Committee on Resources
Subcommittee on Fisheries Conservation, Wildlife and Oceans

Statement/Testimony

Testimony before the Subcommittee on Fisheries, Conservation, Wildlife and Oceans, of the Committee on Resources, US House of Representatives.

Thursday, February 25, 1999, Room 1334 Longworth House Office Building, Washington, DC

THE EFFECTIVENESS OF COASTAL ZONE MANAGEMENT IN THE UNITED STATES

by

Marc J. Hershman

James W. Good

Tina Bernd-Cohen

Robert F. Goodwin

Virginia Lee

Pam Pogue*

The Federal Coastal Zone Management Act (CZMA) was adopted by the US Congress in 1972. It provides a national framework for improved state management of the coastal lands and waters of the nation's coastal zone.

The Coastal Zone Management Effectiveness Study was undertaken between 1995 and 1997 to determine how well state coastal management programs in the US were implementing the CZMA. The study was commissioned by the Office of Ocean and Coastal Resources Management (OCRM) within NOAA, and carried out through the National Sea Grant Program, also within NOAA.

We studied five of the core objectives of the CZMA:

- protection of estuaries and coastal wetlands
- protection of beaches, dunes, bluffs and rocky shores
- provision of public access to the shore
- revitalization of urban waterfronts
- accommodation of seaport development (a coastal dependent use)

In carrying out the study we examined systematically all of the 29 state programs that were approved at the time, reviewed documents and data, and conducted interviews with state officials. We sought information on the governmental processes as well as "on-the-ground" outcomes of the program efforts. Detailed state profiles, five national technical reports, and article-length summaries are on file with OCRM and will be on their Home Page. The articles will be published in the Spring of 1999 in Coastal Management journal.

We offer three major conclusions:

State CZM programs are effectively implementing the five CZMA objectives examined. However, this conclusion is based on assessment of the policies, processes and tools used, and on only limited outcome data and case examples that were available.

For about one-third of the states there was sufficient outcome data to show effectiveness in protecting coastal wetlands and estuaries. If these states are "representative" of all states, then outcome data shows that this CZMA objective is being met.

Beach and dune resources are being protected based on the number of regulatory tools in use and the upgrades to these tools over the years. Beach and dune protection must be balanced with pressures to provide recreational opportunity and to protect private property rights.

Public access to the coast is being advanced using regulatory, acquisition, technical assistance and education/outreach programs. Roughly 455 public access-related projects were funded by coastal programs in the late 1980s, and an estimated 12,000 public access sites are available in 26 of the 29 states.

Over 303 urban waterfront revitalization districts in the US have benefited from CZM program funds and design assistance. On average these districts are halfway to full revitalization -- infrastructure has been improved and at least one redevelopment project has been completed.

Twelve "port-active" states, where large scale general cargo ports operate, use special policies and regulatory tools to expedite port development, including financial grants, specific port development zones, and expedited regulatory reviews.

There are insufficient data for systematic, outcome-based performance evaluation of state CZM programs. Needed is a common set of outcome indicators that would link state management activities to national CZMA objectives.

Outcome indicators must be developed that balance state and federal perspectives. Our study suggests many possible indicators, a selected number of which could be adopted. For example one measure of wetlands protection could be the area of annual permitted loss per year as a percent of all regulated wetlands. A measure of beach and dune protection could be a count of stewardship projects induced by the CZM program which provide beach accessways, dune crossovers, and designated protected areas. And, progress in waterfront revitalization could be tracked through an accounting of stages reached in the revitalization process and the scope of CZM goals achieved.

The time is ripe for Congress to initiate a national outcome monitoring and performance evaluation system. OCRM should take the lead in implementing the process.

Systematic outcome monitoring, reporting and evaluation will not occur without external stimulus and leadership. Coastal managers are already over-burdened with implementation tasks and they face political and legal pressures administering their programs. Congressional leadership will encourage a common set of indicators allowing comparisons across states and conclusions about national performance. In this way on-the-ground outcomes from the national investment in CZM can be credibly measured.

SUMMARIES OF THE FIVE NATIONAL STUDIES OF THE CZME*

Protecting Estuaries and Coastal Wetlands. Good et al. (1999) found sufficient outcome data to make "probable" effectiveness determinations for about one-third of the states examined. Of these, they found that 80% were performing at expected or higher levels in protecting wetland and estuary resources considering issue importance and strength of processes used in the state. If these states can be shown to be representative, they argue, then the national program as a whole can be considered effective for this objective.

Good et al. (1999) followed a four-step process in their study, first examining issue importance, next the potential effectiveness of CMPs based on process indicators, then outcome effectiveness based on on-the-ground outcome indicators, and finally, overall performance based on a comparison of outcome effectiveness with issue importance and potential effectiveness.

