



National Coastal Area Workshop

Washington, D.C. | February 26, 2009

Workshop Report

Introduction

Through the reauthorization of the Coastal Zone Management Act (CZMA), the National Oceanic and Atmospheric Administration (NOAA) may propose the establishment of a national coastal area to serve as a uniform planning and management area around the nation's coasts. Creating a national coastal area could have a number of benefits, including providing a consistent area in which to collect data, develop indicators, and manage resources. To identify a set of technical parameters for designating the national coastal area, the NOAA Office of Ocean and Coastal Resource Management hosted the National Coastal Area Workshop on February 26, 2009 in Washington, D.C. Specific objectives for the workshop were to: 1) understand the current definitions of *coastal area* as used by federal and state programs; 2) describe the benefits and challenges of developing a single definition of *coastal area* that could be used by multiple agencies; 3) determine necessary parameters for a single definition of *coastal area*; and 4) identify next steps and additional key players. The workshop, facilitated by Meridian Institute, brought together approximately 50 experts from federal agencies with coastal management responsibilities as well as representatives from state coastal management programs, national estuary programs, and national estuarine research reserves.

This workshop report provides a summary of the panel presentations on the different definitions of coastal area currently used by federal agencies and the potential benefits and challenges of developing a uniform definition of coastal area. It also provides a detailed list of the parameters identified by the workshop participants as well as insights on data availability and temporal considerations for the parameters. The agenda for the workshop can be found in Appendix A.

Overview: National Coastal Area in CZMA Reauthorization

Donna Wieting and Ralph Cantral of the NOAA Office of Ocean and Coastal Resource Management offered opening remarks to provide background on the proposed CZMA reauthorization bill and to set the stage for discussions about defining a national coastal area. Ms. Wieting noted that since enactment of the CZMA more than 30 years ago, there has been much progress but further improvements are needed to enhance the management of coastal and ocean resources in light of a changing social, economic, and ecological landscape. For more than two years, NOAA collaborated with the Coastal States Organization on a visioning process aimed at determining how to craft a stronger CZMA. Ms. Wieting explained that while each state currently has its own approach for defining a coastal zone, stakeholders indicated during the

visioning process that there is a need for a regular and more consistent approach to defining the coastal area for improved management and regulation. Stakeholder feedback also highlighted a desire for an ecosystem-based approach to the management of coastal resources and areas. Ms. Wieting concluded that the workshop is a first step in moving toward a national coastal area to supplement the state-by-state coastal zones.

Mr. Cantral elaborated that the visioning process resulted in four cornerstones and 12 principles to guide the development of the new CZMA bill. Two of the agreed upon cornerstones were 1) CZMA should ensure long term sustainability of coastal resources and communities and 2) CZMA should coordinate and align federal, state, and local governments to address issues of national importance. Mr. Cantral noted that while NOAA's proposed reauthorization bill is still in internal agency review, three of the concepts it includes are: a call for a uniform national coastal area, periodic state-of-the-coast assessments, and state plans with measurable objectives. If the bill is authorized with these provisions, NOAA's role would be to coordinate with federal and state agencies to 1) establish the boundary of a national coastal area, 2) conduct periodic assessments of coastal and ocean resources within this national coastal area, and 3) establish national measurable objectives that would guide implementation of the Act at the national and state level. Mr. Cantral concluded that ultimately the establishment of a national coastal area is driven by the need to make a much more transparent process so that the public can understand where the planning and management processes apply and have a better vision of what "coastal" means on the ground. This national coastal area could also help to improve interagency coordination and provide federal agencies with a stronger justification to Congress for why regulatory and management programs are needed to protect critical resources and vibrant communities.

Panel I: Current definitions of coastal area and resulting spatial boundaries

The first panel consisted of four representatives from NOAA, the Federal Emergency Management Agency (FEMA), and the U.S. Fish and Wildlife Service (USFWS) addressing the various definitions of coastal area that federal agencies currently use in their management activities. Workshop participants were provided with a list of current boundaries from various states within the U.S. and from other countries for comparison.

