CZMA CLIMATE CHANGE AND COASTAL HAZARDS E-NEWS UPDATE #18

The Coastal Programs Division of NOAA's Office of Ocean and Coastal Resource Management distributes the CZMA Climate Change and Coastal Hazards E-News Update to keep state and territory coastal program managers and climate change/coastal hazards staff informed about climate change (as it pertains to coastal hazards) and coastal hazards activities. If you would like to receive the Climate Change and Coastal Hazards E-News Update, please e-mail christa.rabenold@noaa.gov. For previous issues, see the E-News Update archive at http://coastalmanagement.noaa.gov/news/climatenewsletter.html.

In this Issue:

NOAA UPDATES

NOAA Technical Memorandum to Inform Design of Great Lakes Climate Change Adaptation Training

http://www.glerl.noaa.gov/ftp/publications/tech_reports/glerl-153/tm-153.pdf

NOAA, the Great Lakes Sea Grant Network, and the Old Woman Creek National Estuarine Research Reserve are developing specialized training to build the capacity of Great Lakes coastal communities to adapt to climate change impacts. This training will be based on the results of a needs assessment that is being conducted in two phases. "Laurentian Great Lakes Basin Climate Change Adaptation" (43 pp.) contains the results of the first phase, which is a synthesis of knowledge on training and information needs and preliminary data collection. The second phase will include comprehensive data collection, and the findings and recommendations will also be published.

New CSC Tool Allows Visualization of Potential Sea Level Rise Impacts

http://csc.noaa.gov/digitalcoast/tools/slrviewer/

The NOAA Coastal Services Center (CSC) recently released the Sea Level Rise Impacts Viewer, a new tool for visualizing sea level rise and coastal flooding that is now available for coastal Mississippi and Texas' Houston and Galveston metro areas. The tool displays potential future sea levels, provides simulations of sea level rise at local landmarks, communicates the spatial uncertainty of mapped sea levels, models potential marsh migration due to sea level rise, overlays social and economic data onto potential sea level rise, and examines how tidal flooding will become more frequent with sea level rise. The tool will be expanded for use in other geographic areas in the near future.

CSC Provides Information about Conserving Coastal Wetlands as Sea Levels Rise

http://csc.noaa.gov/digitalcoast/wetlands/

The NOAA Coastal Services Center (CSC) has added a new "approach" to its Digital Coast. "Conserving Coastal Wetlands for Sea Level Rise Adaptation" provides spatial techniques, resources, and examples to help communities identify coastal wetland and other vulnerabilities in the face of sea level rise and prioritize wetland conservation efforts that incorporate sea level rise considerations.

NCDC Updates Billion Dollar U.S. Weather Disasters Resource

http://www.ncdc.noaa.gov/oa/reports/billionz.html

NOAA's National Climatic Data Center (NCDC) tracks and evaluates climate events in the U.S. and globally that have great economic and societal impacts. Its "Billion Dollar U.S. Weather Disasters" web page contains graphs, maps, and narratives describing the most costly weather-related tragedies between 1980 and 2010.

Annual Tsunami Response Exercises Scheduled

http://wcatwc.arh.noaa.gov/

NOAA and the National Tsunami Hazards Mitigation Program are providing the framework for the annual tsunami response exercises in the Pacific and Atlantic Oceans on March 23. The exercises provide an opportunity for emergency management organizations to exercise operational lines of communications, review tsunami response procedures, and promote tsunami preparedness. The Pacific exercise will simulate a Cascadia tsunami originating off the Pacific Northwest coast. The Atlantic exercise will simulate a tsunami originating near the Virgin Islands and is focused on the Caribbean Region.

OTHER FEDERAL UPDATES

CEQ Issues Guidance for Federal Agency Adaptation Planning

http://www.whitehouse.gov/administration/eop/ceq/initiatives/adaptation

In accordance with Executive Order 13514, Federal Leadership in Environmental, Energy, and Economic Performance, the Council on Environmental Quality (CEQ) has issued "Instructions for Implementing Climate Change Adaptation Planning" (5 pp.). These instructions provide direction to Federal agencies on integrating climate change adaption into planning, operations, policies, and programs and will help agencies ensure that resources are invested wisely and services and operations remain effective in light of climate change risks, all within existing agency frameworks and budgets.

USGS Assesses Historical Shoreline Change along New England and Mid-Atlantic Coasts

http://pubs.usgs.gov/of/2010/1118/
http://pubs.usgs.gov/of/2010/1119/

A new report from the U.S. Geological Survey (USGS) examines historical shoreline change along the New England and Mid-Atlantic Coasts over the past 150 years. According to the "National Assessment of Shoreline Change: Historical Shoreline Change along the New England and Mid-Atlantic Coasts" (66 pp.), 68 percent of these beaches are eroding. The rate of coastal change is highly variable, but the average rate of change in the study area is -1.6 feet per year. Long-term erosion rates are generally lower in New England than in the Mid-Atlantic, largely because of coastal geomorphology. The study results provide a baseline for coastal change information that can be used to inform a variety of coastal management decisions. An accompanying report provides the GIS data used to conduct the analysis.

