

Figure 1: Over the next 25 years, population gains of some 18 million people are projected to occur in the coastal states of Florida, California, Texas, and Washington (NPA, 1999).

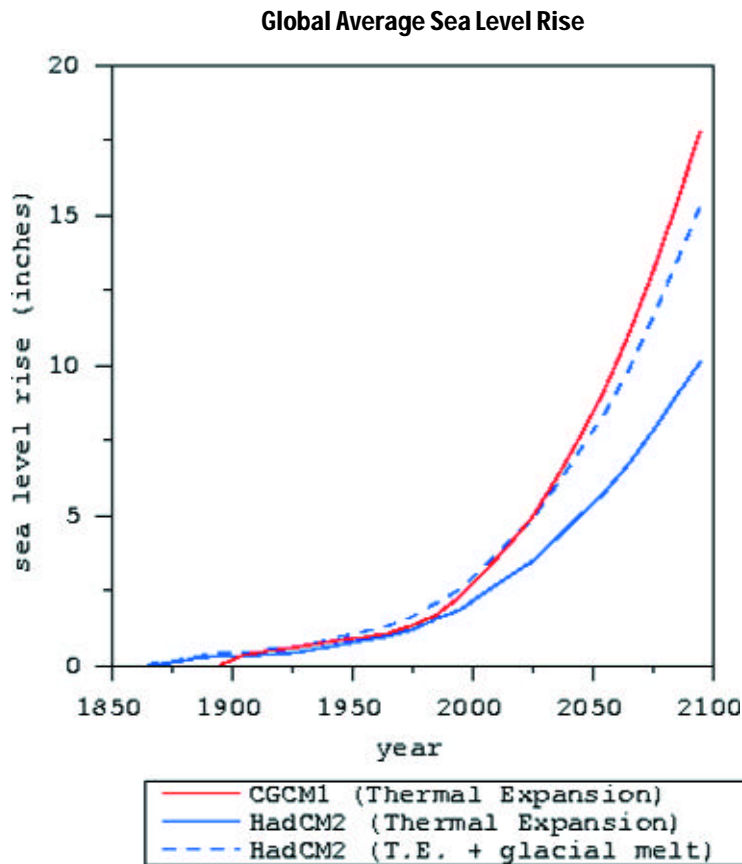


Figure 2 : Projected rise in global average sea level based on the Hadley and Canadian General Circulation Model (GCM) scenarios.

