



Ecosystem-Service Assessment: Research Needs for Coastal Green Infrastructure

Presentation to National Ecosystem Services Partnership
Tuesday, December 8, 2015

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Motivation of Report

- Green infrastructure: lots of interest and knowledge; not enough coordination, research, and synthesis
- Urgency and opportunity for more work in this space became heightened after Sandy



Hurricane Sandy damage north of Seaside, NJ on Tuesday, Oct. 30, 2012



Motivation of Report

- Hurricane Sandy Task Force, 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.”

- In response, Coastal Green Infrastructure and Ecosystem Services (CGIES) Task Force established in September 2014
- Task: develop a **Federal agenda for green infrastructure research**



CGIES Task Force — Functions

- Focused on the role of green infrastructure in enhancing **coastal resilience to climate change**
1. Review information
 2. Identify knowledge gaps
 3. Recommend Federal research priorities
 4. (Coordinate with and leverage other Federal efforts)
 - Ex: U.S. Army Corps of Engineers *Use of Natural and Nature-Based Features for Coastal Resilience* report.



CGIES Task Force — Organization

- Organized under the National Science and Technology Council (NSTC), Subcommittee on Ecological Systems
- Included CEA, CEQ, DOD, DOI, EPA, FEMA, HUD, NOAA, NSC, NSF, OMB, OSTP, USACE, and USDA
- Dec. 2014: Stakeholder input session at A Community on Ecosystem Services (ACES) conference



Report Rollout

- Announced on August 25, 2015 at launch event for the Resilient New Orleans Strategy
- Released on August 27, 2015



Image of the launch event for the Resilient New Orleans Strategy in New Orleans on August 25, 2015. NOAA Administrator Kathy Sullivan (fifth from left) announced the release of the report during her remarks at this event. (Photo Credit: WGNO ABC News)



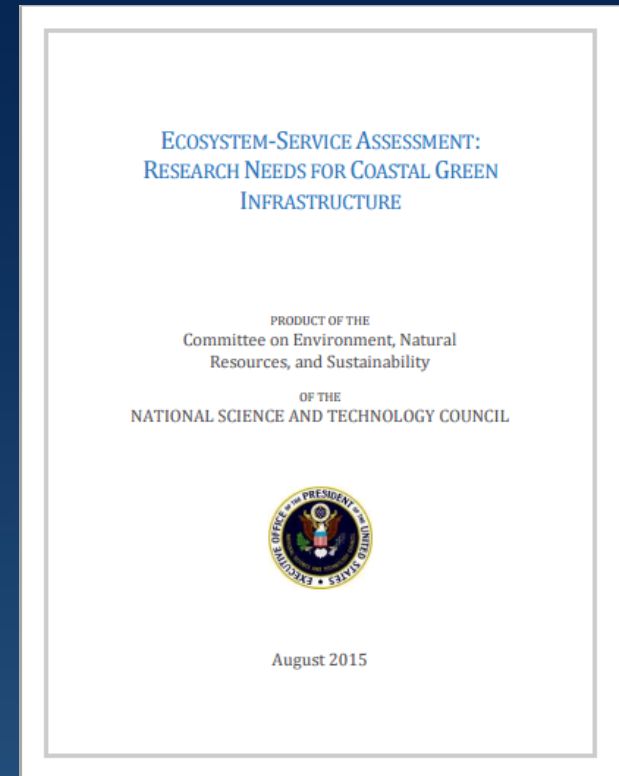
Report Results

- *Ecosystem-Service Assessment: Research Needs for Coastal Green Infrastructure* report ended up having two sections:

1. Key information for decision-makers
2. Research priorities

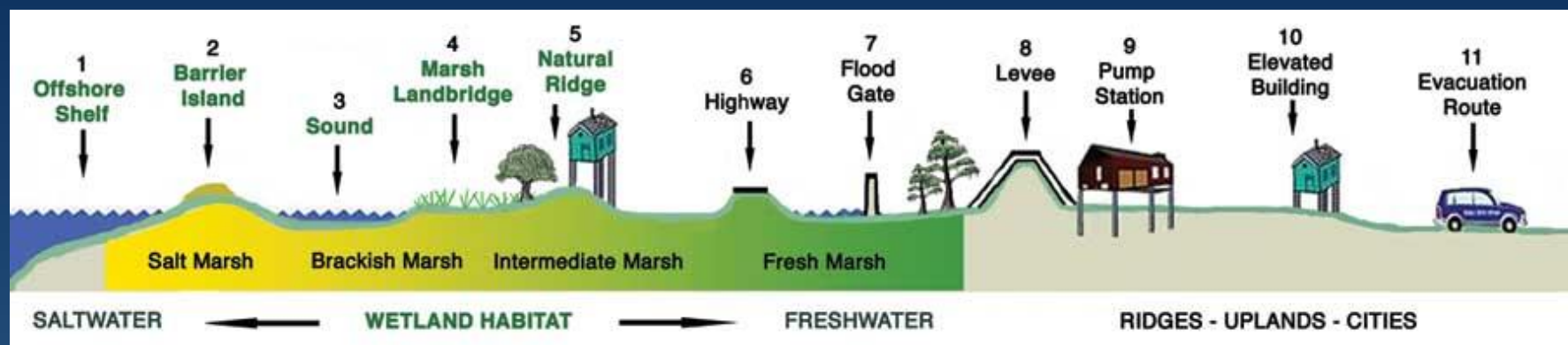
- Report available at

https://www.whitehouse.gov/sites/default/files/microsites/ostp/cgies_research_agenda_final_082515.pdf



Report Results

- Key information for decision-makers
 - Role of salt marshes, mangroves, reefs, seagrass beds, sand beaches and dunes (protective services & co-benefits)



- Ecosystem-service assessment
- Decision-making context



Report Results

- Research priorities
 1. Metrics
 2. Production functions
 3. Ecosystem-service valuation
 4. Social factors
 5. Decision support



Next steps

- Some implementation efforts already underway
 - Ex: Metrics Expert Group (NFWF/DOI) RFI
- NSTC Subcommittee on Ecological Systems will oversee longer-term implementation
 - Work with agencies and non-Federal institutions
- Research efforts intended to inform implementation of ecosystem services memo



Questions

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Incorporating Ecosystem Services into Federal Decision Making

National Ecosystem Services Partnership webinar
December 8, 2015

Sarah Ryker

White House Council on Environmental Quality

Motivation

Advice to the Federal government:

- President's Council of Advisors and Science & Technology (PCAST)
 - “Teaming with Life: Investing in Science to Understand and Use America's Living Capital” (1998)
 - “Sustaining Environmental Capital: Protecting Society and the Economy” (2011)
- H. Sandy Rebuilding Strategy (2013), Recommendation 22
- State, Local, and Tribal Leaders Task Force Recommendations (2014), Themes 3 & 6

Advances in relevant fields (natural sciences, technology, social sciences)

Related commitments:

- Priority Agenda on Enhancing the Climate Resilience of America's Natural Resources (2014)
- Principles, Requirements and Guidelines for Water and Land Related Resources Implementation Studies (2014)

Interest from international partners



Motivation

Long-standing goals for Federal decision processes:

- More completely inform planning and decisions
- Preserve and enhance the benefits provided by ecosystems to society,
- Reduce the likelihood of unintended consequences
- Where monetization is appropriate and feasible, promote cost efficiencies and increase returns on investment.

More specifically:

- Organize potential effects of an action within a framework
- Explicitly recognize the interconnectedness of environmental, social, and, in some cases, economic considerations
- Foster consideration of both quantified and unquantified information.



Federal policy guidance

OMB Management Memorandum 16-01, “Incorporating Ecosystem Services into Federal Decision Making”, October 7, 2015

- Developed and signed by three White House offices, with input from Federal agencies.
- Directs agencies to develop and institutionalize policies that promote consideration of ecosystem services, where appropriate and practicable, in planning, investment, and regulatory contexts.
- Establishes 14-month process for the Federal government to develop more detailed guidance on integrating ecosystem-service assessments into relevant programs and projects.
 - March 30, 2016 – Agencies’ descriptions of current practices; work plans
 - November 30, 2016 - Implementation guidance

<https://www.whitehouse.gov/sites/default/files/omb/memoranda/2016/m-16-01.pdf>



Next steps and opportunities

- Focus on increasing consistency
 - Best practices, gold standard examples, data and tools, training
- Coastal green infrastructure research agenda's priorities include:
 - Metrics
 - Production functions
 - Ecosystem-service valuation
 - Social factors
 - Decision support
- Build on growing base of experience in other topical areas, e.g.
 - Conservation, restoration, mitigation
 - Resilience
 - Decision-making for sustainable infrastructure



Questions

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