To rate and compare the importance of estuary and coastal wetland protection as a CZM issue in each state, the authors chose seven issue importance indicators—three environmental, two social-demographic, and two perception-

based. To them, issue importance serves as context for determining the level of program performance.

Next, Good et al. (1999) defined a "model state CMP" for estuary and wetland protection based on the most important processes and tools identified by all the states. From the model CMP, criteria were developed and applied to estimate the potential effectiveness of each state program "on paper." Potential effectiveness ratings increased as the state approached the model.

Outcome indicators were defined as "measures of on-the-ground protection provided by the CZM processes and tools." An example is the area of wetland compensatory mitigation required in a CZM regulatory program as documented in the permit process. This indicator, along with other measures of regulatory, planning, acquisition, and nonregulatory outcomes, were used to estimate outcome effectiveness. The authors found data sufficient to make at least "probable" outcome effectiveness determinations for just 12 of the 29 CMPs. They rated ten of these 12 (83%) as either "effective" or "very effective" using model-based rating criteria.

Finally, Good et al. (1999) compare outcome effectiveness ratings with issue importance and potential effectiveness ratings in order to place program performance in the unique context of each state. To rate overall performance, they compare outcome effectiveness results with the seriousness of the problem in the state (issue importance) and with the ability of the state's decision-making institutions to deal with the issue (potential effectiveness). As they put it, this allows a determination of overall performance for a state that suits its particular situation, rather than a determination based on a "one size fits all" approach. Thus a state with a low issue importance rating is not held to the same standard as one that rates that issue as high.

Protecting Beaches and Dunes. Bernd-Cohen and Gordon (1999) conclude, based on process indicators and case examples, that coastal programs are effectively addressing the goal of protecting beach and dune resources. To support their conclusion they cite to the wide range of tools in use, the progressive upgrading of these tools over the years, and numerous case examples of sophisticated tools now in use. Outcome data were inconclusive and available in only a few states.

The authors outline 26 tools used by the states to protect beaches and dunes, from which they derive ten key "process indicators of effectiveness." The majority of these indicators are regulatory, including controls over construction and public access where these may damage natural resources. They highlight one commonly used device, coastal setback regulations, to show its potential utility to protect resources and reduce hazards. However, they also point out that a carefully developed setback law often includes many exceptions designed to enhance recreation or protect private property rights. And because outcome data that show the results of implementation are inconclusive and revealed mostly in case study examples, they cannot make definitive conclusions about the effectiveness of setbacks, or other regulatory and planning devices, that are designed to protect the resources.

Bernd-Cohen and Gordon (1998) highlight the wide range of tools in use, including regulatory programs, planning coupled with regulations, stewardship of publicly owned lands, research and public education. They point out that CZM programs have progressively upgraded their management tools to improve how they deal with development impacts and long-term effects. And, they present case examples that show some highly sophisticated tools now in use to address the technical and legal issues. These achievements, when viewed against the backdrop of conflicting policies and multiple governmental programs concerned with beach and dune resources, suggest to them good progress toward the protection goal.

The authors believe that meaningful outcome monitoring and evaluation are possible for this topic area. The outcome data collected, though inconclusive, suggest that states are both capable and desirous of more rigorous documentation of results. Bernd-Cohen and Gordon (1998) present a list of outcome effectiveness indicators that, if systematically monitored and reported across all states, could serve as the basis for a national performance evaluation system for this issue area.

Providing Public Access to the Coast. Pogue and Lee (1999) conclude that state CZM programs are national leaders in improving access to the coast, first through a wide range of acquisition, regulatory and planning tools, and more recently through innovative technical assistance and public education and outreach programs.

The authors note that the CZMA was the first federal law to establish a public access policy for the US, and that the state CZM programs are in the forefront implementing this goal. States use a wide range of tools to achieve the goal including acquisition, regulatory and land use requirements, technical assistance and public education and outreach. The diversity of approaches is illustrated through a variety of case examples.

Although hard numbers for measuring outcomes were not available, Pogue and Lee (1998) note that $35 million (unadjusted 1988 $$) were spent on 455 public access-related projects between 1985 and 1988, roughly 12% of the total CZM funding available in that period. The authors report an estimate of over 12,000 public access sites available in 26 of the 29 states, though the linkage with CZM program actions could not be studied. The states with the most sites tend to have the greatest number of processes available for promoting access. The authors note a policy shift in the 1990s away from direct acquisition and regulation toward technical assistance and public outreach — a recognition of the overall decrease in funds available for access. Innovative approaches such as design standards, legal research and signage are highlighted. They also stress the role of CZM programs in balancing resource protection needs with growing public demand for beach recreation opportunities.

