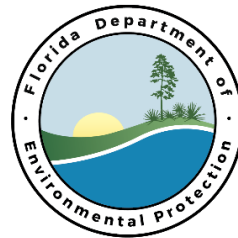


# Adaptation Planning Stakeholder Outreach & Engagement

CM501, Deliverable 3.6



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## Table of Contents

Introduction .....	4
Stakeholder Education Techniques and Outreach .....	5
Interactive Engagement Strategies – Using Roleplay Scenarios to Engage Stakeholders.....	5
Increasing Stakeholder Participation through Community Partners and Events.....	8
Educational Outreach Using Media .....	10
Youth Engagement.....	13
Guiding the Process: Using Steering Committees and Work Groups .....	15
Public Involvement and Input in the Planning Process.....	19
Inclusive Stakeholder Engagement.....	19
Communication Strategies, Meeting Tools, and Activities .....	20
Engagement Using Social Media and Other Technology .....	25
Conclusion .....	28
Works Cited.....	29
Appendix A - NOAA Potential Stakeholder List.....	32
Appendix B - NOAA Common Stakeholder Participation Techniques.....	34

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## Introduction

Stakeholder engagement is a central aspect of planning related activities. Without it, citizens or groups may feel that a plan does not represent the community as a whole. However, stakeholder engagement can be difficult. People are busy, so planning matters often take a back seat to daily activities and priorities. Also, some individuals may find engaging in civic or planning related activities to be tedious and mundane. Well-designed and applied stakeholder engagement techniques help overcome such hurdles by making activities interesting, accessible, and relevant to participants' priorities and concerns. Adaptation planning is no exception, and practitioners have developed engagement techniques to facilitate this process.

With this in mind, local governments and adaptation projects around Florida have employed robust stakeholder engagement programs. This document uses selected case studies and examples to illustrate stakeholder engagement techniques used across the state. It begins with an overview of stakeholder education strategies. It then covers how steering committees and work groups can be used to guide the planning process, and it concludes by describing public participation strategies, such as establishing a presence at community events, hosting workshops, and using social media and internet technology.

## Stakeholder Education Techniques and Outreach

Techniques to engage and educate community stakeholders about current and future coastal flooding and related impacts on their local community are numerous and varied. They range from stakeholders using roleplaying scenarios at a workshop to sharing photos of flood events on social media. This chapter uses real-world examples drawn from several adaptation planning projects in Florida to demonstrate how some of these techniques have been implemented and key takeaways from activities.

### Examples and case studies in this chapter:

- *Planning for Sea Level Rise in the Matanzas Basin Project*
- *Public/Private Regional Resiliency (P2R2) Initiative*
- *Planning for Coastal Change in Levy County*
- *King Tides Project*

### Interactive Engagement Strategies – Using Roleplay Scenarios to Engage Stakeholders

Using roleplay to engage stakeholders is a technique employed in resiliency planning efforts. Properly designed roleplay scenarios can be inexpensive and readily employed during a workshop. They have been used to promote stakeholder understanding of resiliency-related concepts, such as scenario planning and familiarizing citizens with sea level rise adaptation strategies.<sup>1</sup> These scenarios can also be used to foster an environment of collaboration and mutual learning as participants dive deep into the particulars of an issue and encounter a variety of perspectives as they discuss and interact.<sup>2</sup>

One example, is the use of roleplay scenarios in the **Planning for Sea Level Rise in the Matanzas Basin Project's** participatory outreach efforts. *Planning for Sea Level Rise in the Matanzas Basin Project* was a National Estuarine Research Reserve System Science Collaborative-funded collaboration between Florida's Guano Tolomato Matanzas National Estuarine Research Reserve and the University of Florida's College of Design, Construction, and Planning aimed at engaging local stakeholders in sea level rise adaptation planning in the Matanzas Basin. It is worth noting that institutions of higher learning can be valuable, potentially low-cost



Figure 1: Teams in the *Planning for Sea Level Rise in the Matanzas Future Growth Game* produced 2060 development scenarios for a hypothetical tract affected by sea level rise. Image Credit: *Planning for Sea Level Rise in the Matanzas Basin Project*.

<sup>1</sup> Ozor, 2013, p.71

<sup>2</sup> Clark, 2012; Ozor, p.71

institutional partners in efforts to engage with and educate the public. Universities can provide subject matter expertise, technical assistance, and/or volunteer manpower at no or comparatively low cost to local governments.

In the case of the University of Florida Matanzas Basin project, the project team used two scenarios at several of their workshops and meetings throughout the project to interactively engage stakeholders. One of these scenarios focused on planning for future growth and was aimed at educating stakeholders about adaptation and resiliency strategies and challenges associated with their implementation. Participants were divided into small groups and given a hypothetical 700-acre tract of land on which to place a pre-determined number of residential units (representing population growth). Teams were given information about the impact of sea level rise on the tract from the present until 2060 and then internally negotiated the siting and density of new residential units on the tract, ultimately producing future development scenarios demonstrating participants' resiliency and adaptation planning priorities (e.g., infill, redevelopment, or mixed-use town centers).

The *Planning for Sea Level Rise in the Matanzas Basin* project team also employed a sea level rise adaptation strategy role-playing game to engage and educate stakeholders. During this scenario, players were assigned one of five stakeholder personas, such as Local Resident or Environmental Scientist, that are typically involved in adaptation planning processes. Players were divided into five-person teams that included one person playing each role. Guided by a facilitator, each team then worked together to "buy" different sea level rise adaptation strategies, which were pre-assigned costs by the project team, to create a 20-year adaptation plan for their community.

The role play scenario served the Matanzas Basin project team in several ways. First, it introduced participants to adaptation strategies. Second, it helped actively engage participants in a collaborative manner as they learned about potential conflicts or mutual benefits of different strategies. Lastly, the scenario helped the project team get a better feel for adaptation strategy preferences among participants.

## ROLEPLAY SCENARIO MATERIALS

### ***Stakeholder Persona Cards:***

Five cards representing: Inland Developer, Environmental Scientist, Local Resident, Local Government Official, and Ecotourism Business Owner. These cards have background information about each persona and the money available (example below)

### ***Adaptation Strategy Cards:***

Eight cards explaining the following strategies, including cost:

- Beach Nourishment
- Habitat Migration Corridors
- Ecosystem Conservation
- Seawalls
- Elevating Structures
- Water Storage Easement
- Planned Relocation
- Living Shoreline

***Maps:*** To help players envision a community sea level rise scenario, they receive an accurate map of local low-lying places where individual strategies may apply.

***Other Materials:*** Groups may use a timer, pens, notepads, and small calculators.

It is critical to note that the scenario was typically played at the end of workshops after participants had received a primer on sea level rise adaptation planning that included background information about sea level rise science and projections, local impacts related to sea level rise, and sea level rise adaptation strategies. Additionally, it is recommended that participants do not assume a persona that they already identify with. The scenario is intended for participants to approach the issue from a different perspective than what is typical for them.<sup>3</sup>

The below presents a general template of the roleplay scenario design.

### ***Sea Level Rise Adaptation Strategy Roleplay Scenario Design Template***

<b>Objective:</b>	Players work together to develop strategic sea level rise adaptation plans for their community under economic, political, and time constraints.
<b>Goals:</b>	(1) For the researchers: To introduce participants to sea level rise adaptation strategies and opportunities, and discover their preferences in order to assess how participants see their community adapting to sea level rise.  (2) For participants: To gain an understanding of the vast undertaking that planning for sea level rise will be with the coordination of different stakeholders and adaptation strategies given the reality of economic limitations and competing interests among stakeholder groups; and to become familiar with the different strategies available for sea level rise adaptation.
<b>Duration:</b>	30 minutes of roleplay, plus ten minutes for pre and post-evaluations.
<b>Players:</b>	Five players plus one facilitator per group

#### ***Scenario – Planning for the next 20 years***

The effects of coastal dynamics are apparent in your community. You may have noticed more frequent beach erosion and more severe storm flooding than you may remember from years past. On the maps, you can see the areas of your community that are predicted to be vulnerable to habitat changes with 3 feet of sea level rise. Such changes require responses, and implementing these responses should begin soon. All of you come to this table representing the interests of larger groups: local residents, developers, government officials, business owners, and scientists. You have been nominated by your groups to manage the funds they have raised and allocate them towards appropriate adaptation strategies. As a community, you have \$800 million to put towards sea level rise adaptation efforts. Given what you know about the future, but keeping in mind your economic limitations, what is the best way to adapt to the upcoming changes? Develop a strategic sea level rise adaptation plan for the next 20 years, keeping in mind changes likely to occur over the next century.