USGS Updates National Land Cover Database

http://www.mrlc.gov/

In February, the U.S. Geological Survey (USGS) released the latest edition of the National Land Cover Database, which updates knowledge of the nation's land cover and documents precisely where land cover change occurred between 2001 and 2006. The update enables resource managers, planners, and others to identify critical characteristics of the land and patterns of land cover change to inform future management and policy activities.

FEMA Updates Community Rating System Fact Sheet

http://www.fema.gov/media/fact_sheets/mitigation.shtm

The Federal Emergency Management (FEMA) has updated its fact sheet for the National Flood Insurance Program's (NFIP) Community Rating System (CRS) (2 pp.). The CRS is a voluntary program for recognizing and encouraging community floodplain management activities that exceed the NFIP's minimum standards. The fact sheet provides a brief introduction to the program, its benefits, and its application process. In addition, it highlights the program's strongest communities and their associated average flood insurance discounts.

ESRI and FEMA Release Updated Hazus-MH Webinar

http://training.esri.com/acb2000/showdetl.cfm?DID=6&Product_ID=990

ESRI and the Federal Emergency Management Agency (FEMA) have released an updated version of their "Hazus-MH for Decision Makers" webinar (55 minutes). Hazus, FEMA's loss estimation tool, uses GIS to estimate physical, economic, and social impacts of disasters and is useful for hazard mitigation and disaster recovery planning. The webinar reviews the capabilities and benefits of the Hazus-MH models and provides additional resources and training opportunities.

Materials from EPA Climate Change Adaptation Webinar Series Available Online
http://www.epa.gov/statelocalclimate/web-podcasts/forum-by-date.html

In January, the U.S. Environmental Protection Agency (EPA) concluded its three-part Climate Change Adaptation for State and Local Governments webinar series. Associated presentations, papers, audio recordings, and transcripts are now available for "Climate Impacts and Risk Communication" (87 minutes), "Adaptation Planning and Implementation" (98 minutes), and "Federal Resources and Support for Climate Change Adaptation" (87 minutes).

2011 Our Changing Planet Report Submitted to Congress
http://www.globalchange.gov/publications/our-changing-planet-ocp

As required by the Global Change Research Act of 1990, the U.S. Global Change Research Program has submitted its 2011 annual report to Congress. "Our Changing Planet: The U.S. Global Change Research Program for Fiscal Year 2011" (96 pp.) describes activities and plans of the program, which coordinates and integrates scientific research on climate and global change and is supported by 13 federal departments and agencies. It also explains how the program will place greater emphasis on impacts, vulnerabilities, and adaptation options.

ADDITIONAL UPDATES

Wisconsin Releases Report on Climate Change Impacts and Adaptation
http://www.wicci.wisc.edu/publications.php

In February, the Wisconsin Initiative on Climate Change Impacts released "Wisconsin's Changing Climate: Impacts and Adaptation" (217 pp.), proposing measures to help protect and enhance the state's natural resources, economic vitality, and public well-being as the climate changes. In regard to coastal areas, the authors found that diminishing ice cover, changing water levels, and higher winds over the Great Lakes could increase shoreline erosion and risks to shoreline property and increased runoff and flooding could affect the biological integrity of coastal wetlands. The report details the conclusions of more than a dozen working groups and cites actions that decision makers could take to reduce negative consequences of climate change and capitalize on benefits.

Maryland Releases Phase II Strategy for Climate Change Adaptation
http://www.dnr.state.md.us/dnrnews/infocus/climatechange.asp

In January, as part of the "Comprehensive Strategy for Reducing Maryland's Vulnerability to Climate Change," the Maryland Commission on Climate Change released its phase II strategy on building societal, economic, and ecological resilience (80 pp.). The report outlines strategies to reduce the impacts of climate change, including sea level rise, increased temperature, and precipitation changes in six sectors: human health; agriculture; forest and terrestrial ecosystems; bay and aquatic environments; water resources; and population growth and infrastructure. Implementation guidance summarizes priority recommendations and identifies responsible agencies, key partners, priority levels, and potential costs.

Washington and British Columbia Sign Agreement on Coastal Impacts Outreach
http://www.ecy.wa.gov/climatechange/events.htm

Washington State and British Columbia have signed an agreement to promote public awareness of sea level rise and impacts on coastal areas. According to the agreement, Washington's Department of Ecology and the Province of British Columbia will work together to highlight the impacts of climate change on natural and built environments in coastal areas and the public's role in adapting to and mitigating climate change impacts; engage citizens in gathering materials that promote awareness of the potential impacts of sea level rise and storm surges; share communications (material and strategies); share learning associated with delivering

climate change messages and information about climate risks and public engagement in actions they can take; and coordinate outreach through nongovernmental organizations.