Spatial Distribution Around North America in Sea Level Rise

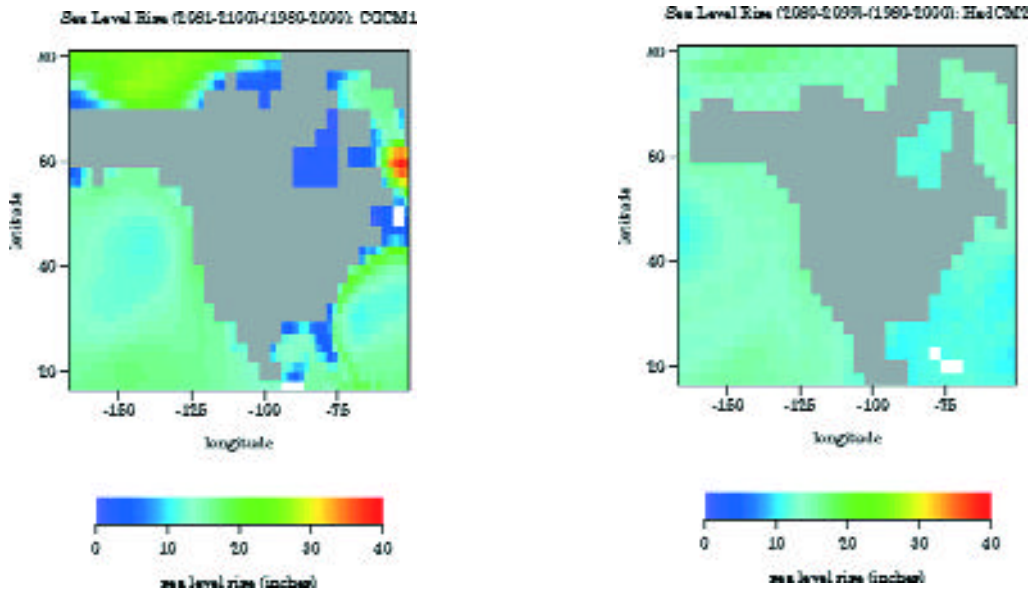


Figure 3 : Projections of the regional pattern of global sea level rise by the year 2100 based on the Canadian (left) and Hadley (right) scenarios. These estimates do not include contributions to sea-level change due to vertical movement of coastal lands.

Hurricanes and their Impacts in the 20th Century (1900-1995)

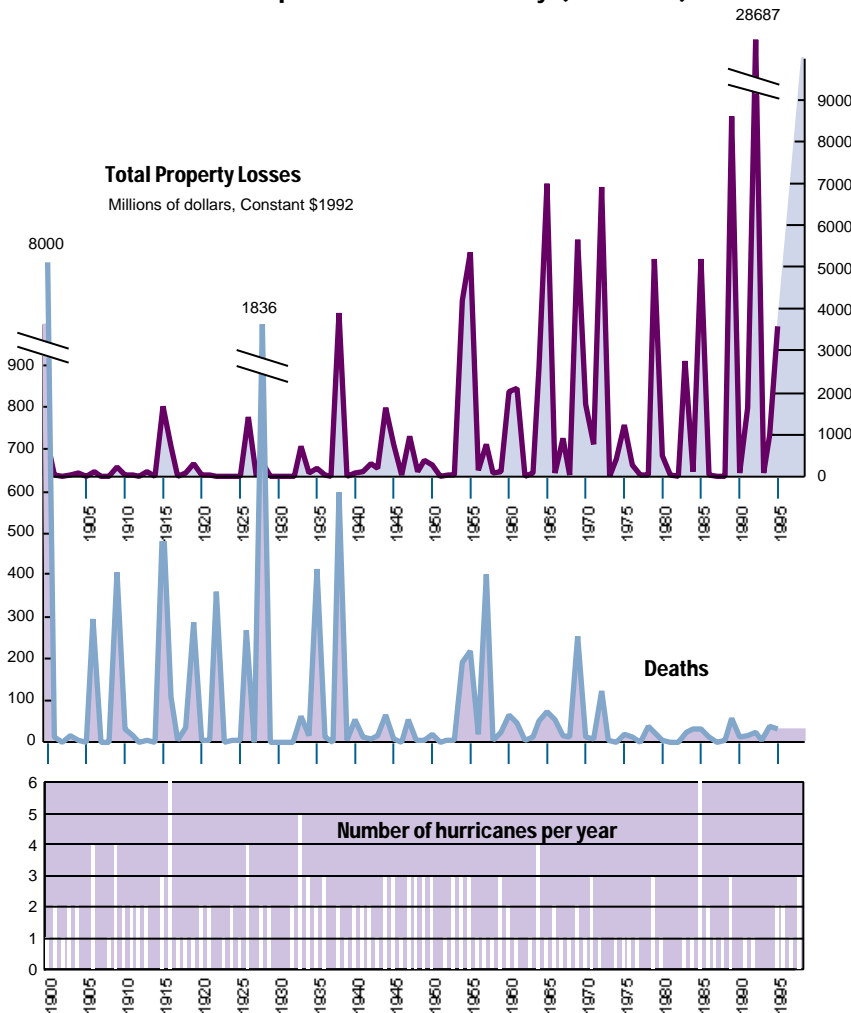


Figure 4: Loss of life and property from hurricanes making landfall in the continental U.S. over the past 20th century
Source: National Hurricane Center: NOAA.