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<sup>3</sup> Planning for Sea Level Rise in the Matanzas Basin, n.d.

## Increasing Stakeholder Participation through Community Partners and Events

Increased stakeholder participation can be achieved by expanding outreach efforts to work with community partners and provide outreach at community events. Potential community partners include church groups, rotary clubs and similar civic organizations, and other interest groups. In addition to providing support and local buy-in to adaptation and resiliency planning efforts, collaboration with community partners and participation at community events helps outreach efforts better reach intended audiences and inform them of project activities. In other words, projects or programs interested in increasing stakeholder engagement may be well served to focus outreach efforts on forums where relevant stakeholders already are located or involved in community activities.

For example, the **Northeast Florida Regional Council's Public/Private Regional Resiliency (P2R2) Initiative** is aimed at protecting and enhancing the economic resiliency of Northeast Florida in the face of sea level rise and related impacts. A main focus of the Initiative is to engage private sector businesses and increase public participation in the region's resiliency efforts. To encourage participation by more private-sector actors, P2R2 hosted a three step launch beginning with an op-ed piece about the Initiative and its approach to resiliency in the *Florida Times-Union* (Jacksonville newspaper). Then the

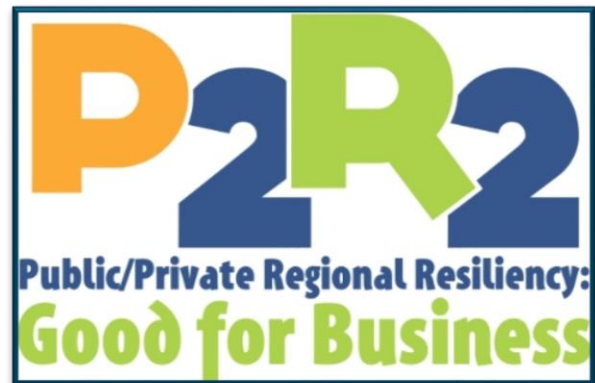


Figure 2: P2R2 Logo

Initiative held a panel discussion with P2R2 members at the local Rotary District Convention. To cap off the launch, P2R2 held the Regions Resiliency Night at the Museum of Contemporary Art in downtown Jacksonville. The event shared information about P2R2 activities and premiered a local artist's new murals. Partnering with a local newspaper, civic organization, bank, and museum helped P2R2 reach a broader audience than is typical of traditional planning outreach efforts.<sup>4</sup> The P2R2 launch demonstrates that collaborations with community partners and events can increase opportunities for planners and government officials to interact with the public outside of more traditional public meeting formats.

Another strategy is to present and share project information at local festivals. This can be an inexpensive, simple way to educate community members about adaptation and resiliency-related concepts in a less formal environment. It also helps the project reach a large, broad audience. The **Planning for Coastal Change in Levy County Project** used this method. The *Planning for Coastal Change in Levy County Project* was a two-year, Florida Sea Grant-funded project aimed at initiating coastal planning with a particular focus on planning for sea level rise in Levy County. The project was undertaken by faculty, staff, and students from the University of Florida in consultation with local stakeholders. This project represented the beginning dialogue of planning for sea level rise in the Levy County area – which made substantial stakeholder education and public outreach vital to its success.

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<sup>4</sup> Northeast Florida Regional Council, June 2015





Figure 3: Cedar Key Arts Festival Project Booth. Image Credit: Planning for Coastal Change in Levy County

The project team attended and set up information booths at three large regional festivals, including the Cedar Key Arts Festival. Festival booths gave the project team an informal opportunity to present locally-relevant sea level rise-related information to festival attendees. Most booths set up by the team featured sea level rise projections and children’s activities, such as educational word searches and puzzles.<sup>5</sup> At the Cedar Key Arts Festival, University of Florida students shared their findings on “community-based strategies to adapt to sea level rise and other coastal changes” with attendees.<sup>6</sup>

Public feedback gathered at all of the festival booths was ultimately integrated into the project final report and recommendations.<sup>7</sup>

More generally, local governments seeking to increase public involvement in adaptation planning processes may be well-served to consider opportunities to establish a presence outside of formal public meetings. Community festivals such as the Cedar Key Arts Festival can provide a low-cost opportunity to educate and informally interact with community stakeholders.

Another strategy the Levy County project team employed was working with the local arts community through a partnership with the Cedar Key Arts Center called the *Changing Levy Coast Arts Project*.<sup>8</sup> The active arts community in Cedar Key provided the project team an opportunity to increase its audience in the area and engage the topic of adaptation in a way atypical of traditional planning. The project team worked with seven artists to develop an exhibit that explored the artists’ perspectives on the issue and the challenges they saw facing their community.

**Festival Booth Materials included:**

- Local maps depicting low-lying areas, floodplains, natural resources, etc.
- Sea level rise projections and adaptation strategies
- Project information
- Pictures of local flood events
- Children’s activities, e.g., word searches and puzzles

The project team held an informational workshop with the participating artists to provide them with background information that included a primer on sea level rise science and related impacts to the area, as well as a tour of potentially vulnerable areas (which also acted as an opportunity for the artists to ask questions or voice concerns about sea level rise with the project team). The efforts culminated in a month long exhibit at the Cedar Key Arts Center. An event was held the opening night of the exhibit so the artists

<sup>5</sup> Cerame, 2012

<sup>6</sup> Frank, 2013

<sup>7</sup> Frank, Jourdan, and Volk, 2014

<sup>8</sup> Bond, 2014



Figure 4: Art Piece Made During the Planning for Changing Levy County Art Project. Image Credit: Planning for Coastal Change in Levy County.

and the University of Florida project team could discuss the art and share information about the larger project.<sup>9</sup> The exhibit also displayed other work from the Levy County project, including project posters illustrating potential sea level rise impacts to coastal habitats and developed areas in the county, a short film that recorded local oral histories on coastal change, and a “drift wood quilt” created by participants in the Cedar Key Summer Youth Program. By carefully designing the outreach and education components of the project, the Levy County project team was able to broadly engage stakeholders while educating both participants and themselves about a wide variety of qualitative information about the community. The education and outreach components of this project allowed the project team to gather local knowledge and

experiences to better inform the project.

### Educational Outreach Using Media

Efforts to educate local stakeholders on current and future flood hazards can be enhanced by directly engaging the public using nontraditional outreach techniques, such as social media and interviews. Involving community members in outreach and education efforts can be effective at gathering local knowledge related to changing coastal conditions. It can also facilitate peer-to-peer learning during adaptation planning processes as their information is shared with community neighbors.

Interactions with stakeholders, such as oral history interviews, can be recorded and edited into short films or podcasts and shared with the public at meetings and workshops or posted onto websites and social

#### ***Basic Oral History Interview Questions***

- 1) Background Information to ease the interviewee into the conversation: What is your name? Where are you from? Please tell us a little bit about yourself and your background.
- 2) In the time that you have lived on the coast, what types of changes have you observed (e.g., changes to the local natural environment? Changes to local culture? Changes to the local economy?)
- 3) How have these changes impacted the community or you?
- 4) Have these changes affected the natural environment?
- 5) How did people respond, or adapt, to these changes?
- 6) How can people adapt in the future?

