureserve.org/coastal-marine-strategy))—will be completed during this strategy's five-year period while others will take longer to accomplish.

## GUIDING PRINCIPLES

**Emphasize activities where a strong conservation need aligns with NatureServe's strategic plan.**

**Focus on areas that will have high conservation impact and the highest probability of success.**

**Build on areas where NatureServe has existing strengths, partnerships, and presence.**

**Concentrate on activities that can be initiated in the five-year span of the strategy, but with the vision of adding long-term activities that improve the quality of marine biodiversity data, methods, and tools to levels that match terrestrial species and ecosystems.**

**Identify priorities, but allow for flexible response based on opportunities and needs that arise.**

**Focus on estuarine and marine coastal and nearshore areas, not the open ocean (with some exceptions).**



## DEVELOP SCIENTIFIC KNOWLEDGE

### *Coastal and Marine Ecosystem Classification (CMECS)*

Promote the widespread use and adoption of CMECS by providing the content, tools, and training to help users easily adopt this globally applicable U.S. federal standard.

### *Ecosystem Data Collection & Mapping*

Promote and support the collection and mapping of regional and national ecosystem spatial data by providing expertise in the application of the classification and developing methods and tools.

### *Ecosystem Conservation Status Assessment*

Develop and apply methods for coastal and marine ecosystem conservation status assessment.

### *Threats Assessment & Mapping*

Build on efforts to compile and map data on threats to coastal and nearshore ecosystems.

### *Ecosystem Condition & Monitoring Standards Development & Application*

Apply the Ecological Integrity Assessment framework to develop methods, specific metrics, and thresholds for assessing condition of coastal and marine ecosystems within the CMECS classification.

### *Extinction Risk Assessment*

Complete Red List assessments for select marine taxonomic groups.

### *Climate Change Vulnerability Assessment*

Adapt NatureServe's Climate Change Vulnerability tool for the assessment of coastal and marine species and ecosystems.



## PUBLISH ANALYSES & SYNTHESSES

### *Species & Ecosystem Information Publishing*

Expand key publishing tools like NatureServe Explorer, LandScape America, and NatureServe Surveyor to capture and disseminate coastal and marine biodiversity data.



## ENHANCE EFFECTIVENESS

### *Complementary Collaboration & Coordination*

Capitalize on our network experience in coordination and standardization, work effectively with partners with complementary strengths, and avoid competition and duplication of efforts wherever possible.

### *Systems & Staff Capacity*

Increase expertise and staff capacity to expand our core systems to accommodate coastal and marine methods and data in activities like database, tool, and website maintenance and enhancement; partner outreach; training; and methodology research and development.

### *NatureServe Network Capacity Building & Expansion*

Enhance NatureServe member program capacity to collect, manage and disseminate coastal and marine data and establish a broader suite of partners that can support coastal and marine data development.

### *Communication & Outreach about Coastal & Marine Planning Tools & Methods*

Continue to coordinate the Ecosystem-Based Management Tools Network.

### *Coastal & Marine Methods & Tools Training*

Expand training programs to include more explicit coastal and marine components, especially in the subject areas of ecosystem classification, conservation status assessments, inventory and mapping, and conservation planning.



## SUPPORT CONSERVATION PLANNING

### *Multi-objective Planning (Integrated Land-Sea Planning and Marine Spatial Planning)*

Expand our work in multi-objective planning and focus on building or expanding the tools and processes needed for integrated land-sea planning and marine spatial planning.

### *Marine Protected Area (MPA) Network Design*

Engage in MPA network design and evaluation with a focus on integrating our existing toolkit with other MPA tools.

### *Coastal Climate Change Adaptation Planning*

Engage practitioners in Coastal Climate Change Adaptation Planning with a focus on further developing the necessary tools and methods and on providing training.





# COASTAL & MARINE PROGRAM HIGHLIGHTS

## Marine Classification

A decade-long collaboration with NOAA and other partners created the Coastal and Marine Ecological Classification Standard (CMECS). This scientific framework provides a consistent vocabulary for describing the components of marine ecosystems and became a U.S. FGDC standard in 2012. ([www.cmeccatalog.org](http://www.cmeccatalog.org))

## Ecosystem-Based Management (EBM) Tools Network

NatureServe oversees and coordinates the EBM Tools Network, now the premier source of information about coastal and marine planning and management tools. ([www.ebmtools.org](http://www.ebmtools.org))

## Integrated Land-Sea Planning

NatureServe has demonstrated our capabilities in coastal and marine spatial planning by leading and participating in several “integrated land-sea” conservation projects.

## PHOTO CREDITS

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