Ralph Cantral, NOAA Office of Ocean and Coastal Resource Management

Mr. Cantral provided an overview of the definition of coastal zone in the current CZMA and the definition of national coastal area proposed in the CZMA reauthorization bill. He noted that a uniform national coastal area would be a significant change from today, as currently the coastal zone is established by each coastal state based on the definition in the CZMA:

The zone extends inland from the shorelines only to the extent necessary to control shorelands, the uses of which have a direct and significant impact on the coastal waters, and to control those geographical areas which are likely to be affected by or vulnerable to sea level rise.

Mr. Cantral highlighted that the current state-by-state definition has yielded widely different coastal zones around the country and even in adjacent states. This has proven problematic to other agencies in administering their programs and assessing the status of coastal and ocean resources. It also has caused confusion for industries and the regulated community as they find it difficult to predict where various

enforceable policies will be applied by the states. Mr. Cantral stated that NOAA is proposing a national coastal area to address this issue, based on the definition in the draft CZMA bill:

The term “national coastal area” means an area, defined by the Secretary, for which coastal states will develop coastal and ocean resource assessments and implementation plans. The boundary of the national coastal area:

- (i) extends inland from the shoreline of each coastal state to the extent necessary to control land and water uses that impact coastal and ocean ecosystems and coastal community resiliency; and*
- (ii) extends seaward from the shoreline of each coastal state to the extent necessary to manage ocean resources that may affect state waters and coastal resources, provided the boundary shall not extend seaward of those waters subject to the jurisdiction of the United States.*

In considering the varying extents, and significant overlap, of coastal areas managed currently by NOAA, Mr. Cantral provided a schematic of the areas managed by programs within only one office of the agency—the Office of Ocean and Coastal Resource Management (see Appendix B). This office administers programs related to coastal zone management, estuarine research reserves, coastal and estuarine land conservation, marine protected areas, coral reef conservation, federal consistency, and other offshore activities. These programs, which represent only a few of many within NOAA, have management responsibilities that extend from the coastal uplands to the seaward extent of the Exclusive Economic Zone.

Percy Pacheco, NOAA Special Projects Office

Mr. Pacheco described the NOAA Coastal Assessment Framework (CAF) that was developed in the 1990s to define watersheds of coastal and upstream areas. Within the CAF, six building blocks were established: Estuarine Drainage Area land component, Estuarine Drainage Area water component, Coastal Drainage Area land component, Coastal Drainage Area water component, Fluvial Drainage Area, and Fluvial Coastal Drainage Area.

Mr. Pacheco noted that these building blocks assisted with the identification of what constitutes a coastal county. A 15% rule—at least 15% of the county had to be covered by a Coastal Drainage Area or Estuarine Drainage Area or within a coastal USGS 8-digit Hydrologic Unit Code (HUC) to be classified as a coastal county—was employed as the most appropriate level to capture counties that have significant impacts on coastal and ocean resources. Using the CAF criteria, 673 counties would be considered coastal within 31 coastal states. Comparison using criteria from different programs resulted in the following numbers for coastal counties: Coastal Zone (as defined by the states) = 442 coastal counties; FEMA (A and V zones) = 364 coastal counties, and shoreline = 404 coastal counties. Mr. Pacheco noted that these results do not include the territories. NOAA is currently considering an update for CAF using the 10/12-digit HUC to improve its future applications and better capture the migration of diadromous fishes to address key fisheries management issues while retaining a coastal focus for the rest of the country.

Mr. Pacheco concluded that the CAF provides a consistently derived, watershed-based, digital spatial framework for managers and analysts to organize and present information on the nation’s coastal, near-ocean, and Great Lakes’ resources. With the appropriate supporting data layers, it can be used as a decision support tool to address several types of ecosystem-based management issues.