<sup>9</sup> Planning for Coastal Change in Levy County, n.d.

media.<sup>10</sup> As part of the *Planning for Coastal Change in Levy County Project*, graduate students from the University of Florida conducted interviews with eight local community members on their observations on how the coast has changed over time. The oral history interviews recounted observations of environmental changes; personal and community impacts as a result of such changes; and suggestions for future adaptation and community planning. The interviews were edited into a 15-minute short film, which was posted online and shown at the project's public workshops and art exhibition opening.<sup>11</sup>

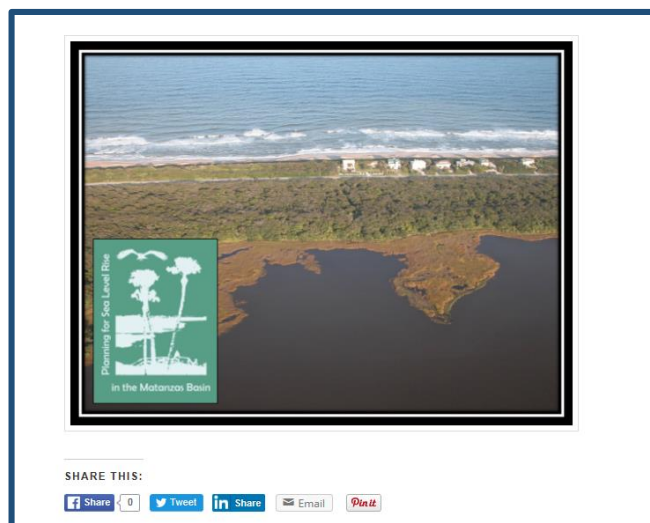


Figure 15: *Planning for Sea Level Rise in the Matanzas Basin Project Website*. Link: [www.planningmatanzas.org](http://www.planningmatanzas.org)

Social media can also be used to inform stakeholders about events and other opportunities to provide feedback to the adaptation actors. Online resources can include interactive webpages, Instagram, Facebook, Pinterest, hyperlinks to registration pages, and email links. The *Planning for Sea Level Rise in the Matanzas Basin Project* website features a blog of project activities and events, a library of technical resources, project presentations, project findings, project reports, GIS data, maps, photos, frequently asked questions, opportunities to get involved, and contact information. The website also welcomes users to connect with social media directly from their web page, including Facebook, Twitter, Instagram, email, and Pinterest.

Levy County also kept an updated website and Facebook page. Workshop invitations were posted on Levy County websites, relevant community group Facebook pages (including the local Lions Club, Woman's Club, and Chamber of Commerce pages), and community news websites in order to reach the greatest community audience online. As demonstrated by the Matanzas Basin and Levy County projects, social media can be a powerful, low-cost way of informing stakeholders about project activities and easily accessed educational materials.

Social media can be used to record and share experiences of flooding and sea level rise related impacts within a region. One such effort is the **King Tides Project**. The *King Tides Project* is aimed at assisting people around the world in learning about how sea level rise will likely affect communities by highlighting how the highest of annual high tides affect a local area. Using smartphones and social media, users take and submit pictures of king tides.<sup>12</sup> The project has two main goals: to educate the public about sea level rise and to create a catalog of local flood data that researchers and decision-makers can use.<sup>13</sup>

<sup>10</sup> Endres, pp. 494-495

<sup>11</sup> Bond, 2013

<sup>12</sup> The highest predicted high tides of the year at coastal locations (EPA, 2015)

<sup>13</sup> King Tides Project, 2014

The *King Tides Project* highlights the opportunity for social media to enhance education and outreach efforts by sharing current flood issues with a broad audience while simultaneously improving local data collection efforts.<sup>14</sup> There is great potential for experiential learning<sup>15</sup> to help educate the public about sea level rise through commonly used social media platforms.<sup>16</sup>



Figure 5: Community Member-Submitted Image of a King Tide in Southeastern Florida.  
Image Credit: Larry Stults

Moreover, the *King Tides Project* illustrates that communities undertaking resiliency initiatives can leverage the widespread availability of social media and smartphones into a crowdsourced data gathering exercise focused on identifying specific community vulnerabilities and educating community members about local vulnerabilities. In short, the experiences of community members can be used to educate other members of the public about coastal flooding-related impacts on the community. Because community members are directly involved with the creation and dissemination of these experiences, these educational efforts are likely to be perceived as realistic and reliable by other community members.

A Florida example of the *King Tides Project* is a collaboration between the Tampa Bay Climate-Ready Estuary Program and the Sarasota Bay Climate-Ready Estuary Program.<sup>17</sup> The two programs are responsible for planning the protection and restoration of their respective bays, a purview which includes educating community stakeholders about sea level rise and its potential impacts on local communities. From 2013-2015, the Programs sponsored the “Chasing the Waves: King Tide” traveling photo exhibit, which featured photos from the *King Tides Project*, as well as from the winners of a local king tides photo contest.



Figure 6: “Chasing the Waves: King Tide” Exhibit on Display.  
Image Credit: Tampa Bay Estuary Program

<sup>14</sup> Segerberg & Bennett, 2011

<sup>15</sup> “an active form of learning through experiences that includes reflecting on personal encounters and applying the lessons learned to future situations” -Hix, 2015, p.485

<sup>16</sup> For other examples of the efficacy of experiential learning in efforts to educate about natural resources management and related issues, see: Hix, 2015; Hansen, 2012; National Forest Programme Facility & FAO, 2010.

<sup>17</sup> Tampa Bay Estuary Program and Sarasota Bay Estuary Program, n.d.

## Youth Engagement

Another aspect of community outreach and stakeholder engagement is youth engagement. Young people will eventually be tasked with dealing with the challenges of tomorrow, so they are a critical audience that should be informed and engaged on the issues of resiliency and sea level rise adaptation. In addition, they can introduce new, valuable perspectives and ideas into community adaptation processes.<sup>18</sup>

During summer 2012, the *Planning for Coastal Change in Levy County* team partnered with the City of Cedar Key on the six-week, coastal change-themed Cedar Key Summer Youth Program. More than 90 children from the local community, mostly ages 6-13, participated. Topics covered included: the role of children and youth in community decision-making; coastal dynamics and local history; community planning and coastal adaptation; mapping using Geographic Information Systems (GIS); and envisioning the future of the local community.

Activities included the inspection of Native American artifacts from the area and the reconstruction of pottery from fragments; exploration of historical maps and interviewing family members; building a box city affected by sea level rise; creating maps of the neighborhood using aerial images and tracing paper; conducting a walking tour of Cedar Key and creating a photo journal of the trip; and painting and hanging wooden “quilts” that show Cedar Key’s future. Art, photos, maps and other pieces created by the campers were displayed during an end of camp celebration.



*Figure 3: Children Creating a Box City during the Cedar Key Summer Youth Program. Image Credit: Planning for Coastal Change in Levy County*

Youth engagement in the project did not end with the summer camp. In the fall of 2013, the project team worked with local schools to participate in a youth essay contest for 4<sup>th</sup>-8<sup>th</sup> graders. Participants wrote short essays related to planning for sea level rise adaptation in Levy County. The project team provided age-appropriate scientific background information to teachers and posted additional information on the project website. At the conclusion of the contest, the top three essays were chosen and given cash awards. All children received participation certificates.<sup>19</sup> In addition to educating children and their families about

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<sup>18</sup> Mullahey, 2008, p.6

<sup>19</sup> Frank, 2012

sea level rise and its impacts, the contest provided the project team with valuable insight into local knowledge, beliefs, concerns, and preferences regarding sea level rise.

- What did you know about coastal change or sea level rise before you began working on this essay?
- What did you learn from the websites that you did not know before?
- What is sea level rise in your own words? How do you think it may affect the environment and natural habitats in your community? How would it affect where people locate their houses and businesses? What else might be affected by rising sea levels?
- Sea level rise is a slow process that happens over a long period of time. Why might it still be important to plan for it now?
- What are some ways you think your community could prepare for sea level rise?