Ocean Heat Content in the 0-3000 m Layer

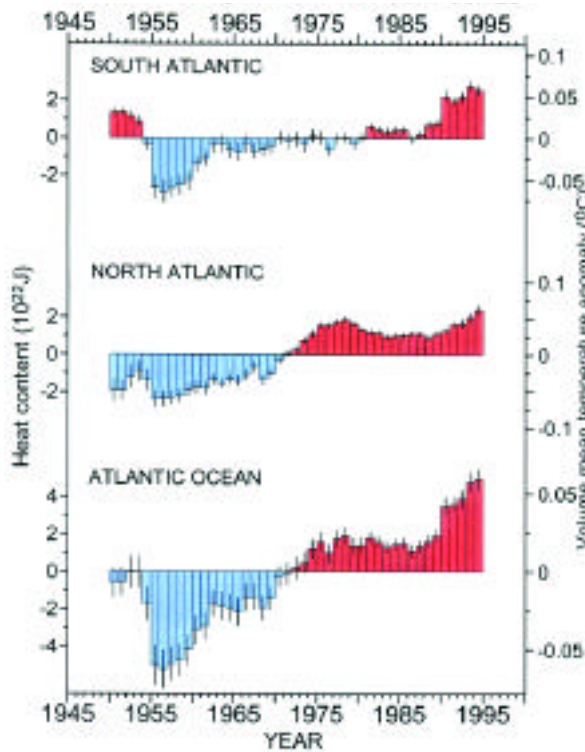


Figure 5: A comprehensive analysis of over 5 million temperature profiles by Levitus, et al. (2000) reveals a pattern of warming in both the surface and the deep ocean over the last 40 years. The largest warming has occurred in the upper 300 meters (984 feet), which have warmed by an average of 0.31°C (0.56°F), with additional warming as deep as 3000 meters (9843 feet).

The Global Ocean Conveyor Belt

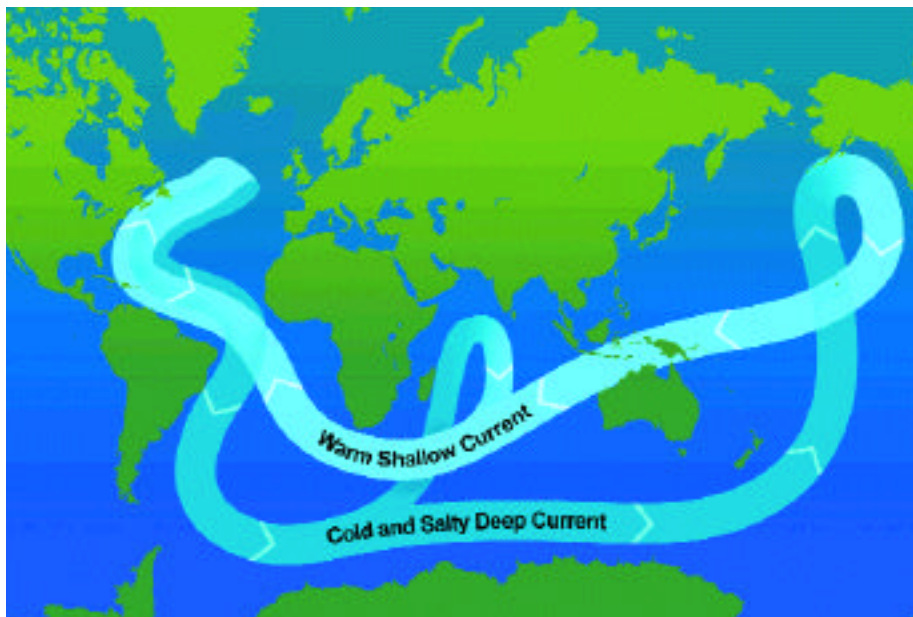


Figure 6: The ocean plays a major role in the distribution of the planet's heat through deep sea circulation. This simplified illustration shows this "conveyor belt" circulation which is driven by differences in heat and salinity. Records of past climate suggest that there is some chance that this circulation could be altered by the changes projected in many climate models, with impacts to climate throughout lands bordering the North Atlantic. (Modified from Broecker, 1991).