Mark Crowell, FEMA Mitigation Division

Mr. Crowell stated that FEMA administers the National Flood Insurance Program. He also noted that FEMA does not have or use a single definition of coastal. Mr. Crowell reviewed several studies for defining

coastal counties to show how various processes and criteria result in vastly different calculations of coastal counties and the associated percentage of the population living in these counties:

- In a 1980's erosion study, FEMA used the definition of coastal as counties that were adjacent to the coast or counties that contained V zones. A total of 258 coastal counties were identified through this process.
- In 1990, a NOAA study identified coastal counties by population change and tidal waters. A total of 451 coastal counties were identified with 45% of the population of the U.S. living in these counties.
- In 1991, a study by FEMA determined coastal counties for a sea level rise study using criterion such as tidal waters, hurricane and extratropical storm surge, and tsunamis. A total of 283 coastal counties were identified (total did not include Great Lakes).
- In 1998, NOAA conducted a watershed based assessment to define coastal counties. A total of 673 coastal counties were identified with 53% of the population living in these counties.
- The Census Bureau used a 50-mile buffer of areas adjacent to the coast as their definition. This process did not use coastal counties as a determinant, but did find that 49% of the population lived in coastal areas.
- In 2007, a FEMA study used the definition of coastal as any county bordering the open ocean or Great Lakes and/or any county containing a V zone. A total of 364 coastal counties were identified with 37% of the population living in those counties.

Mr. Crowell noted that FEMA's Mitigation directorate administers the National Flood Insurance Program and prepares Flood Insurance Rate Maps (FIRMs) that show the one-percent annual chance flood (or the 100-year flood) and associated elevations. He highlighted that FEMA's current coastal demographic study concluded that 3% of the U.S. population (8,672,000 people) live in areas subject to the one-percent annual chance coastal flood, while 8% of the U.S. population (24,718,000 people) live in coastal census block groups based on one-percent annual chance coastal flood. He noted that these demographic results are not intended to be used as an upper bound on the percent of population exposed to coastal flood hazards.

Mr. Crowell concluded that a variety of combinations of geophysical, geopolitical, and boundary criteria can be used to define coastal areas. He stressed that it may be untenable to develop a single government-wide definition but perhaps a super definition should be developed with different subcategories or tiers based on combinations of geophysical and geopolitical criteria. He also noted that there is currently an extensive misuse and citing of the current studies that define populations living in coastal areas, so the proper use of any definition of coastal should be effectively communicated.

Doug Vandegraft, USFWS National Wildlife Refuge System

Mr. Vandegraft stated that USFWS started defining a coastal boundary because management had asked how many national parks are in the coastal area. To respond to the request, USFWS underwent a process to develop an inventory of Marine National Wildlife Refuges. They first looked at what refuges are touched by tidally influenced waters, which resulted in a list of 169 refuges. They then looked through the National Wetland Inventory and added another 8 refuges based on tidally influence wetlands. Their current inventory reflects coastal, ocean, insular or Great Lake lands submerged intertidal or emergent within the National Wildlife Refuge administrative boundaries that have saline soils.

Conclusion

In closing the session, Mr. Cantral provided other examples of criteria used to establish boundaries. As an example of a boundary based on economics, he noted that Florida had assessed fishing communities that make their living off of coastal resources and found they often live away from the coast due to the high cost

of real estate. In considering temporal criteria in establishing boundaries, he highlighted that the sea level rise map in Florida extends to Lake Okeechobee, which currently may not be considered coastal as it lies inland, but it may become coastal over time as sea level rises. He concluded that in considering a uniform definition of national coastal area, it may be necessary to consider the temporal scale as well as geographic, ecological, and economic criteria.

Panel II: Benefits and challenges to a single definition of coastal area

The purpose of the second panel was to describe, from the perspectives of federal and state coastal management agencies, the major benefits and challenges to creating a national coastal area. The two panelists addressed how a uniform planning and management area would be beneficial to the management of coastal resources as well as what possible challenges would need to be overcome to move forward with establishment and implementation of a national coastal area.