Adapted from Planning for Coastal Change in Levy County Project:

<https://changinglevycoast.files.wordpress.com/2012/06/coastal-change-essay-info-consent.pdf>

Given children’s long-term connection to the issue, it can be important to give them a voice in the adaptation process and help them to become knowledgeable about planning and adaptation to sea level rise. Engagement activities show that youth can be involved in a broader discussion related to adaptation and community planning that can be fun and interactive, while serving to educate children and their family members about their community and potential coastal flooding issues that may affect them. Activities can also serve to collect their input about related issues and encourage them to seek out innovative solutions in the future. When designing such projects, consideration should be given to ensuring their relevance and applicability to particular audiences.<sup>20</sup> Moreover, these projects should encourage youth to focus on what can be done to improve the community’s future, not focused on creating fear images of worst-case scenarios.<sup>21</sup>

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<sup>20</sup> Rodriguez & Davis, 2015, p.142

<sup>21</sup> O’Neill & Nicholson-Cole, 2009, p.373

## Guiding the Process: Using Steering Committees and Work Groups

### Examples in this chapter:

- *Planning for Sea Level Rise in the Matanzas Basin Project*
- *Southeast Florida Regional Climate Change Compact*

To facilitate decision making processes and planning efforts, it is typical for practitioners to work with a smaller body of stakeholders that are representative of community interests and values to make for a more efficient planning process (rather than attempt the impossible task of engaging every single member of the public). This smaller body of people is often called a steering committee or work group and can be effective at identifying local needs and leveraging local capacities during a project. Forming a steering committee or work group is a common method used in adaptation planning efforts. Steering committee members should reflect the diverse institutions and programs seeking to improve adaption and resiliency initiatives in the community. Typically, steering committee members may come from the private sector, public offices, educational institutions, or special interest groups. When working with public officials, please consult with the local government attorney about compliance with Florida Sunshine Law requirements. Below is a list of some potential steering committee members that may participate in, and help guide, adaptation planning efforts.

### ***Potential Steering Committee Members***

- ***Public officials***, including public works directors, planning directors, city or county commissioners, and city/county managers
- ***Members of the business community***, including Chamber of Commerce representatives, local business owners, real estate agents, and real estate developers
- ***Technical experts***, including university professors, graduate students, economists, and University of Florida Institute of Food and Agricultural Sciences (IFAS) County Extension Staff
- ***Coastal scientists***, including coastal engineers, geospatial analysts, hydrologists, geologists, environmental planners, meteorologists, and experts on local flora and fauna
- ***Representatives of special interest groups***, including representatives of environmental organizations, advocacy groups, neighborhood organizations, non-profit organizations, and non-governmental organizations

Adaptation-related steering committees can be appointed by the project team, local officials, or they can be revamped versions of existing steering committees (e.g. local mitigation steering committees or floodplain management committees)<sup>22</sup>. As seen in *Planning for Sea Level Rise in the Matanzas Basin*, steering committees can also consist of volunteers from various stakeholder groups. Along with helping the project team move forward with adaptation plans, steering committees and work groups can be used to coordinate regional local governments and advance adaptation planning efforts in an efficient manner, as seen in **Southeast Florida Regional Climate Change Compact** Steering Committee and Sea Level Rise Work Group.

The formation of an adaptation planning related steering committee may also benefit other community planning activities related to coastal flood hazards. For example, communities that participate in the Community Rating System (CRS) can qualify for reduced flood insurance rates in the National Flood Insurance Program. CRS Activity 510 provides two credits for a committee that helps draft a floodplain management or a hazard mitigation plan.

In the *Planning for Sea Level Rise in the Matanzas Basin Project*, the project team assembled a diverse group of stakeholders that represented the diverse interests, values, and businesses within the region. The project team worked with the steering committee to act as a content filter for the wider community and to develop projected related outputs that would be relevant to stakeholder needs and interests, such as workshop presentations, planning scenarios, visual aids, and communication strategies. Steering committee members included:

- Senior City Planner
- City Stormwater Manager
- St. Johns River Riverkeeper Member
- Director of Rural Properties, Rayonier
- Fletcher Management Company Senior Vice President
- Coastal Property Owner/Real Estate Broker
- St. Johns River Water Management District Senior Project Manager
- The Nature Conservancy Associate Director of Protection
- Florida Wildlife Federation Planning Advocate
- Friends of the Guana Tolomato Matanzas National Estuarine Research Reserve Board Member
- Northeast Florida Sea Grant Extension Agent,
- The Ripple Effect Ecotours Assistant Manager<sup>23</sup>

The steering committee worked with the project team for the entire project and its role from informing sea level rise projections to educating community members about sea level rise. The steering committee met with the project team on a quarterly basis over the course of three years. At these meetings, the steering committee provided guidance to the project team and received information to disseminate to other stakeholders and the general public. Other steering committee tasks included providing local

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<sup>22</sup> Or can reach out to existing committees for their expertise

<sup>23</sup> *Planning for Sea Level Rise in the Matanzas Basin*, 2015



perspectives on the project; defining the goals of local adaptation planning; advocating for the project at public meetings, in regional planning council meetings, and on the local news; presenting at workshops; and continuing to support adaptation efforts even after the project was completed. After the project's completion, the steering committee members reflected on their experience with the adaptation planning process in a set of interviews that is now accessible to the public on the [project's website](#).<sup>24</sup> Throughout the entire project, the Steering Committee was there to guide the project and ensure its relevance to participants.



Figure 5: Screenshot of Steering Committee Interviews Video

There are two key takeaways from the role of steering committee in *Planning for Sea Level Rise in the Matanzas Basin Project*. First, steering committees contribute to adaptation planning processes by functioning as purveyors of local knowledge. The steering committee in the Matanzas Basin project understood the local planning context better than the project team. The steering committee understood the dynamics influencing local sea level rise adaptation needs and policy and were able to communicate this with the project team, which used this information to generate more contextually-appropriate adaptation strategy recommendations.

***Matanzas Basin Sea Level Rise Steering Committee contributions:***

- Project guidance and project information dissemination
- Sharing local perspectives with the project team
- Identifying goals for local adaptation planning
- Project advocates at public meetings and in the news
- Workshop presenters
- Torch bearers for continuing adaptation planning efforts post-Matanzas project

Second, many of the Matanzas Basin project steering committee members reported that they used knowledge and tools learned during their involvement with the project in related adaptation planning efforts. This demonstrates the value of steering committees in creating local champions for adaptation planning. Membership on a steering committee can provide community members with the skills, experience, and enthusiasm necessary for these champions to be effective at promoting adaptation efforts locally. Active involvement by community members in adaptation planning can encourage them to continue their involvement in these efforts after a given project has ended. When carefully designed, stakeholder engagement in the present encourages additional engagement in the future.

<sup>24</sup> Planning for Sea Level Rise in the Matanzas Basin, 2015

Another example is the *Southeast Florida Regional Climate Change Compact*, which is led by a steering committee composed of municipal representatives from local governments and organizations within the Compact’s four county region (Broward, Miami-Dade, Monroe, and Palm Beach Counties, plus the South Florida Water Management District). The Compact has a wide scope related to both climate change adaptation and mitigation. To develop regionally-significant sea level rise adaptation related guidance, the Compact has formed several sea level rise related work groups, such as the Inundation Mapping and Vulnerability Assessment Work Group<sup>25</sup> and the Sea Level Rise Work Group.<sup>26</sup>

The role of both work groups was mainly technical in nature. They provided recommendations to the Compact in the form of a unified sea level rise projection and they developed a methodology for mapping potential impacts and performed a vulnerability assessment for the region. Work group members ranged from local government officials and geo-spatial analysts, to coastal scientists and engineers. The work groups’ tasks and responsibilities helped inform the region’s understanding of its vulnerability and provided consistent information for Compact members to develop adaptation strategies and policies.

Their outputs helped provide guidance for the Compact Steering Committee. The use of work groups by the Compact demonstrates that delegating planning and analysis related tasks to a group of technically skilled stakeholders can provide benefits in the form of increased knowledge for Compact members and steering committee without subjecting them to level of involvement and work needed to develop the information. The delegation of the more in-depth research and analysis needed to develop recommendations for the Compact to work groups composed of local technical experts, helped ease the burden and workload of the Steering Committee. It created hyper focused project outputs that ensured the timely creation of supporting analyses and recommendations for the Compact that were regionally relevant and sensitive to the needs of Compact stakeholders.