Classification of Annual Shoreline Change Around the United States

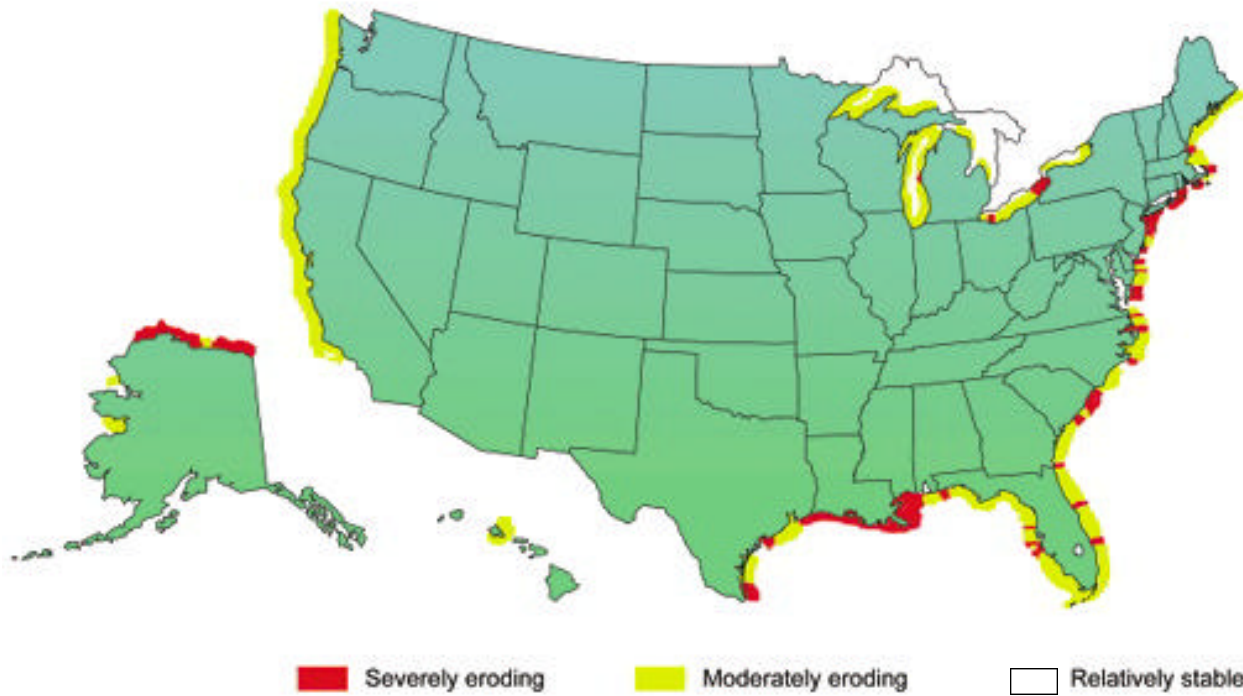


Figure 7: A general classification scheme of shoreline erosion rates throughout the US. (modified from Dolan et al., 1985).