Dan Farrow, NOAA Office of Habitat Conservation

Mr. Farrow described the following benefits to a uniform coastal area boundary:

- Better resource assessments, policy analyses, performance reporting, and program administration
- More certainty for stakeholders (e.g. industries that work in several states would benefit from consistency between states; the public would have an easier time understanding regulatory jurisdictions)
- Increased potential for federal agency integration
- Improved political perception
- Assist states in working together more collaboratively, leading to a more coherent national coastal management program

He then explained the challenge of defining a national coastal area lies in the current spectrum of definitions of coastal zone used by coastal states. These definitions include:

- Political – range from entire state or territory, coastal counties, and coastal towns or municipalities
- Physical – distance from a reference point or topographic feature
- Mixed – combines political, man-made, or natural features
- Geophysical feature/watershed
- Biological

Mr. Farrow highlighted that as you get near the geophysical/biological end of the spectrum, the public may have less understanding of the basis for establishing the boundary but the boundary may be more directly linked to the coastal resources that are being managed.

Bob Bailey, Oregon Coastal Management Program

Mr. Bailey stated that when the CZMA was established more than 30 years ago, it contained a very broad definition of coastal zone that allowed each state to define its coastal zone boundary to suit the political environment that often surrounds the creation of such a new program. He noted that the Coastal States Organization has proposed language for a reauthorized CZMA that would acknowledge that this term has really become a legal term rather than definition of an area useful for planning and management. CSO proposes to redefine the term “Coastal Zone” to mean the area approved by the Secretary for purposes of carrying out the CZMA and proposes retaining the existing approved coastal zone boundaries for each state.

However, CSO recognizes the need for a broader coastal planning area within which to address coastal management issues. CSO proposes that coastal states be able to designate a broader coastal planning area that would encompass a greater area within which the states would conduct periodic assessments of coastal resource and management needs, prepare multi-year assessments to meet those needs, and then apply for funding to conduct research, collaborate with federal and state agencies, and develop measures to address issues in this broader area. This would enable a more ecosystem-based approach to coastal management.

Mr. Bailey noted that under the current system the term “coastal area” has different meanings and applications in various federal agencies, creating uncertainty and jurisdictional complexity for state managers. One of the benefits of defining a coastal planning area would be to help resolve some of the uncertainty. He urged that in defining this area, it is important to consider including municipalities that consider themselves to be “coastal” and exclude municipalities that do not consider themselves “coastal.” He added that including areas that are now not considered “coastal” may trigger contention over perceived additional regulatory burdens. But as an example of expanding the concept of “coastal planning area,” Mr. Bailey suggested that the U.S. Department of Agriculture and Natural Resource Conservation Service (NRCS) should be involved due to the significant influence of inland agricultural activities on coastal waters.

Mr. Bailey concluded that we are retrofitting a system that has been in place for over 30 years. Specifically, he identified several key needs for improving the current system:

- Need to recognize that biological and physical processes work on different scales, resulting in a spatial mismatch between management areas and the environment that can cause challenges;
- Need a uniform definition of coastal planning area to assist with aligning various programs, but in aligning programs there is a need to allow for flexibility;
- Need a common coastal planning area to encourage integration of all state and federal agencies with management responsibility (including EPA, DOD, NRCS, USDA, NOAA, etc);
- Need to promote collaboration within the coastal planning area in order facilitate efforts towards common management goals;
- Need to recognize that intergovernmental coordination is vital and should be encouraged but not mandated within the coastal planning area; and
- Need to conduct an assessment every five years within the coastal planning area to as the basis for an action plan by the state and federal agencies for following five years.

Breakout Groups: Identifying parameters for defining a national coastal area

In identifying the charge to the breakout groups, Ralph Cantral of NOAA Office of Ocean and Coastal Resource Management reminded participants that the objective is to establish a definition and boundary for a national coastal area that will lead to better alignment of programs and more coordinated management activities. He also stressed that when talking to Congress, the term “coastal” is not well understood so the coastal community needs to develop a clearer message for what “coastal” means and why it is important. With these two objectives in mind, the breakout groups were asked to brainstorm potential parameters that could be used in delineating a national coastal boundary, discuss data availability and gaps in mapping these parameters, consider temporal aspects of the parameters, and offer additional suggestions or concerns for moving forward with delineating a national coastal area and conducting assessments.

