Coastal Zone Management and Community Resilience

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Established in 1970,

CSO represents the Governors of the nation's thirty-five coastal states, commonwealths and territories on legislative and policy issues relating to sound coastal, Great Lakes and ocean resource management, protection and development.

TAKE HOME MESSAGES

To achieve resilience, actions must be taken in local communities and regions, requiring planning, regulations, education, training and on-the-ground action that often can only be done by states and localities.

A tool for reaching these local communities and regions is the Coastal Zone Management Act

Communities throughout the nation are already experiencing the effects of increased storms and climate change, and CZM programs have proved to be effective tools in meeting these challenges.

So in designing a national strategy to build resilience, the CZMA needs to be considered a major tool to accomplish many of the goals.



CZMA 1972: Congressional Findings

Section 302. There is a national interest in the effective management, beneficial use, protection, and development of the coastal zone.

A possible tool to streamline approvals?

Federal Consistency is the authority to review certain federal activities for consistency with state laws.

When a state coastal management program is approved by the federal government, state laws become requirements that apply to federal agencies. This limited waiver of federal supremacy effectively equates state and federal law.

[Section 307 of CZMA, 16 USC 1456]

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NOAA Partnership

CZMA (Funding and Policy)
State Programs a vehicle to implement national initiatives
National Estuarine Research Reserves
Digital Coast

- Data
- Tools
- Training
- Stories from the Field (or case studies)
- Application



CZM programs are also instrumental transforming the regional ocean partnerships into effective tools for resilience.



Defining RESILIENCE

From the Hurricane Sandy Rebuilding Task Force Report:

For individuals and communities, **resilience** means the ability to anticipate, prepare for, and adapt to changing conditions and withstand, respond to, and recover rapidly from disruptions. Disruptions can include deliberate attacks, accidents, potential threats, and naturally occurring incidents. Discussions of resilience will vary depending on the focus of the effort and stakeholders involved (e.g., individuals, communities, regions), the scale and time frame of planning and rebuilding efforts, and the expected return frequency and severity of the event or stressor.



There is a need for a national strategy to plan for and respond to coastal challenges. There is no disputing this.

Many agencies, blue ribbon panels of experts, think tanks and universities are taking part in the dialogue. One of the more important recent contributions were the recommendations of the Sandy Task Force.

RECOMMENDATION 11: Provide technical assistance to States and localities to help optimize Sandy recovery infrastructure funding, share best practices, leverage resources, advance sustainability, and meet the needs of vulnerable communities. Identify opportunities to expedite and improve other types of review processes through programmatic agreement or consultation where appropriate.



Natural and Nature Based Risk reduction Strategies:

RECOMMENDATION 19: Consider green infrastructure options in all Sandy infrastructure investments.

RECOMMENDATION 20: Improve the understanding and decision-making tools for green infrastructure through projects funded by the Sandy Supplemental.

RECOMMENDATION 22: Develop a consistent approach to valuing the benefits of green approaches to infrastructure development and develop tools, data, and best practices to advance the broad integration of green infrastructure.



RECOMMENDATION 53: Improve National Flood Insurance Program (NFIP) policyholder awareness of factors that affect flood risk and insurance rating decisions.

RECOMMENDATION 54: Encourage increased hazard mitigation activities including elevation in order to protect property against future losses.



Building State and Local Capacity to Plan for and Implement Long-Term Recovery and Rebuilding

RECOMMENDATION 57: Work with States and local jurisdictions to consider funding strategies and raise awareness about the need to fill Local Disaster Relief Manager positions.

RECOMMENDATION 59: Support New Jersey planning efforts, including pilots for New Jersey Local Resilience Partnerships, and encourage Federal agencies, the State of New Jersey, non-profits, and philanthropic organizations to provide both financial and technical support for the formation and operation of the Local Resilience Partnerships.