Updated Publications Aim to Raise Awareness of Flood Protection and Responsibilities in Mississippi
http://www.msema.org/insurance/documents/CitizensGuideToFloodProtectionMeasures.pdf
http://www.msema.org/insurance/documents/CommunityGuide.pdf

The Mississippi Emergency Management Agency (MEMA) has updated two of its outreach publications. "A Citizen's Guide: Flood Protection Measures" (24 pp.) describes types and impacts of flooding and what citizens can do before, during, and after a flood. This guide is designed to be modified by communities to include relevant local information. "A Community Guide: Pre and Post-Flood Responsibilities" (54 pp.) is intended to provide guidance to local elected officials, emergency management staff, and floodplain administrators in all flood-related tasks.

New Report Aims to Prepare California for Climate Change
https://www.pacificcouncil.org/sslpage.aspx?pid=573

The Pacific Council on International Policy's "Preparing for the Effects of Climate Change: A Strategy for California" (77 pp.) makes recommendations for how California can address some of their most pressing climate change threats: sea level rise, more severe forest/range wildfires, and water supply reduction. Overall, it recommends the state increase monitoring and data gathering on uses of and changes to natural resources and land-use patterns, establish a Climate Risk Council, improve communication and coordination across levels of government and economic sectors in planning, and align incentives for proactive adaptive management and to fund large-scale community-based adaptation projects. Threat-specific recommendations are also included.

Report Examines Effects of Sea Level Rise along Florida's Coasts
http://www.floridaoceanscouncil.org/reports/Climate_Change_and_Sea_Level_Rise.pdf

Produced by the Florida Oceans and Coastal Council, "Climate Change and Sea-Level Rise in Florida: An Update of 'The Effects of Climate Change on Florida's Ocean and Coastal Resources'" (36 pp.) reports on the scientific knowledge about sea level rise and its likely impacts on the state. It looks at changes in barrier islands, beaches, and inlets; changes in estuaries, tidal rivers, and coastal forests; higher storm surge and impacts on coastal infrastructure; threats to coastal water supply and wastewater treatment; increases in beach erosion and renourishment; impacts on coastal planning; and increased flooding risks.

EcoAdapt Releases Report on Marine and Coastal Adaptation in North America
http://www.cakex.org/virtual-library/1615

"The State of Marine and Coastal Adaptation in North America: A Synthesis of Emerging Ideas" (145 pp.) from EcoAdapt provides an overview of key climate change impacts on natural and built environments in marine and coastal North America and reviews adaptation options available to and in use by resource managers. Options are discussed under four broad categories: natural resource management and conservation; capacity building; infrastructure, planning, and development; and governance and policy.

Report Examines Role of Private-Public Collaboration in Building Resilience
http://books.nap.edu/catalog.php?record_id=13028

The National Research Council's "Building Community Disaster Resilience through Private-Public Collaboration" (142 pp.) assesses the state of private-public sector collaboration dedicated to strengthening community resilience, identifies gaps in knowledge and practice, and recommends research that could be targeted for investment. The authors conclude that local-level private-public collaboration is essential to community resilience.

Study Predicts Rising Seas Will Affect Major U.S. Coastal Cities by 2100
http://www.uanews.org/node/37914

"Implications of Recent Sea Level Rise Science for Low-Elevation Areas in Coastal Cities of the Conterminous U.S.A." ("Climatic Change" 2/16/11, 11 pp.) by the Climate Assessment for the Southwest, part of NOAA's Regional Integrated Sciences and Assessments (RISA) program, reports that rising sea levels could threaten an average of 9 percent of the land in 180 U.S. coastal cities by 2100. According to the study, coastal cities along the Gulf and southern Atlantic coasts are most vulnerable.

New Reports Find Adaptation and Green Infrastructure Enhance Resilience and Economic Performance
http://www.ccap.org/green_infrastructure.html
http://www.ccap.org/adaptation_lessons.html

New reports by the Center for Clean Air Policy suggest that incorporating adaptation best practices into city planning strategies can have positive effects on community resilience, human health, air quality, energy demand, and economic prosperity. The reports, "The Value of Green Infrastructure for Urban Climate Adaptation" (52 pp.) and "Lessons Learned on Local Climate Adaptation from the Urban Leaders Adaptation Initiative" (23 pp.), document how pioneering local governments have developed and applied approaches to increase community resilience by planning for and adapting to emerging climate change impacts. The latter report concludes that comprehensive planning, no-regrets strategies, and mainstreaming of adaptation into existing policies are proving to be effective at the local level.

CONFERENCES, TRAININGS, EVENTS

Online Symposium: Community Recovery from Disaster
https://www.riskinstitute.org/peri/content/view/288/40/
March 21-25, 2011

2011 National Hurricane Conference
http://www.hurricanemeeting.com/
Atlanta, Georgia
April 18-22, 2011

Webinar: Coastal Adaptation to Sea Level Rise Tool (COAST)
https://www1.gotomeeting.com/register/501237225
April 21, 2011

Webinar: Road Map for Adapting to Coastal Risk Training
http://www.csc.noaa.gov/digitalcoast/training/coastalrisk.html
May 11, 2011

Solutions to Coastal Disasters Conference
http://content.asce.org/conferences/cd2011/index.html
Anchorage, Alaska
June 26-29, 2011

Share Your Thoughts
If you have news that you would like to include in future updates or suggestions about the type of information you would like to see here, please e-mail christa.rabenold@noaa.gov.

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