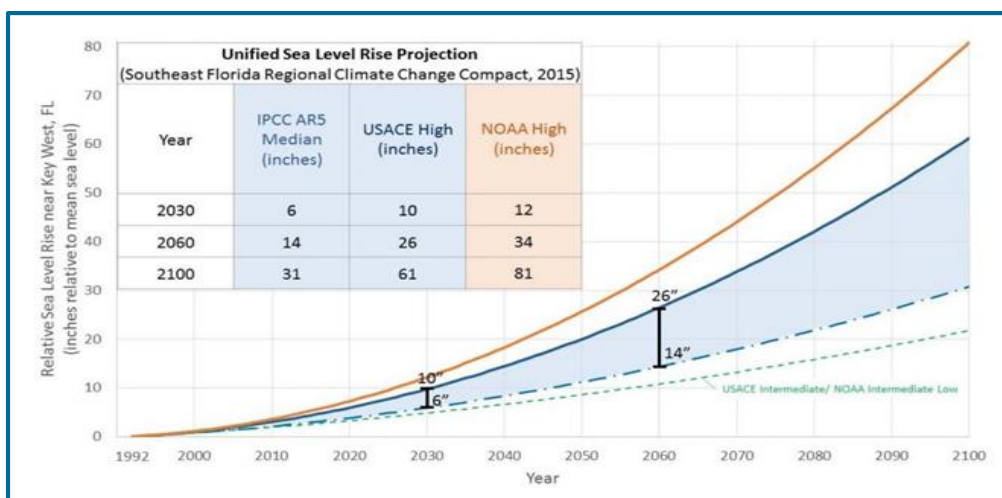


Figure 9: Southeast Florida Regional Climate Change Compact Unified Sea Level Rise Projection, 2015

<sup>25</sup> SFRCCC, 2012; <http://www.southeastfloridaclimatecompact.org/wp-content/uploads/2014/09/vulnerability-assessment.pdf>

<sup>26</sup> SFRCCC, 2015; <http://www.southeastfloridaclimatecompact.org/wp-content/uploads/2015/10/2015-Compact-Unified-Sea-Level-Rise-Projection.pdf>

## Public Involvement and Input in the Planning Process

Involving stakeholders in the adaptation planning process can help local governments identify local priorities and projects ready for action. This chapter uses examples and a case study to demonstrate how several adaptation projects in Florida have increased stakeholder involvement in planning processes by using non-traditional engagement techniques and incorporating new strategies into more traditional engagement practices. The chapter concludes with a case study highlighting the stakeholder engagement techniques used to involve the public in **Satellite Beach’s Climate-Ready Estuaries Pilot Project**. Please refer to Appendix A and B for a list of potential stakeholders and participation techniques.

### Examples and case studies in this chapter:

- *Sarasota’s BRACE*
- *Southeast Florida Regional Climate Change Compact*
- *Punta Gorda Climate Change Adaptation Plan*
- *Planning for Coastal Change in Levy County*
- *Planning for Sea Level Rise in the Matanzas Basin Project*
- *City of Ft. Lauderdale*
- *Satellite Beach Climate-Ready Estuaries Pilot Project*

### Inclusive Stakeholder Engagement

Adaptation efforts may incorporate a diverse set of local community stakeholders, but inclusivity in stakeholder engagement necessitates targeted, and sometimes alternative, outreach techniques. Some local governments may be interested in targeting specific audiences to ensure inclusive stakeholder participation in ways other than presenting at public meetings. Such an approach was taken by **Sarasota’s Building Resilience Against Climate Effects (BRACE) Program**.

*Sarasota’s BRACE Program* piloted a project in Sarasota County in partnership with the Department of Health to better understand the needs of vulnerable populations during hazard events. The program team held in-person workshops with representatives from 14 different vulnerable populations, social workers, and emergency managers. By bringing social workers and emergency managers together in one room, with representatives of the vulnerable populations most in need of their services, the BRACE workshops encouraged social workers and emergency managers to share information and coordinate efforts to better address hazard event-related needs of vulnerable populations, such as increased evacuation times needed for certain populations.<sup>27</sup> In addition to encouraging inclusive engagement, targeting specific audiences can allow local governments to plan more effectively for the unique needs of specific community sub-populations by encouraging the sharing of expertise and resources and the coordination of resources between different agencies.

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<sup>27</sup> From conversations with Kristian Blessington, Sarasota County Department of Health.

## Communication Strategies, Meeting Tools, and Activities

Increased stakeholder engagement in adaptation planning can also be encouraged by the incorporation of new strategies, tools, and activities into more conventional participatory methods. Local governments are encouraged to bring stakeholders to the table to have meaningful conversation by focusing on specific, relevant phenomena and information, and linking adaptation to collectively agreed upon initiatives that mitigate risks associated with hazards and sea level rise related impacts. The **Southeast Florida Regional**



Figure 10: Southeast Florida Regional Climate Change Compact Logo

**Climate Compact** is working with Yale Law School's Cultural Cognition Project through its Southeast Florida Science Communication Initiative to document and examine the Compact's highly focused and inclusive participatory process.

Participation in the Compact's numerous public meetings and forums has included not just local governments, but also business groups and various resident associations. The Initiative has highlighted how the Compact has not focused on developing an elaborate messaging campaign, but rather focused on working with citizens to identify the best available information to better understand the risks they face (What do we know?) and working to identify actions that address the risk and fix some of those problems (What can we do with our knowledge?).<sup>28</sup> For the Compact, its participatory process is its communication strategy and, as a result, its actions have produced a broad, multi-stakeholder coalition focused on using the best available information to promote their collective well-being.<sup>29</sup>

It is important that public meetings are actively engaging and relevant to participants. An example of this is the **Punta Gorda Climate Change Adaptation Plan** stakeholder outreach and public meeting efforts. The Punta Gorda Climate Change Adaptation Plan was the collaborative product of the City of Punta Gorda, the Southwest Florida Regional Planning Council (SWFRPC), and the Charlotte Harbor National Estuary Program (CHNEP). Three public meetings were held to develop the plan. These meetings were publicized through electronic newsletters and postcards. Participants were able to register online, over the phone, or in-person, allowing meeting personnel an opportunity to review the meeting audience membership and their potential interests. Meetings were held in donated space during morning hours, and



Figure 11: City of Punta Gorda Adaptation Plan Public Meeting. Image Credit: City of Punta Gorda

<sup>28</sup> Kahan, D., 2014.

<sup>29</sup> Ibid.

refreshments were provided by the SWFRPC. Participants included full-time local residents, city staff, and visitors representing a variety of community stakeholder groups.

Over the three meetings, participants filled out surveys indicating their demographic information and opinions about local climate, wildlife, and storms – including feedback about perceived roles for local, state, and federal government in preparing for extreme weather events in the future. Meetings began with presentations about potential sea level rise and climate change related impacts in Southwest Florida, after which participants were divided into groups to identify local vulnerabilities, possible solutions, and participant views on addressing identified vulnerabilities in the Adaptation Plan through a set of scenarios. After all meetings were held, the project team combined the 54 vulnerabilities identified by participant stakeholders in eight major areas of vulnerability (e.g., Fish and Wildlife Habitat Degradation). These major areas of vulnerability were then used to identify adaptation priorities for the City.

A different method for engaging participants and receiving input is the **SWOT Analysis Tool**, which was used by both the *Planning for Sea Level Rise in the Matanzas Basin* and *Planning for Coastal Change in Levy County* project teams to gather stakeholder input. A SWOT analysis is a planning technique for analyzing a planning scenario, strategy, or community vision by identifying and analyzing the associated Strengths, Weaknesses, Opportunities, and Threats. It sets up a structured process for participants to think more in depth about a particular topic.

#### **SWOT Analysis Tips**

- Tailor your SWOT analysis to the issue you are exploring. Resiliency related topics include:
  - Community visioning in response to sea level rise or related flood hazards;
  - Assessing different planning scenarios during the adaptation planning process;
  - Assessing different adaptation strategies; and
  - Assessing the adaptive capacity of your local government.
- Keep the conversation on topic, but be flexible and push participants to explore new perspectives.
- Ensure that all participants have the opportunity to contribute – e.g., pass Post-It notes or sheets of paper around for people to record their thoughts and collect at the end of the session.
- Be honest! For a SWOT analysis to be effective, the weaknesses and threats have to be adequately identified and addressed.
- If participants are struggling to contribute, prepare ahead of time and provide a few recommendations for each category to help give them ideas.
- Record input on flipcharts, or similar materials, and let participants drive the bulk of the discussion.