Chief among their recommendations is that CZM programs conduct needs assessments to determine the kind of access needed in the future and where it should be located. And, due to the creativity and innovation used to achieve access they argue for a clearinghouse, or register, for documenting and sharing information on innovative tools and programs.

Revitalizing Waterfronts. Goodwin (1999) found 303 urban waterfront districts which have benefited from state CZM programs. Districts on average are roughly halfway to full revitalization (infrastructure has been improved and at least one redevelopment project is completed). Fourteen coastal programs are determined to be the most effective in waterfront revitalization because of their on-the-ground outcomes and the close linkage between CZM policies, processes and the outcomes. Revitalization is occuring mostly in those areas of the country experiencing industrial change -- the rust belt, the Pacific Northwest, and New England.

Goodwin (1999) found that providing funds for waterfront planning and public improvements was considered the most important of all the tools used by coastal managers to revitalize waterfronts. He documents CZM funds of over $30 million leveraging over $430 million of non-CZM funds, an amount he believes is an underestimate. In addition to identifying funding and the wide range of additional tools used by the coastal management programs, he defines key process outcomes such as adopted waterfront revitalization plans and design studies performed to achieve on-the-ground outcomes. Goodwin develops an ideal waterfront revitalization program and determines, in a similar way to Good, et al. (1999), the degree to which each of the states approaches the ideal.

Outcomes themselves were in three forms: extent of revitalization in the state measured by the number of districts involved; stage of revitalization achieved in each district; and scope of resulting on-the-ground improvements that revitalize and achieve coastal management goals. For example he shows the number of districts where revitalization is complete, the number having reached certain milestones such as completed plans, infrastructure, or projects, and the number of districts achieving different types of uses.

Goodwin finds that the greatest needs nationally are to formulate an urban waterfront data base that would describe the amount of waterfront revitalization that has occurred and that still remains unfinished, and to elevate waterfront revitalization to a national objective under section 309 of the CZMA.

Accommodating Seaport Development. Hershman (1999) concluded that 12 "port-active" states are effectively achieving the goal of the Act because of their specific policies and management tools which facilitate port development, and because of preliminary evidence of "organizational learning" in CZM and port agencies derived from case studies in ten of the twelve states.

Seaport development is one of the coastal dependent uses to which CZM programs are to give priority consideration. Hershman focused on large-scale general cargo ports because of the role they play in global trade and their importance to the nation, as well as the state in which they are located. He found that most states give port development only general consideration in policies and procedures, similar to any other coastal developer, but that twelve states stand out as "port-active" states. These states have significant port facilities from a national perspective (or relative to their size), and correspondingly these CZM programs have more specific policies and techniques to help review and facilitate port

development. These specific tools include financial grants, specific port zones, expedited regulatory processes, and other tools.

According to Hershman, measuring outcomes in meeting the seaport development goal is problematic; whether a port is built or not is dependent primarily on economic and locational factors. CZM can influence the timing, shape and manner of port development, but this depends on the context in every case and normally reflects other CZM objectives such as wetland protection or public access. He relies, therefore, on the notion of "organizational learning," where the manner in which the port and CZM organizations interact to accommodate their mutual needs becomes a measure of effectiveness. If what they learn from each other results in changed objectives within each organization and helps resolve differences, then the port and CZM organization are being effective in meeting the objectives of a multi-purpose Act like the CZMA. Through case examples he suggests that they are, in effect, beginning to integrate the multiple objectives of the CZMA within each organization.

Bernd-Cohen, T., and M. Gordon, 1999. State coastal program effectiveness in protecting natural beaches, dunes, bluffs and rocky shores". Coastal Management 27: __ - __.

Good, J. W. J. W. Weber, and J.W. Charland, 1999. Protecting estuaries and coastal wetlands through state coastal management programs. Coastal Management 27: ___ to ___.

Goodwin, R. F., 1999. Redeveloping deteriorated urban waterfronts: The effectiveness of US coastal management programs. Coastal Management 27: __to__.

Hershman, M. J., J. Good, T. Bernd-Cohen, R. Goodwin, V. Lee, P. Pogue, 1999. The effectiveness of coastal zone management in the United States. Coastal Management 27: __ to __.

Hershman, M. J., 1999. Seaport development and coastal management programs: A national overview. Coastal Management 27: __to__.

Pogue, P, and V. Lee, 1999. Effectiveness of state coastal management programs in providing public access to the shore: A national overview. Coastal Management 27: __ to __.

# # # # #