Sea Grant Network Flooding Resilience Webinar Series – Winter 2018

The National Sea Grant Network is engaging in a flooding resilience visioning exercise, to try to make a plan for how Sea Grant could/should be involved in working with communities to help them become more resilient to flooding that may become more common with a changing climate. We have had a series of three webinars (meetings people attend to hear presenters through our computers) to discuss this.

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I. Education and Outreach (Webinar #1, Jan. 8, 2018)

1. Prep-RI: Providing Resilience Education for Planning in Rhode Island

- A municipal training module system that provides resilience education programs to prepare RI communities for future challenges posed by flooding and erosion
- Designed primarily for local boards and commissions, the programs can also be used by government staff, community organizers, and citizens
- The online modules focus on climate change, infrastructures at risk, mapping, sea level rise (SLR), managing stormwater, and reducing risks
- Each module contains videos, presentation notes, and resource pages, as well as a certification of completion and a module evaluation
- Under new RI legislation planning boards need SLR and flood training; Prep-RI is a feasible way for boards to satisfy these standards

2. Education and Outreach for Community Resilience to Flooding and Stormwater Management

- The Minnesota based sea grant operation seeks to educate and provide resources so that informed decisions regarding land use and natural resources can be made
- They achieve this partly through the Nonpoint Education for Municipal Officials (NEMO) program which uses education and civic-engagement to inspire policy actors and community leaders to take action and create specific goals and objectives
- Success in the program has been seen through their workshops-on-the-water events that include interactive models like the watershed game to help build understanding about the connection of land use to water management and illustrates various planning scenarios
- An additional success area of the NEMO program is in the reduction of barriers to the implementation of Green Infrastructure (GI)
- Through this portion of NEMO audits are run on community municipal codes and ordinances regarding GI is conducted, ranked, and then recommendations for improvements are made

3. Sea-level Rise and Law: Outreach to Local Governments In Florida

- Seeks to Increase awareness of impacts of sea-level rise (SLR) on local governments (fiscally, legally, practically) with a focus on policy and law
- The University of Florida Sea Grant increases awareness partially through promotion of online resources like the Sea Grant site and through workshops where planners and local governments can earn professional credits
- Workshops cover a range of topics like the legal overviews of climate change, issues in infrastructure, and issues in policies, law, money, and fairness

- Additional resources include a summary/report on the language used in SLR policies in local Florida governments and a summary of a court ruling on the liability of local governments to provide and maintain drainage systems

4. Raising Climate Awareness for New York City Coastal Communities: "Rising Above the Flood"

- The program focuses on aiding the most sensitive areas of NYC including Queens and the Rockaways which experience monthly flooding
- Seeks to provide information, improve the delivery of climate and weather preparedness related information, and empower communities
- Uses climate forums which are a series of place-based public events that bring scientists and experts to the communities to provide education and relevant information, as well as to establish two-way dialogue between residents, scientists, agencies, and city officials
- A successful forum held in Canarsie, Brooklyn demonstrated the importance of meeting a community where they are at, the value of working with a community member to organize the event, and the need to present easily understandable information

II. Tech & Sci (Webinar #2, Jan. 22, 2018): Community Response to Flooding - National Sea Grant Visioning Project

1. Green Infrastructure and Technical Assistance

- Seeks to work with inland communities in NJ rather than the coastal communities which have gotten significantly more attention
- Aims to reduce the amount of impervious surfaces in communities
- To fulfill this aim the group put together an Impervious Cover Reduction Action Plan (RAP) alongside community and using stakeholder input
- The RAP is inexpensive compared to traditional watershed management plans

2. Floodplain Management Technical Assistance

- Works with towns and municipalities in the Cape Cod area of MA
- Uses a Community Rating System (CRS) to evaluate how effective a town is in preventing/mitigating flooding or flood effects
- Towns who implement certain items (i.e. public information distribution/education about flooding, Building Elevation Permits, and conservation of floodplains) improve their CRS rating and get discounted insurance through the National Flood Insurance Program

3. Flooding Technical Support

- Seeks to make Sea Level Rise (SLR) data from the Co-ops Technical Report 083 available to any outreach professional and extension agent
- The data can be pulled up for a specific community and then the outreach professional/extension agent can enter it into a two-page SLR scenario report or a two pager floodplain map for ease of understanding for community stakeholders
- Floodplain two pagers have already been used in coastal Alabama communities to better understand new floodplain insurance policies

4. Adaptation Planning

- Co-production planning with coastal communities in NC
- Seeks to identify areas vulnerable to SLR, gather scientific data, explore adaptation/mitigation practices, and improve resiliency and planning policies
- Uses VCAPS group community meetings and diagram planning to help form plans
- Emphasizes the importance of stakeholder participation and for adapting plans for needs that emerge as the process progresses

5. Improving Resilience to Coastal Hazards and SLR

- Focuses on the coastal communities of Hawai'i
- Seeks to connect university researchers with extension faculty and community stakeholders
- Published a Sea Level Rise Vulnerability and Adaptation Report to help fulfill a Hawai'i climate change mitigation and adaptation initiative act
- The report uses modeling and mapping to combine passive flooding, coastal erosion, and high wave flooding into an overall SLR exposure area map

III. Flood Visioning Engagement (Webinar #3, Jan. 29, 2018)

1. Hawai'i and Pacific Islands King Tides Project

- Uses citizen science to document high water levels in the Hawaiian Islands
- The citizen scientists take pictures and collect data using a free smartphone app
- The goal is to train these citizen scientists on coastal processes and coastal hazards and how to prevent, withstand, and adapt to such hazards, as well as to apply citizen science data towards policy making
- Partnering with stakeholders and existing volunteer networks to cover a larger geography has been vital to the success of the project and continued community involvement through long term place-based outreach and training will be vital to its continued success

2. Engagement Convening & Relationship Building

- Seeks to address flood planning, SLR, and climate adaptation planning in the Southeast US, such as Tybee Island
- Emphasizes the importance of developing a plan with the community and stakeholders instead of coming in with a predeveloped plan as flood planning is an ongoing, evolving process
- FEMA's community rating system (CRS) is used in places to lower flood insurance costs
- Other factors vital to the success of projects include making data easily accessible to the community, creating a multidisciplinary team, and accounting for social and economic dimensions along with environmental dimensions of the project

3. Collaboration Response to Sandy

- After hurricane sandy in 2012 one response of coastal NJ was to create The Atlantic-Cape May Coastal Coalition to discuss municipal issues and create policies and practices for a more resilient coastal NJ
- Uses CRS, FEMA maps, outreach workshops hosted by various experts in the field, and most importantly stakeholder involvement and monthly meetings of the coalition so that all the towns involved continue to strive towards their similar goals

4. Working Together to Manage Duluth's Urban Watersheds

- The state of Minnesota was having difficulties managing their total maximum daily loads of pollutants (TMDL) under the clean water act so they developed a 10 year watershed plan and divided out 10 watershed areas to help manage and protect waterways
- Unfortunately, the city of Duluth was cut in half by the state watershed line so the Sea Grant partnered with Duluth and surrounding cities/communities to create a comprehensive watershed management plan
- They created the Duluth Urban Watershed Advisory Committee (DUWAC) and a watershed model for each community
- DUWAC allows for ease of information sharing and faster collaboration and engagement between the communities of the greater Duluth area
- Stakeholders voted as to which watershed model to implement and continue to voice what they want out of the DUWAC collaboration besides the original goal of preserving/restoring/protecting urban streams