Building State and Local Capacity to Plan for and Implement Long-Term Recovery and Rebuilding

The New Jersey Local Resilience Partnerships are voluntary associations of small groups of adjacent communities that share common geography, flood risks, recovery challenges, and other characteristics. They serve the dual purposes of improving Sandy recovery and promoting greater cooperation among towns. The Partnerships have a bottom-up structure in which towns retain local control over land-use decisions. They will enable communities to expand their capacity to recover by bringing recovery planning and implementation capabilities to member towns on both a local and regional basis, expanding access to information and resources, and encouraging neighboring municipalities to pool resources and share services. Shared services may include joint engineering projects and cross-jurisdictional approaches to hazard mitigation.) —



RECOMMENDATION 60: Package the variety of existing Federal resources and tools related to disaster recovery and create new ones specific to community planning and capacity building in order to establish a coordinated suite of assistance that enhances and streamlines access to the recovery expertise needed by impacted communities.



Lessons learned from recent extreme weather events STATE COASTAL PLANNERS ALREADY KNOW AND DO

- Absolute protection from floods is not possible. Plans that exceed capacity will eventually fail.
- Do not rely on a single structural approach.
- All groups must share responsibilities and responsibilities must be clear; building resilience it must be a "whole-government and whole-community approach" with federal agencies aligned with the state and local ones.
- Decisions must be based on relative risk, and imperfect knowledge.
- Climate change assumptions must be incorporated into the plan.
- Mitigation of disaster risk before a storm event can be more costeffective than recovery after the event.
- Life cycle of infrastructure needs to be factored in and costs addressed.
- Effects of a disaster are felt well outside the affected area.
- Effective communication of risk is essential.
- Full recovery takes a long time.



All of these recommendations – results of the Sandy Rebuilding Task Force consisting of Federal Agencies (with input form tribes, states) – affect local communities, require local community engagement, and ultimately must be implemented in local communities.

Many of the non-structural flood risk reduction strategies described by USACE must be done on a local level. Planning, zoning, setback lines, building codes, and educating communities about the effects of their actions are all key actions taken on a local level that CZM managers facilitate at a local level.



Zoning

Building Codes

Risk Communications

Evacuation

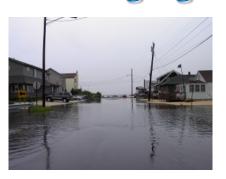
Insurance

Natural and nature-based structural solutions

Engineering Structural solutions



New Hampshire Partners Leveraging Resources



The N.H. Coastal Program, Great Bay NERR and the N.H. Department of Environmental Services participate in the Coastal Adaptation Workgroup, a group of 19 partners, to help coastal communities prepare for and respond to severe weather events and the impacts of climate change. The group provides coordinated information and technical assistance to communities. Since its inception in 2010, CAW has hosted a series of six community workshops about climate and community preparedness, which have included presenters from state emergency management, and other professionals, depending on the topic.

http://nh.stormsmart.org/



Rhode IslandShoreline Change Special Area Management Plan

The Beach SAMP is bringing state, federal, municipal, academic and private sector interests together to create a state management plan with solid, practical guidance for communities adapting to short-term and long-term shoreline change. URI researchers are studying the project areas to understand how the coast has changed, what it may look like in the future, what infrastructure is at risk. The results will be used to identify the needs to address now and plan for in the future.



http://seagrant.gso.uri.edu/coast/beachsamp.html







Maryland

Coast-Smart: Training, Tools and Technical Assistance

- → Assist local communities assess/prepare for SLR impacts and storms
- → Invest in research/computer models/mapping tools to plan
- → Provide centralized access to coastal data and mapping tools to visualize, share, map and analyze data
- → Provide training workshops for contractors, local managers and private landowners on implementing living shoreline protection practices
- → Develop new mechanisms to provide outreach and education for engaging stakeholders and building community support





http://maryland.coastsmart.org/

Massachusetts Interagency Cooperation on Hazard Mitigation

The Massachusetts Coastal Zone Management Program participates in a Hazard Mitigation Interagency Committee, coordinated by the Massachusetts Emergency Management Agency, which assists with updating the state hazard mitigation plan and selecting projects to recommend to FEMA for funding.