Potential Parameters

Potential Parameter	Data Availability/Gaps
Inland Boundary	
Counties with coastal A and V zones	V-zone database (FEMA); A-zone database (FEMA-in development)
Counties that are adjacent to the coast	Data available
50-100 mile buffer	Data available
50 mile buffer from mean high tide line	Data available
Coastal watersheds	HUCs (USGS); EDAs (NOAA)
Area below certain elevation	Topography data
Salinity range	
Tidal range/lake levels	Data available; may be gaps regionally
Airsheds	
100-year flood area	Data available
Coastal erosion	Historical erosion data
Sediment supply/system (riverine/littoral)	Little data available on supply or transport system
Impacts of coasts (e.g. property values)	Data may not be available for all locations
Impacts on coasts (e.g. floods, hurricanes)	Meteorological data on storm activities
Economic impacts of coastal processes (e.g. hazards, erosion impact on property values)	Some data but not in all locations
Gradient of impacts (more intense closer to coast, less intense as extend inland)	
Ecological indicators	Fish and bird habitat data; may not be consistent data available for all locations
Essential fish habitat	
Critical habitat for endangered species	
Habitat corridors	
Built infrastructure (ports, navigation, levees)	
Natural infrastructure	Current data incomplete
Tribal lands	
Cultural resources	
Visitorshed	
Population and demographic patterns	Census and population data
Socioeconomic indicators (social and economic value of coastal areas)	National Ocean Economic Projects (by counties); CIESIN; economic data scarce
Interested/affected parties	Limited data; ideas – surveying tools/other mechanisms to get info on user communities (developers, conservation community, property owners, tourists, etc)
Offshore Boundary	
Continental shelf	
EEZ	
Aquaculture	
Alternative energy siting	

Marine uses	
3- mile limit	
12-mile limit	
Fish habitat	
Critical habitat for marine endangered species	
Offshore cultural resources	

Temporal Considerations

- Watersheds – change over time due to sediment impacts, nutrients, climate change, water quality issues, water usage, and development
- Erosion
- Tidal influence/lake levels
- Sea level rise
- Biological – habitat corridors and populations will likely shift due to climate change impacts, especially ocean acidification
- Sediment system
- Natural infrastructure - may change location or may lose habitat due to development or climate change
- Population and demographic patterns
- Economic dependence of the coast and on the coast
- Property values in coastal areas – may change due to environmental impacts and development trends
- Interested/affected parties – will likely change over time due to people’s awareness of environmental issues/impacts

Further insights and suggestions

Additional Benefits

- Improve priority setting and resource allocation by state agencies.
- Employ the planning area as a way to phase in new aspects of the CZM program, including strategies to address and adapt to climate change impacts, including sea level rise.
- Increase leveraging of resources among federal and state agencies and non-governmental groups.
- Provide funds and technical assistance for coordinated research on coastal issues.
- A national coastal area could help clarify how local groups can better interact with federal agencies.
- Assessments will likely provide better information for use in management and may help build better relationships between the states and federal agencies through the process of doing the assessment.

Process Ideas

- To prevent duplication of efforts when doing coastal assessments, should build off of existing assessments (watershed assessments, ecosystem assessments) and use existing data.
- Consider the suggestion of tiered definitions, with sub-tiers possibly based on issues.
- Impacts by anthropogenic versus natural causes have different temporal and spatial boundaries. Need to expand the boundary to the largest common denominator.
- Parameters and the resulting boundary should be based on science and how the ecosystem functions, instead of on political boundaries.

- Watershed boundaries may be best, and then consider uses to determine the appropriate watershed size. Keep in mind that the watershed extent will need to be realistic, defensible, and politically feasible.
- Since the national coastal area anticipates better coordination between agencies to manage a shared resource, it is important to bring state and federal agencies into the dialogue early on. In these discussions, may need to consider the current language in the proposed CZMA, especially “to the extent necessary” and “control” to really define what is meant.
- In defining a planning area, needs to be integrated with existing planning efforts to prevent conflicts.
- Need multiple-parameter approach to make the definition applicable to all states.
- One option would be to identify goals and objectives for each state or region, and then define the boundary based on those goals to encourage planning to address specific priorities.

