COAST

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Authors

- Jill Gambill *(University of Georgia Marine Extension and Georgia Sea Grant)*
- Elizabeth Hunter *(Georgia Southern)*
- Ashby Worley *(The Nature Conservancy)*

Key Messages

Coastal Georgia has experienced over 10 inches of sea level rise since 1935 [1].

The Georgia Department of Natural Resources recommends that coastal communities plan for 4 to 6.3 feet of sea level rise by 2100.

Up to 178,787 people in Georgia could be at risk of sea level rise impacts by 2100, many of whom are from socially vulnerable populations [2].

If sea levels rise 3 feet by 2100 (on the low end of projections), Georgia will lose 36 square miles of salt marsh—more than the area of Brunswick, GA [3].

Overview

Coastal Georgia is home to constant change. While the Georgia coastline is just 100 miles long, the entire tidal range of rivers, creeks, barrier islands and estuaries stretches over 2,344 miles. Up to ten vertical feet of tide water feeds in and out of the system twice daily. Georgia's coastal economy pulses around these rhythms.

Climate change is causing critical shifts within coastal and marine processes, creating complex challenges for coastal communities. Sea level rise combined with heavier downpours is generating more frequent and expansive flooding, overwhelming coastal roadways, stormwater, septic and wastewater systems and other important infrastructure. Larger, more powerful hurricanes are creating coastal erosion issues, as well as inland flooding. With rising water levels, saltwater is encroaching upon sources of drinking water and natural habitats.

Coastal Georgia has natural characteristics that can aid the state in combating these threats. Georgia's wetlands absorb carbon from the atmosphere, helping to mitigate climate change. Georgia's saltmarshes can sequester 88-340 billion grams of carbon per year, equivalent to 10-37 million gallons of gasoline [4]. The majority of Georgia's 12 barrier islands are protected from development, with intact ecosystems that help insulate the mainland from intensifying hurricanes and tropical storms [5]. While the population of coastal Georgia is expected to grow significantly in the coming decades, Georgia currently has fewer people and lower cumulative property values at risk of chronic flooding due to sea level rise than other states in the Southeast [6]. However, parts of the Georgia coast face projections of sea level rise that are 30 percent higher than the global average [7].

Policymakers in coastal Georgia face difficult decisions, as they strive to protect natural resources, public safety and the economic stability of their communities. However, with smart land use planning, communities can guide development away from vulnerable areas, implement sustainable practices and conserve the dynamic natural protections of coastal Georgia.

Resources

Rising Oceans, Flooded Towns: How Georgia Coastline Communities are Readying to Recover Despite a Changing Climate

Climate change is posing a significant threat to the coastal counties of Georgia. The Georgia Department of Natural Resources and Hagerty Consulting have recognised this threat and are facilitating a nine-year project aimed at developing a disaster recovery and redevelopment plan for the state's coastal communities.

Camden County "Rise Ready" Community Planning Tool

The Coastal Resilience decision-support tool provides communities access to the best available science and local data on coastal hazards to visualize their risks and examine where nature can increase resilience and reduce risk through conservation and restoration activities.

Smart Sea Level Sensor Project

Chatham Emergency Management Agency officials, City of Savannah officials and Georgia Tech scientists and engineers are working together to install a network of internet-enabled sea level sensors across Chatham County. The real-time data on coastal flooding will be used for emergency planning and response.

Roads to Nowhere in Four States: State and Local Governments in the Atlantic Southeast Facing Sea-Level Rise

Coastal communities are becoming increasingly aware of the risks to local infrastructure from more frequent and severe flooding, more extreme storm surges, and sea-level rise. As local governments are responsible for the lion's share of land use decision-making and infrastructure development in coastal communities in the United States, local governments in the coastal zone will play a key role in adapting to the changing climate.

Tybee Island Sea Level Rise Adaptation Plan

The first municipal sea level rise adaptation plan adopted in Georgia, this nationally award-winning plan outlines risks to infrastructure and opportunities to decrease impacts from sea level rise.

Georgia Coastal Hazards Portal

Created by the Skidaway Institute of Oceanography and the Savannah Area Geographic Information System (SAGIS), the portal provides information on historic hurricane tracks, storm surge, erosion and sea level rise in coastal Georgia.

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