Processes Affecting Wetland Migration

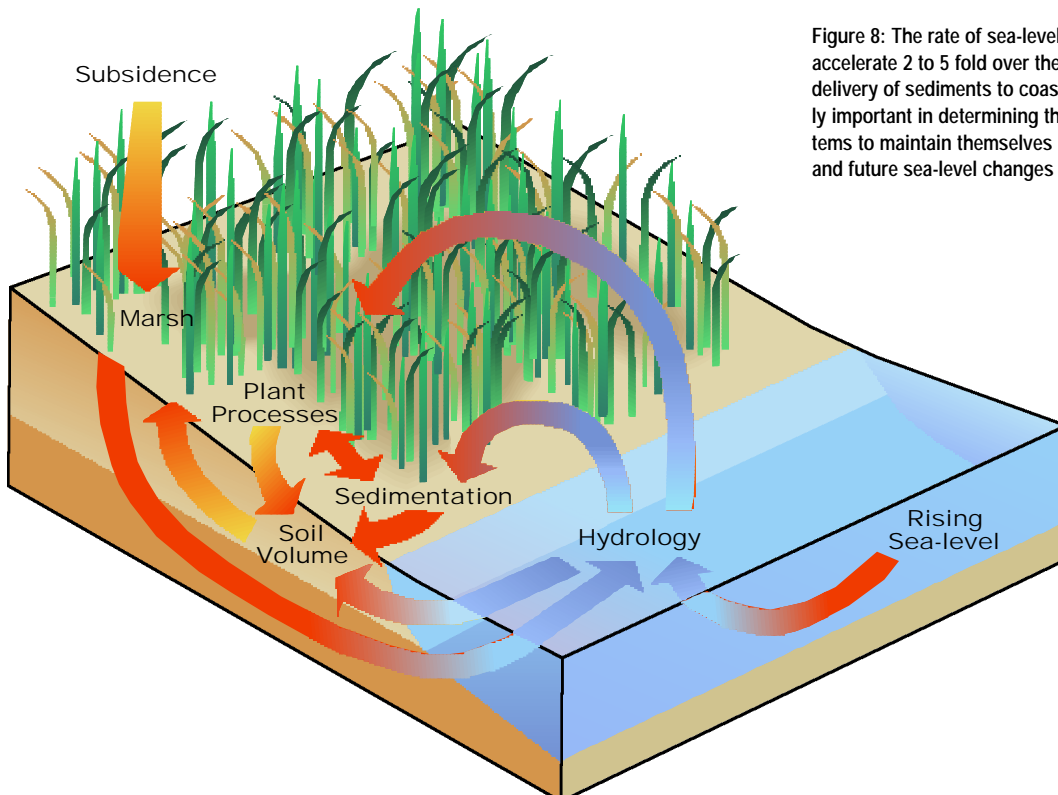


Figure 8: The rate of sea-level rise is projected to accelerate 2 to 5 fold over the next 100 years. The delivery of sediments to coastal wetlands is extremely important in determining the potential of these systems to maintain themselves in the face of current and future sea-level changes (based on Reed, 1995).