In the Matanzas Basin project, open house facilitators compiled information about the area’s adaptive capacity and readiness to deal with potential sea level rise related impacts from the 70 participants who attended the public workshop.<sup>30</sup> These participants represented multiple stakeholder groups and were asked to think about the relationship between potential sea level rise impacts and conservation priorities before beginning the SWOT Analysis. The planning team incorporated the input gained during the SWOT analysis into its final reports and recommendations.<sup>31</sup>

The SWOT analysis performed during the *Planning for Coastal Change in Levy County Project* focused on the communities in light of potential sea level rise related impacts. Working with workshop participants, the project team taped large flipchart sheets onto the wall for each of the four categories and wrote participant’s input onto the corresponding sheet. A facilitator guided the discussion, ensuring that the discussion stayed on track, people were not interrupted, and that all input and ideas were accepted (even if people disagreed).

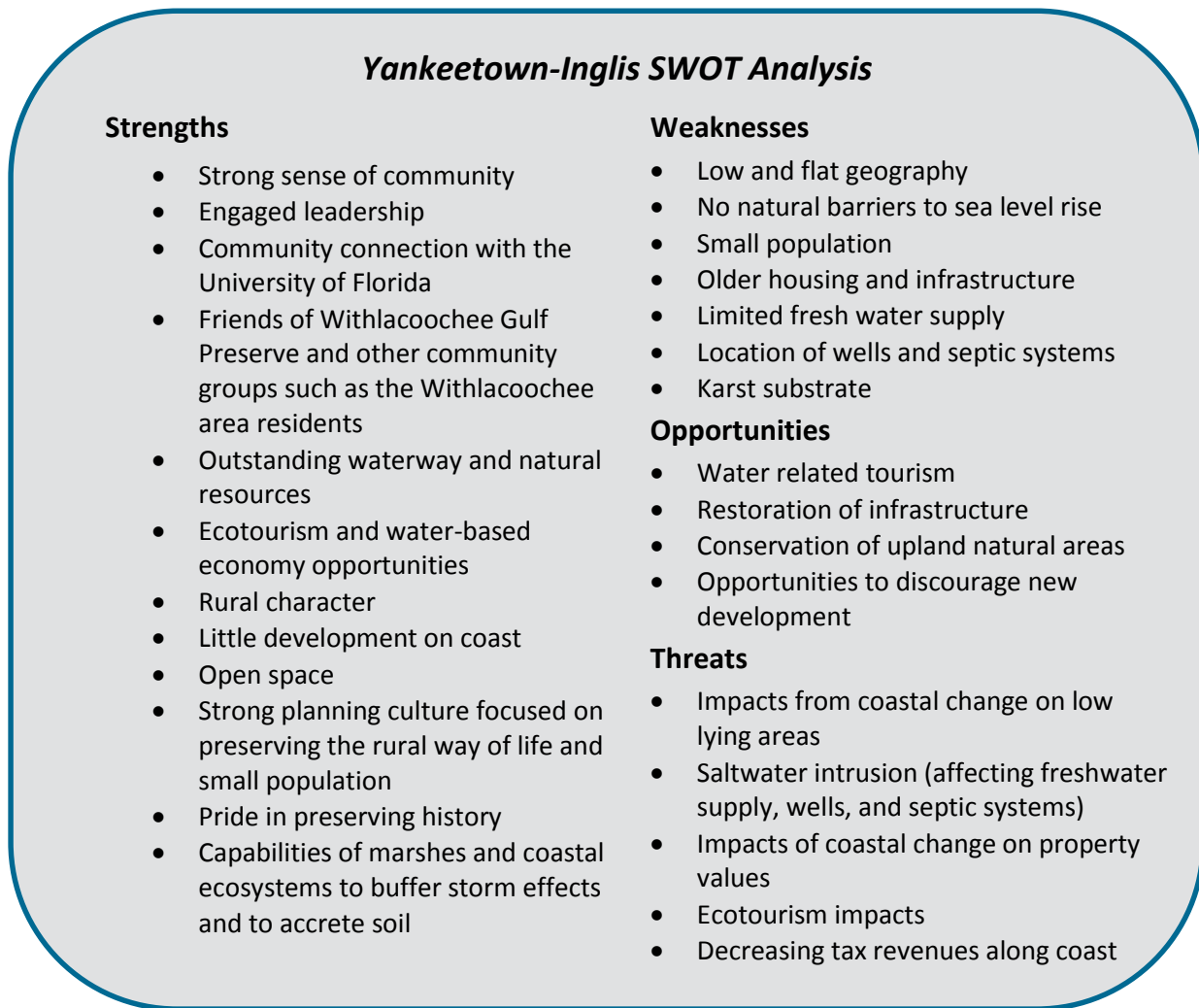


Figure 12: Yankeetown-Inglis SWOT Analysis

<sup>30</sup> Planning for Sea Level Rise in the Matanzas Basin, 2014

<sup>31</sup> Frank, 2015

These experiences show that SWOT analysis can be a powerful tool for encouraging community members to think through adaptation planning scenarios and potential solutions on a broad level. Moreover, it is useful for gathering stakeholder input about the SWOT components and making them active participants in a workshop or meeting.



Planning for Sea Level Rise in the Matanzas Basin  
**Adaptive Capacity & Readiness**  
 Results from Stakeholder Input and Workshops



### Analyzing Sea Level Rise Planning in Relationship to Regional Conservation Priorities and Adaptive Capacity

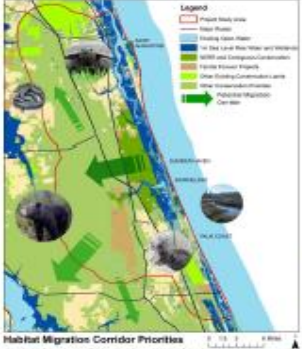
During community workshops, 70 participants from multiple stakeholder groups generated a strengths, weaknesses, opportunities, and weaknesses (SWOT) analysis with both conservation and sea level rise planning in mind for the Matanzas Basin and GTM Research Reserve. Results are summarized below:

**Weaknesses**

- Conservation areas are primarily and based
- Current conservation areas do not adequately protect all focal species
- Planned development conflicts with conservation priorities
- Current priorities don't include other impacts of climate change
- Need projects focused on planning for sea level rise in developed areas



**Regional Conservation Priorities**



Habitat Migration Corridor Priorities  
 Source: US Fish and Wildlife Service, 2014. USFWS. <http://www.fws.gov/landmanagement/>  
 USFWS. <http://www.fws.gov/landmanagement/>  
 USFWS. <http://www.fws.gov/landmanagement/>  
 USFWS. <http://www.fws.gov/landmanagement/>  
 USFWS. <http://www.fws.gov/landmanagement/>

**Opportunities**

- Coordination with timber & agriculture
- Cheaper land inland
- Phased development

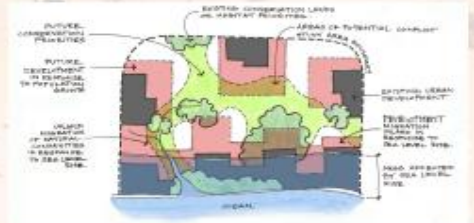


**Strengths**

- Strong inland & coastal conservation

**Threats**

- Competition with planned development & economic drivers
- Water issues
- Lack of political support



Planning for Sea Level Rise in the Matanzas Basin  
 Department of Urban and Regional Planning  
 University of Florida 2014

planningmatanzas.org

Figure 13: Planning for Sea Level Rise in the Matanzas Basin Project SWOT Analysis. Image Credit: Planning for Sea Level Rise in the Matanzas Basin Project



## Engagement Using Social Media and Other Technology

Social media can be used by practitioners to both raise awareness of adaptation projects and incorporate public input into the planning process. Rather than replace more conventional outreach strategies, a well-considered use of social media can complement conventional techniques. To encourage greater stakeholder participation in public meetings, local governments can live stream meetings and allow members of the public to provide real-time feedback. The City of Ft. Lauderdale has welcomed community members to comment on live public open house meetings through virtual channels.<sup>32</sup> The City's Climate Adaptation Open House was broadcast on local cable and residents were encouraged to participate using Twitter by tweeting questions and comments with the hashtag #ftladapt<sup>33</sup> or by submitting questions for open house panelists to the handle @FTLCityNews.<sup>34</sup>

