



## SUMMARY

### 1. Habitat Activities and Accomplishments

- NOAA Chesapeake Bay Office Hosts Chesapeake Executive Order Climate Strategy Workshop
- RAE Coastal Blue Carbon Brown Bag and Update
- Approval for Coastal Blue Carbon as International Carbon Trading Category
- Interagency Coastal Blue Carbon Team Meeting

### 2. Tools and Upcoming Trainings

- Joint U.S. Forest Service and Association of Fish & Wildlife Agencies webinar – Climate Projections 101: Informing Adaptation Planning for Fish & Wildlife Management (November 7, 2012, 3-4pm ET)
- Climate Change at the National Academies
- EPA Releases BASINS and WEPP Climate Assessment Tools (CAT): Case Study Guide to Potential Applications
- The NOAA Coastal Services Center Expands Coverage of Sea Level Rise Viewer to West Coast

### 3. Conferences and Key Events

- CERF 2012, Mar Del Plata, Argentina (November 11-14, 2012)
- 28<sup>th</sup> Lowell Wakefield Fisheries Symposium, Anchorage, AK (March 26-29, 2013) – **Abstracts due November 30, 2012**
- 1<sup>st</sup> National Adaptation Forum: *Action today for a better tomorrow*, Denver, CO (April 2-4, 2013) – **Abstracts and proposals due November 23, 2012**
- Annual Meeting 2013: Society of Wetland Scientists, Duluth, MN (June 2-8, 2013)

### 4. Additional References

- Bell JD, Johnson JE and Hobdà AJ (eds) (2011) Vulnerability of Tropical Pacific Fisheries and Aquaculture to Climate Change. Secretariat of the Pacific Community, Noumea, New Caledonia.
- Burkett, V.R. and Davidson, M.A. (Eds.). (2012). *Coastal Impacts, Adaptation and Vulnerability: A Technical Input to the 2012 National Climate Assessment*. Cooperative Report to the 2013 National Climate Assessment., pp. 150.
- Guidry, Michael W. and Mackenzie, Fred T. (2012) Future Climate Change, Sea-Level Rise, and Ocean Acidification: Implications for Hawai'i and Western Pacific Fisheries Management. University of Hawai'i Sea Grant College Program, School of Ocean and Earth Science and Technology.
- Hazen, Elliott L., et al. (2012) Predicted habitat shifts of Pacific top predators in a changing climate. *Nature Climate Change* 2(11). doi:10.1038/nclimate1686.
- Kirwan, Matthew L. and Mudd, Simon M. (2012) Response of salt-marsh carbon accumulation to climate change. *Nature* 489, 550-553. doi:10.1038/nature11440.
- McIvor, A.L., Möller, I., Spencer, T. and Spalding, M. (2012) Reduction of wind and swell waves by mangroves. Natural Coastal Protection Series: Report 1. Cambridge Coastal Research Unit Working Paper 40. Published by The Nature Conservancy and Wetlands International. 27 pages. ISSN 2050-7941.
- Pendleton L, Donato DC, Murray BC, Crooks S, Jenkins WA, et al. (2012) Estimating Global “Blue Carbon” Emissions from Conversion and Degradation of Vegetated Coastal Ecosystems. *PLoS ONE* 7(9): e43542. doi:10.1371/journal.pone.0043542.
- Pinsky, M. L. and M. Fogarty. 2012. Lagged social-ecological responses to climate and range shifts in fisheries. *Climatic Change* doi:10.1007/s10584-012-0599-x.



# HIGHLIGHTS

## Habitat Activities and Accomplishments

- **NOAA Chesapeake Bay Office Hosts Chesapeake Executive Order Climate Strategy Workshop**  
NCBO hosted a one-day workshop on September 12 to bring together the agencies collaborating on implementing the climate aspects of the Strategy developed in response to the Executive Order on the Chesapeake Bay. Representatives from several line offices within NOAA, the Chesapeake Bay Program, U.S. Geological Survey, Maryland Department of Natural Resources, MADE-CLEAR (Maryland and Delaware Climate Change Education, Assessment, and Research), and the University of Maryland Center for Environmental Science gathered in Annapolis to review the status of climate activities in the current Executive Order Action Plan, identify priority areas for FY13, spotlight opportunities and gaps, and establish a climate sub-team in coordination with the Chesapeake Bay Program and the Executive Order Federal Leadership Committee. Contact: Jennifer Faught
- **RAE Coastal Blue Carbon Brown Bag and Update**  
On Monday, September 17, Steve Emmett-Mattox from Restore America's Estuaries (RAE) gave a NOAA Library brown bag seminar on coastal blue carbon and the opportunities it presents for wetlands conservation. Later that afternoon, Steve was joined by Jeff Benoit and Diane Hoskins from RAE to meet with Buck Sutter, Brian Pawlak, and Amber Moore to discuss various coastal blue carbon issues. Steve provided an update on two RAE-led, OHC-funded coastal blue carbon projects. The first is a decision-making framework to assess the additionality of tidal wetland greenhouse gas offset projects, and the second is to perform a landscape-scale carbon assessment of tidal wetlands in the Snohomish estuary in the Northwest. Steve also gave a presentation focused around these projects at the RAE conference in Tampa, FL in October (Brian Pawlak moderated the session). Contact: Amber Moore
- **Approval for Coastal Blue Carbon as International Carbon Trading Category**  
On October 4, Restore America's Estuaries (RAE) announced the Verified Carbon Standard's (VCS) approval of Wetland Restoration and Conservation (WRC) as a new international carbon trading category. The following summarizes how this relates to the RAE coastal blue carbon methodology that OHC is funding:
  - With this new VCS protocol, wetland protection and restoration projects are now eligible for carbon credits the same way that other land-use projects are (such as Reduced Emissions from Deforestation and Degradation or REDD projects).
  - A requirement to get carbon credits for a project is that the individual project passes an additionality test, and project managers must demonstrate how their project passes that additionality test when applying for credits. The document does not say how to prove that additionality for an individual project, which is where the RAE methodology comes in.
  - RAE, with funding from OHC, is developing a methodology for any project manager on the steps they must follow before carbon credits are issued for a given wetlands project, including proving that the particular project would be "additional" (i.e., the carbon credits the project generates would not have happened in the absence of carbon finance).
  - The VCS protocol makes wetland carbon credits now a possibility and the project we funded RAE to work on will hopefully clarify how to go about getting those credits including how to prove additionality of a project.