Regional Considerations

- Need to consider if there are regional issues that would preclude us from coming up with a uniform national description. For example, should consider if the definition of coastal needs to be different for the Great Lakes.
- Need to coordinate the with regional ocean governance efforts to understand their current boundaries and assess how parameters would work within their regions.

Messaging Suggestions

- The national coastal area should be something that is easily described and mapped so it can be readily understood by a variety of audiences.
- In defining a national coastal area, it is important to recognize that it’s not perfect and does not cover every use. Need to come to a consensus with the community and build a strong message to make the area understandable and valued by the public, user groups, Congress, and others.

Conclusion and Next Steps

To wrap up the workshop, Ralph Cantral of the NOAA Office of Ocean and Coastal Resource Management offered insights regarding the next steps in identifying a national coastal area and moving toward a nationwide assessment of coastal resources. Though there is no known timeframe for passage of the CZMA reauthorization bill, he explained that the parameters identified through this workshop, while too detailed to be included in the bill language, provide NOAA with a stronger, more robust description of what a national coastal area may look like and justification for why it is important. The insights from the workshop will also help move implementation of the national coastal area forward and jumpstart public input after the passage of the bill.

In thinking about next steps, Mr. Cantral remarked that after the CZMA reauthorization law is enacted, the next two steps will be the assessment of coastal resources and then the creation of state plans. He emphasized that NOAA recognizes the importance of including state and federal agencies, as well as the academic community, in these processes. Specifically related to the assessments, Mr. Cantral stressed that NOAA plans to rely on existing data and information and to work to make it more accessible to the states. These assessments will feed into a state-of-the-coast type report, which is proposed to be released every five years. Mr. Cantral concluded by noting that NOAA will likely host a similar workshop focused on how to move forward on the coastal assessments in the near future and may be calling on the participants in this meeting to help in that effort.

Appendix A

National Coastal Area Workshop

Washington Marriott | Salons G & H

Thursday, February 26 | 10:00 a.m. - 5:00 p.m.

Agenda

Meeting Objectives:

- Understand the current definitions of *coastal area* as used by federal and state programs
 - Describe the benefits and challenges of developing a single definition of *coastal area*
 - Determine necessary parameters for a single definition of *coastal area*
 - Identify next steps and additional key players
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9:30 Coffee and registration

10:00 Welcome and Overview of workshop

- Welcome – David Kennedy, NOAA Office of Ocean and Coastal Resource Management
- Purpose – Ralph Cantral, NOAA Office of Ocean and Coastal Resource Management
- Agenda review – Elizabeth Lee, Meridian Institute

10:20 Current definitions of *coastal area* and resulting spatial boundaries

Moderator: Ralph Cantral, NOAA Office of Ocean and Coastal Resource Management

Panelists:

- National coastal assessment framework – Percy Pacheco, NOAA Special Projects Office
- The definition of ‘coastal’ and the one-percent annual chance coastal flood hazard boundary line – Mark Crowell, FEMA Mitigation Division
- Determining the inventory of marine national wildlife refuges – Doug Vandegraft, USFWS National Wildlife Refuge System

Discussion and questions

11:30 Benefits and challenges to a single definition of *coastal area*

Moderator: John King, NOAA Office of Ocean and Coastal Resource Management

Panelists:

- Federal perspective – Dan Farrow, NOAA Office of Habitat Conservation
- State perspective – Bob Bailey, Oregon Coastal Management Program

Discussion and questions

12:00 Lunch

1:00 Charge to breakout groups

1:15 Breakout groups commence

3:15 Break

3:30 Report out from breakout groups

Moderator: Elizabeth Lee, Meridian Institute

Group discussion of breakout results

- 4:15 Next steps for developing a common definition of *coastal area*
Moderator: Ralph Cantral, NOAA Office of Ocean and Coastal Resource Management
- 4:40 Wrap up and concluding thoughts
- Ralph Cantral and Donna Wieting, NOAA Office of Ocean and Coastal Resource Management
- 5:00 Adjourn

Appendix B