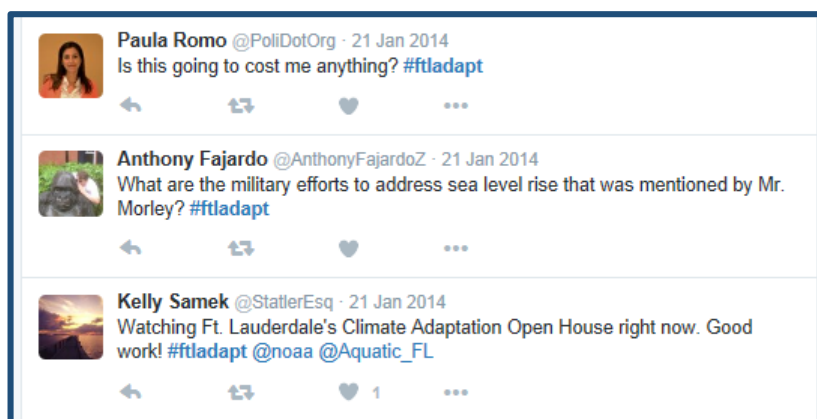


Figure 14: Example Tweets Submitted to #ftladapt.  
Image taken from Twitter

In addition to participating in outreach efforts, interested community members can serve as a valuable resource by organizing and hosting their own meetings to record citizen input. They can engage family members, friends, and colleagues who may not have participated in other outreach efforts. This peer-to-peer exchange helps facilitate mutual learning from a trusted source of information and knowledge, and such meetings can be held at times and places that are more convenient to attend. Good guidance materials and meeting instructions are critical in such community-led outreach programs. This will ensure that collected input is relevant and comparable. It will also allow technical expertise to be harnessed even when local governments are not directly involved in the input-gathering process.

For example, as part of the visioning process for its 2035 Comprehensive Plan, the City of Fort Lauderdale engaged in a large-scale community-wide outreach effort. One component of this effort was the City's **Meetings in a Box**, which allowed interested community members to host their own visioning sessions with family, friends, local organizations, or any other small community groups. The meetings were

<sup>32</sup> Vezina, 2013

<sup>33</sup> Twitter, 2016

<sup>34</sup> Twitter, 2013

organized and led from August-October 2012 by community members. A community engagement facilitator provided participants with guidance materials to ensure that meeting host had a general understanding of how meetings should be held and to make them as useful as possible for their intended purpose.

Meeting boxes were provided to citizen facilitators. Box materials included facilitator guidance and tips (supplemented by an online video posted on YouTube<sup>35</sup>), meeting design and structure, discussion rules and agreements, guidance on meeting accommodations (such as seating), and meeting materials (such as sticky notes). The facilitator guide and video provided a basic introduction to meeting facilitation with tips on how to facilitate and run the meeting.

**Meeting in a Box Facilitator Tips:**

1. Help the group have productive conversation.
2. Remain neutral.
3. Intervene over ground rules violations.
4. Enforcement is important.

Additional segments of the facilitator guide and video focused on meeting activities, such as the use of sticky notes to brainstorm desired aspects of the City's future. The guide and video also included forms for facilitators to record meeting results and submit to the City after the conclusion of the meeting. Once planning staff received the input generated during the Meetings in a Box, it was categorized and integrated into feedback generated during other outreach efforts and into the larger comprehensive plan overhaul. Ultimately, the City received 389 individual ideas from all of the Meetings in a Box; these ideas touched on subjects as diverse as the desirability of increasing parking in certain areas of the City to the desirability of sustainability in the City.<sup>36</sup>

**Case Study: Satellite Beach's Multiple Stakeholder Engagement Techniques**

From 2009-2010, the City of Satellite Beach undertook an Environmental Protection Agency-funded Climate Ready Estuaries Pilot Project aimed at identifying and assessing the City's sea level rise vulnerabilities and potential solutions, including the potential designation and implementation of Adaptation Action Areas. The project emphasized stakeholder outreach and involvement in the planning process.

Over two planning workshops in Satellite Beach, the City prompted stakeholders to consider resilience through their knowledge of community vulnerabilities and to elaborate adaptation strategies based upon respondents' priorities. The leading question of the workshops asked: "If you're thinking 50 years down

<sup>35</sup>Meeting in a Box, 2012, <https://youtu.be/ThrosdAK2Xs>

<sup>36</sup> City of Fort Lauderdale, n.d.

the road, how can we create the Satellite Beach that you want?” In so doing, attendees reflected on the recent past and the ways in which tropical storms had affected their property. Participants noted that astronomical tides and storms had flooded roads, interrupted powerline infrastructure and homes had fallen into the ocean as a result of post-storm erosion.<sup>37</sup> The project team then worked with participants to translate specific nuisances into policies that could feed into an Adaptation Action Areas comprehensive plan designation. A sample list of identified policies is shown below.

### **Workshop Participant-Identified Actionable Policies**

- Fortified and/or powered powerline infrastructure
- A new beach restoration plan
- New controls on future development

Later, after discussing community specific coastal vulnerabilities, two more public forums were held to educate the stakeholders about other opportunities for adaptation. At these meetings, a panel of experts discussed resiliency efforts currently being undertaken in other communities. Then, workshop leaders gauged participant attitudes toward the City’s vulnerabilities to sea level rise and attendant impacts and what they perceived as effective strategies for addressing these vulnerabilities. Participants voted on which of these strategies they would support, and the top five strategies were used to create a MetroQuest survey (See Figure 19). Only residents of Satellite Beach were eligible to complete the survey, which was ultimately used to help design the City’s proposed Adaptation Action Areas.

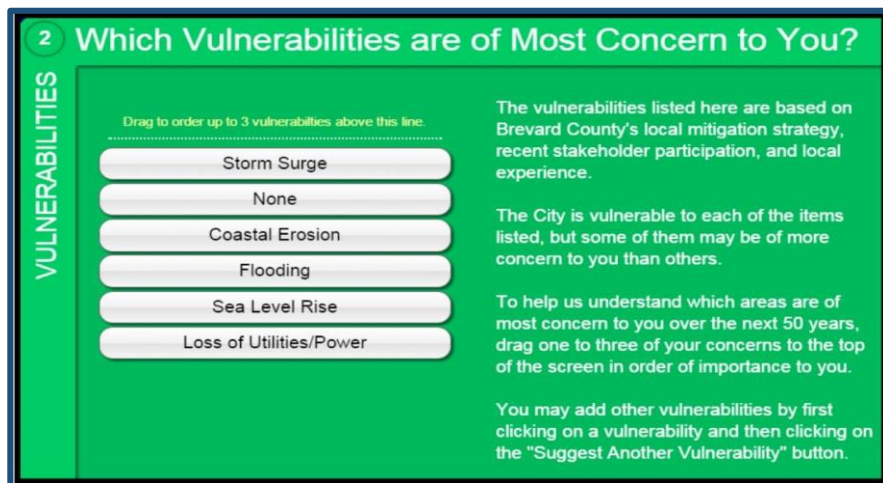


Figure 16: Screenshot of MetroQuest Survey

Satellite Beach successfully deployed a dynamic stakeholder engagement program throughout their four public meetings. The first two workshops focused on the community's needs as prescribed by the local stakeholders. The next two public meetings were geared towards educating the public about other

<sup>37</sup> From a telephone interview conducted between DEO staff and Tara McCue, 12/11/2015.

adaptation opportunities, followed by an open discussion with stakeholders about what would work best in their community. Through a robust stakeholder engagement program, Satellite Beach worked to educate participants and receive feedback based on their understanding of potential local vulnerabilities to sea level rise and possible responses.

Some of the responses included fortified and/or buried powerline infrastructure, a new beach restoration plan, and new controls on future development. The connection between incremental improvements to citizen and property safety and welfare and a more desirable future community was thus established.