This new protocol is good news for us since it is a big step towards making carbon credit funding available for wetland protection and restoration. This work, along with the work being done by the NOAA Coastal Blue Carbon Team's domestic policy group, is directly linked to the coastal blue carbon action in the National Ocean Policy's regional ecosystem section ("incorporate carbon sequestration into coastal habitat conservation"), and OHC's FY13 Habitat Priority Plan (HPP). And, continuing with these connections, there is also an action under the Habitat Blueprint priority in the HPP on incorporating coastal blue carbon sequestration services into domestic U.S. policy mechanisms. Contact: Amber Moore

- **Interagency Coastal Blue Carbon Team Meeting**  
The Interagency Coastal Blue Carbon Team had their quarterly meeting on October 11 at U.S. Fish and Wildlife Service's building in Arlington, VA; Amber Moore attended for OHC. The meeting began with two presentations: Dr. Steve Crooks, co-chair of the International Blue Carbon Science Working Group and the Climate Change Program Manager for ESA PWA, provided an update on global actions to integrate carbon management and coastal wetland conservation and restoration, including activity by the IPCC, the International Blue Carbon Working Groups, and key information and technology

needs; and Steve Emmett-Mattox, the Senior Director for Strategic Programs for Restore America's Estuaries, provided an update on coastal blue carbon activities in the U.S., with an emphasis on future needs and directions to fully develop a coastal blue carbon program in the U.S. Following the presentations, the group discussed developing a glossary of terms to ensure that federal agencies are on the same page regarding coastal blue carbon and climate adaptation. Participants also discussed their vision for the team and the work groups moving forward. The next meeting will be held in January or February 2013. Contact: Amber Moore

## Resources

### Tools and Upcoming Trainings

- Joint U.S. Forest Service and Association of Fish & Wildlife Agencies webinar – Climate Projections 101: Informing Adaptation Planning for Fish & Wildlife Management (November 7, 2012, 3-4pm ET)  
Climate scenarios offer one way to identify and examine the land management challenges and opportunities posed by climate change. Scientists with the U.S. Forest Service will provide an introduction to climate projections. Amy Daniels, National Program Leader for Landscape Science, will describe the key concepts that the end-users of climate projection products should understand to appropriately interpret such information, including various sources of uncertainty. These concepts are reviewed in the Forest Service publication [Climate Projections FAQ](#). Click [here](#) to join the live meeting webinar, and dial 1-888-858-2144, passcode 1418655, for the audio.
- Climate Change at the National Academies  
The National Academies has put together a new website to serve as hub for its recent climate-related work, which can be found here: <http://nas-sites.org/americasclimatechoices/>.
- EPA Releases BASINS and WEPP Climate Assessment Tools (CAT): Case Study Guide to Potential Applications  
EPA and partners have developed two water and climate assessment modeling tools, the Better Assessment Science Integrating Point and Non-point Sources (BASINS) and the Water Erosion Prediction Project Climate Assessment Tool (WEPPCAT), that facilitate application of existing simulation models for conducting scenario-based assessments of potential climate change effects on streamflow and water quality. The report presents a series of short case studies using the BASINS and WEPP tools. The case studies are designed to illustrate the capabilities of these tools for conducting scenario-based assessments of the potential effects of climate, land use, and management change on water resources. For more information, visit: <http://cfpub.epa.gov/ncea/global/recordisplay.cfm?deid=242952>.
- The NOAA Coastal Services Center Expands Coverage of Sea Level Rise Viewer to West Coast  
The NOAA Coastal Services Center has expanded the coverage of the Digital Coast Sea Level Rise and Coastal Flooding Impacts Viewer to include coastal counties in California, Oregon, and Washington. The viewer now covers nine states, with new coastal states being added quarterly. The tool features coastal flooding scenarios with visualizations of local landmarks, uncertainty maps, flood frequency information, and social and economic vulnerability information. It now also provides access to maps from the U.S. Army Corps of Engineers' National Levee Database that show areas protected by levees. The tool can be viewed here: <http://www.csc.noaa.gov/digitalcoast/tools/slrviewer>.

