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Residents' Receptivity to Sea Level Rise on Tybee Island

Infrastructure, residences, and businesses on Tybee Island are vulnerable to sea level rise and have already experienced its adverse effects in the forms of erosion and flooding. These impacts will only become more frequent and intense as the climate continues to change. Although Tybee Island is a national leader in climate adaptation planning and coastal resilience, and their 2016 Sea Level Rise Adaptation Plan sought public input to identify problems and potential solutions, there has not been a study that specifically assesses how Tybee residents perceive the risk of sea level rise or what types of adaptation strategies they prefer. This information is important for adaptation planning because it 1) facilitates the development of politically palatable policy and 2) identifies obstacles to widespread adoption of adaptation strategies. This pilot study used Rogers' Protection Motivation Theory as a theoretical framework to assess Tybee residents' perceptions of risks posed by sea level rise, and their receptivity to a variety of sea level rise adaptation strategies in the categories of protect, accommodate, or retreat.

Results showed that residents perceived a very high risk from sea level rise but did not feel confident in their ability to implement adaptation strategies. Despite this lack of confidence, many respondents had already attempted household-level flood-mitigation strategies and indicated their willingness to work together with their community to implement more. Results also indicated a belief that the government was better able to implement adaptation strategies than individuals, suggesting that the political atmosphere would be receptive to climate-related planning policies. This suggests a need for Tybee's government to engage residents with more information about sea level rise adaptations, building people's confidence in the effectiveness of the strategies and in the community's ability to undertake them. Recommendations include tying local adaptation-planning goals to FEMA's Community Rating System certification process, holding community outreach and awareness events, and following the solar model of cooperatively paying for and installing household-level adaptations.