## Conclusion

This document used selected case studies and examples from around Florida to illustrate how stakeholders are being engaged in adaptation projects and initiatives. There are a wide range of stakeholder engagement strategies. Engagement strategies can include stakeholder education activities, providing public input in the planning process, as well as providing support and guidance to a project or planning process. This document highlighted educational strategies, such as playing games, sharing flood photos on social media, and working with youth, as well as examples illustrating the use of steering/work groups to guide adaptation planning processes. It concluded by describing how local governments and projects have encouraged public participation, such as establishing a presence at community events, hosting workshops, and using social media and internet technology to encourage greater public participation. There are a wide variety of stakeholder engagement techniques available to local governments and this document has highlighted a handful of methods, but, ultimately, it is up for local governments to decide what works best for them and their community. With careful consideration, every community can find stakeholder engagement strategies that account for community needs, interests, and available resources and encourage broad community support and participation in adaptation planning and activities.

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## Appendix A - NOAA Potential Stakeholder List

Stakeholder Group	Scale		
	State	Regional/County	Local
<b>Public Safety</b>			
Emergency planning officials			
Floodplain management officials			
Hazard mitigation planners			
<b>Transportation</b>			
Metropolitan planning organization (MPO)			
Highway planning and maintenance officials			
Local transit authorities (public transportation, airports, etc.)			
<b>Building and Housing</b>			
Building regulation and inspection officials			
Public works, utilities, engineering officials			
Public housing authority			
Local developers and builders associations			
Local realtors associations			
Local engineering and architects associations			
<b>Community and Economic Development</b>			
Local community development and economic development officials			
Nonprofit community development organizations			
Chamber of commerce			
Major business interests (largest employers, local business associations)			
<b>Education</b>			
Local colleges and universities			
School district officials			
Nonprofit education and education advocacy organizations			
IFAS Extension agent			
<b>Planning and Environment</b>			
Local and regional planning officials			
Environmental planning and management officials			
Water and wastewater management officials			
Coastal planning and management officials			
Sustainability planning officials			
Land conservation organizations			
Nonprofit planning and environmental organizations			



<b>Recreation and Cultural Resources</b>	<b>State</b>	<b>Regional/County</b>	<b>Local</b>
Local recreation and cultural resource officials			
Nonprofit recreation groups and organizations			
Cultural resource groups (historic preservation, arts, museums)			
<b>Human and Social Services</b>			
Health care and mental health organizations			
Social service providers			
Elderly and child advocacy organizations			
Neighborhood and community associations			
Religious and charitable organizations			
<b>State Partners</b>			
Sea Grant agent			
State planning officials			
State coastal management program			
State or local floodplain manager and National Flood Insurance Program coordinator			

(Adapted from NOAA's Community Roadmap Workshops – Potential Stakeholder list  
[https://coast.noaa.gov/digitalcoast/\\_/pdf/potential-participant-checklist.pdf](https://coast.noaa.gov/digitalcoast/_/pdf/potential-participant-checklist.pdf))

## Appendix B - NOAA Common Stakeholder Participation Techniques

Method	Advantages	Limitations
Advisory group/ Task force	<ul style="list-style-type: none"> <li>Provides for interaction between agency and full spectrum of community opinion</li> <li>Creates forum for interaction between groups themselves</li> <li>Good forum for creating consensus</li> <li>Group members become knowledgeable and make informed recommendations</li> </ul>	<ul style="list-style-type: none"> <li>Selections for group members must be credible to public</li> <li>Group activity must be linked to real decisions</li> <li>Requires much staff time and support</li> <li>Public doesn't automatically accept group recommendations as representative of larger public</li> <li>Disputes over group's mandate can develop</li> </ul>
Charrette	<ul style="list-style-type: none"> <li>Solves problem or creates product within specific time frame</li> <li>Public typically has visual alternatives on which to provide input</li> <li>Repetitive exercises during course of charrette help to build consensus</li> </ul>	<ul style="list-style-type: none"> <li>Requires a great deal of planning</li> <li>Requires a highly skilled and unbiased design team</li> <li>Time commitment calls for highly motivated and interested participants</li> </ul>
Field trip	<ul style="list-style-type: none"> <li>Often allows for personal interaction and team-building</li> <li>Helps participants gain better understanding of resources and issues</li> </ul>	<ul style="list-style-type: none"> <li>Size of participant group is typically limited</li> <li>May be difficult to systematically collect participant input</li> </ul>
Focus group	<ul style="list-style-type: none"> <li>Helpful in assessing emotional and other qualitative factors</li> <li>Cheaper and yields greater depth data than surveys</li> </ul>	<ul style="list-style-type: none"> <li>No claims can be made about statistical accuracy</li> <li>Public may have false perceptions about how focus group data are used</li> <li>Cannot substitute for more visible forms of participation</li> </ul>
Hotline	<ul style="list-style-type: none"> <li>Ensures that callers reach a knowledgeable person and get good information</li> <li>Can be used for coordination purposes</li> </ul>	<ul style="list-style-type: none"> <li>Effectiveness depends on person answering phone</li> <li>Staff must be thoroughly prepared to provide information quickly</li> </ul>
Internet	<ul style="list-style-type: none"> <li>Allows widespread access to resources on issues</li> <li>Allows for participation from geographically broad audience</li> </ul>	<ul style="list-style-type: none"> <li>Not everyone has access to the Internet</li> <li>Training may be required to use some technologies</li> <li>Technology may be unreliable</li> <li>Technology is still developing</li> </ul>
Public hearing	<ul style="list-style-type: none"> <li>All participants can have their comments recorded verbatim</li> <li>Highly transparent; all participants can hear what others say</li> </ul>	<ul style="list-style-type: none"> <li>May result in speeches rather than discussion of issues</li> <li>Does not provide for interaction</li> <li>Can be manipulated</li> </ul>
Town meeting	<ul style="list-style-type: none"> <li>Greater interaction and less formality than public hearing</li> <li>Provides for much interaction</li> </ul>	<ul style="list-style-type: none"> <li>May contribute to exaggerated or fixed positions</li> <li>May not provide venue for problem solving</li> </ul>
Workshop	<ul style="list-style-type: none"> <li>Effective for problem solving or completing a task</li> <li>Highly interactive</li> <li>Useful for producing agreement</li> </ul>	<ul style="list-style-type: none"> <li>Limits number of participants that can be involved</li> <li>Those with fixed positions may resent workshop process</li> </ul>

<b>Method</b>	<b>Advantages</b>	<b>Limitations</b>
Interview	<ul style="list-style-type: none"> <li>• Can provide more in-depth information than any other method</li> <li>• People provide more information in private than they will in public</li> </ul>	<ul style="list-style-type: none"> <li>• Time-consuming</li> <li>• The number of interviews possible is usually limited by time</li> <li>• Skilled interviewers are required</li> <li>• Interview responses are not visible to the rest of the public</li> </ul>
Open House	<ul style="list-style-type: none"> <li>• Allows one-on-one interaction between stakeholders and agency</li> <li>• Can be designed so that participants can provide written comments</li> <li>• Event design is highly flexible and can be made formal or informal</li> </ul>	<ul style="list-style-type: none"> <li>• Participants may not hear the views and opinions of others</li> <li>• May be difficult to systematically collect participant input</li> <li>• Does not give stakeholder groups an audience to address</li> </ul>
Poll or survey	<ul style="list-style-type: none"> <li>• Helps to assess opinions of broader public</li> <li>• Results can be described and presented quantitatively</li> </ul>	<ul style="list-style-type: none"> <li>• Requires trained staff to conduct process</li> <li>• Faulty methods can yield misleading results</li> <li>• Only provides results for a particular moment in time—results may change in near future</li> <li>• Potentially high costs</li> </ul>
Public meeting	<ul style="list-style-type: none"> <li>• Can be less formal than a public hearing</li> <li>• Participants can have their comments recorded (usually not verbatim)</li> <li>• Typically more interactive than public hearing</li> <li>• Highly transparent; all participants can hear what others say</li> </ul>	<ul style="list-style-type: none"> <li>• May result in speeches rather than discussion of issues</li> <li>• May contribute to polarization of parties</li> <li>• Can be manipulated or controlled by organized groups</li> </ul>
Referendum	<ul style="list-style-type: none"> <li>• Widely accepted as legitimate expression of public sentiment</li> <li>• Allows for inclusion of all stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>• Voters may be swayed by emotional appeals</li> <li>• May not be legally binding in some communities until changes in law are made</li> </ul>
Adapted from NOAA's (2007) Introduction to Stakeholder Participation, which was adapted from Creighton (2005).		