### Conferences and Key Events

- CERF 2012, Mar Del Plata, Argentina (November 11-14, 2012)  
With the theme, *The Changing Coastal and Estuarine Environment: A Comparative Approach*, comparison focuses specifically on temperate, coastal systems within Southern and Northern Hemispheres. This conference aims to summarize the state of knowledge of six topics of concern within a changing coastal environment, compare the nature of human impacts within temperate South America and those in comparable climates within North America, foster future international collaborations, and foster broader education of students and young scientists and promote networking among peers and with the geographically larger community. For more information and to register: <http://www.erf.org/cerf2012argentina>.
- 28<sup>th</sup> Lowell Wakefield Fisheries Symposium, Anchorage, AK (March 26-29, 2013) – **Abstracts due November 30, 2012**  
This symposium, titled *Responses of Arctic Marine Ecosystem to Climate Change*, seeks to advance our understanding of present and future responses of arctic marine ecosystems to climate change at all trophic levels from plankton to marine mammals to humans by documenting and

forecasting likely changes in environmental processes and the responses of species to those changes. We encourage contributions that focus on collaborative approaches to understanding and managing living marine resources in a changing Arctic and to managing human responses – locally, regionally, and globally – to changing arctic marine ecosystems. For more information and to submit abstracts: <http://seagrant.uaf.edu/conferences/2013/wakefield-arctic-ecosystems/index.php>.

- 1<sup>st</sup> National Adaptation Forum: *Action today for a better tomorrow*, Denver, CO (April 2-4, 2013) – **Abstracts and proposals due November 23, 2012**  
NAF is the first of its kind, a national convening on climate change adaptation presenting state-of-the art and science adaptation practice. It combines professional development training, individual presentation, peer networking, and working group innovation opportunities, in order to create the most productive event possible in three days! This professional development event affords attendees the opportunity to learn more about how to make their work climate smart, share what they have learned with others, and develop a stronger network to be climate savvy in all that they do. For more information and to register: <http://www.nationaladaptationforum.org/>.
- Annual Meeting 2013: Society of Wetland Scientists, Duluth, MN (June 2-8, 2013)  
The Society of Wetlands Scientists annual meeting is the premier educational and networking opportunity for scientists, researchers and academics with a passion for advancing the discipline. The meeting will be held at the Duluth Entertainment Convention Center in Duluth, Minnesota, June 2-6, 2013. The meeting theme – *Benefit of wetlands. Value to society.* – highlights the connections between basic and applied research and how they improve our understanding and management of wetlands.

### Additional References

- Bell JD, Johnson JE and Hobdà AJ (eds) (2011) Vulnerability of Tropical Pacific Fisheries and Aquaculture to Climate Change. Secretariat of the Pacific Community, Noumea, New Caledonia.  
Full e-book: <http://cdn.spc.int/climate-change/fisheries/assessment/e-book/indexcdn.html#/2/>
- Burkett, V.R. and Davidson, M.A. (Eds.). (2012). *Coastal Impacts, Adaptation and Vulnerability: A Technical Input to the 2012 National Climate Assessment*. Cooperative Report to the 2013 National Climate Assessment., pp. 150.  
Full report to be posted to USGCRP website soon (<http://globalchange.gov/>)
- Guidry, Michael W. and Mackenzie, Fred T. (2012) Future Climate Change, Sea-Level Rise, and Ocean Acidification: Implications for Hawai‘i and Western Pacific Fisheries Management. University of Hawai‘i Sea Grant College Program, School of Ocean and Earth Science and Technology.  
Full report found [here](#)
- Hazen, Elliott L., et al. (2012) Predicted habitat shifts of Pacific top predators in a changing climate. *Nature Climate Change* 2(11). doi:10.1038/nclimate1686.  
Full article: <http://www.nature.com/nclimate/journal/vaop/ncurrent/full/nclimate1686.html>
- Kirwan, Matthew L. and Mudd, Simon M. (2012) Response of salt-marsh carbon accumulation to climate change. *Nature* 489, 550-553. doi:10.1038/nature11440.  
Full article: <http://www.nature.com/nature/journal/v489/n7417/abs/nature11440.html>
- McIvor, A.L., Möller, I., Spencer, T. and Spalding, M. (2012) Reduction of wind and swell waves by mangroves. Natural Coastal Protection Series: Report 1. Cambridge Coastal Research Unit Working Paper 40. Published by The Nature Conservancy and Wetlands International. 27 pages. ISSN 2050-7941.  
Full report: <http://www.wetlands.org/WatchRead/Currentpublications/tabid/56/mod/1570/articleType/ArticleView/articleId/3353/Default.aspx>
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Full article: <http://www.plosone.org/article/info%3Adoi%2F10.1371%2Fjournal.pone.0043542>
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Full article: <http://www.springerlink.com/content/b451513163g44532/>