The CZM program provides direct technical assistance to **regional planning agencies and municipalities** so that they can craft their own approaches, plans based on their needs..



www.mass.gov/eea/agencies/czm/program-areas/stormsmart-coasts



Puerto Rico



→ Partnership with IOOS, Sea Grant & and universities to develop a Climate Change, Sea Level Rise, and Coastal Hazards Adaptation Strategy

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http://www.drna.gobierno.pr/oficinas/arn/recursosvivientes/ costasreservasrefugios/pmzc/PRCC_DRNA.pdf



Indiana Supporting Hazard Mitigation Planning

The Coastal Counties have developed Multi-Hazard Mitigation Plans, and many municipalities have adopted them though resolution or have created their own plan.

- Town of Munster has a Council Resolution, the City of Hobart has a Board of Public Works and Safety Resolution
- City of Hammond created their own Multi-Hazard Mitigation Plan.

The Lake Michigan Coastal Program reviews multi-hazard plans and encourages implementation of loss reduction through technical assistance as part of project proposals seeking grant funding. The LMCP also developed a Coastal Hazards Model Ordinances document a few years ago.

http://www.in.gov/dnr/lakemich/files/lm-HazardOrd TechnicalAssistance.pdf



Texas

2009 Coast Wide Erosion Response Plan

The **Coastwide Erosion Response Plan** was created in 1996, updated in '04 and '09 by the Texas Land Office

It identifies critical coastal erosion areas to assist in prioritizing coastal erosion response projects and studies.

Local governments must establish and implement Local Government Erosion Response Plans (ERP) to address erosion and storm damages. The plans may include provisions for establishing building setbacks, protecting public beach access and easements, and procedures for preserving, restoring, and enhancing sand dunes.



http://www.glo.state.tx.us/coastal/pdf/
TCERP_20http://www.glo.texas.gov/what-we-do/
caring-for-the-coast/_documents/coastal-erosion/
response-plans/coastwide-erosion-responseplan.pdf09_final_20100219.pdf



Wisconsin

The first multicultural climate change educational initiative that directly links place-based evidence of climate change, based on its impact on traditional Ojibwe culture along Lake Superior, with climate change research. Increased climate change literacy and public engagement achieved through the development of the Coastal Climate Change Discovery Center and service learning curriculum.







San Francisco, California



San Francisco Bay Conservation and Development Commission

Adapting to Rising Tides (ART)

- ★ Adaptation planning includes the evaluation of climate-related vulnerabilities and risks and the identification of ways to reduce these risks to increase the resilience of communities, organizations and assets.
- + http://www.adaptingtorisingtides.org/plan/







San Francisco Bay Conservation and Development Commission

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Choose project area

- Convene partners & stakeholders
- Set resilience goals
- Identify sectors, services & assets
- Select climate scenarios & impacts

ASSESS

- Review existing conditions
- Evaluate assets' climate change vulnerability & risk
- Characterize vulnerabilities & risks
- Identify priority issues

PLAN

- Refine resilience goals
- Select evaluation criteria
- Develop adaptation responses
- Evaluate and select adaptation responses
- Prepare response plan or integrate responses into other plans

IMPLEMENT & MONITOR

- Implement high priority responses
- Utilize plans to seek funding
- Track progress and evaluate effectiveness
- Communicate accomplishments
- Assess new impacts information
- Revise priorities and strategies as needed

RESILIENCE



Hawai'i



IN 2009, the state created "A Framework for Climate Change Adaptation Planning in Hawai'i" The Hawaii Coastal Zone Management Program (CZM) has created the Coastal Resilience Networks (CRest) Project, partering with the University of Hawai'i, to help planners and policymakers understand how climate adaptation may be integrated into Hawaii's existing land-use planning and regulatory framework. To reach this goal, the CRest Project will develop actionable guidance options that will allow climate impacts to be evaluated in permitting and climate adaptation measures to be implemented through state and county plans.



In conclusion, the CZMA is not a statute that forces states to comply with federal mandates on where to place development, what flood risk reduction strategies must be used and where, what wetlands must be set aside for a buffers, and if/how communities must be educated about the effects of their actions. But it does provide a way for states to get that done.



The Coastal Zone Management Program is a voluntary state-federal partnership which encourages states to adopt their own management programs in order to meet the federal goals of protection, restoration, and appropriate development of coastal zone resources. The states have broad latitude to adapt federal goals to state and local circumstances, needs, and legal traditions. These examples show it's a powerful tool. NOW USE



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