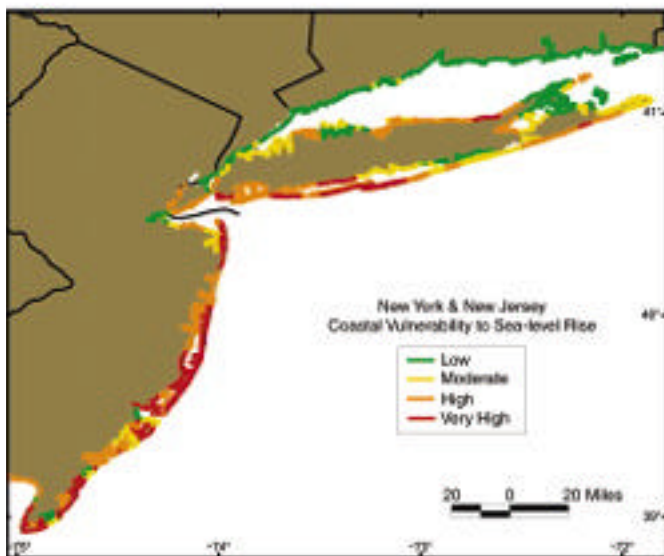
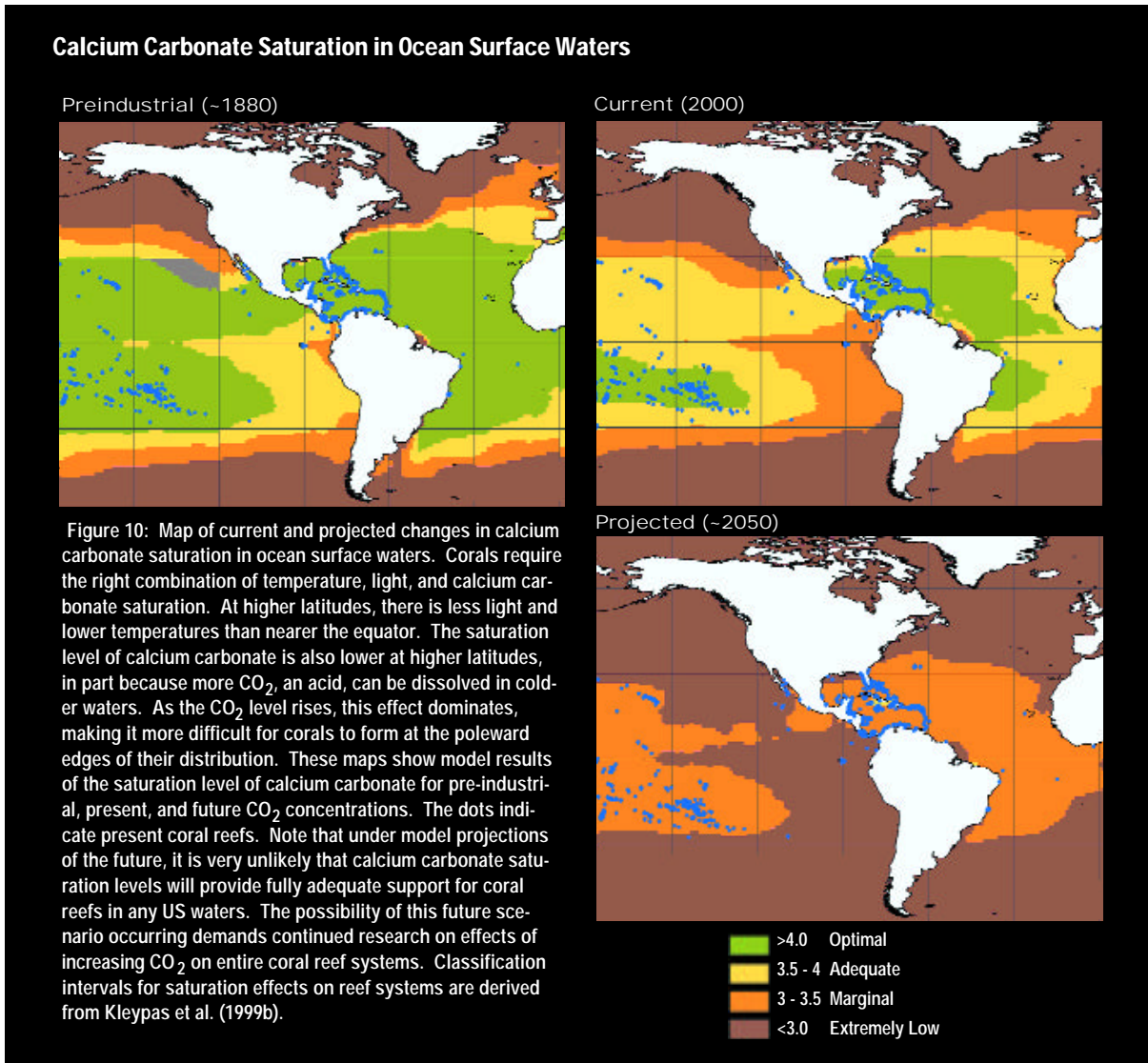


Figure 12: These preliminary results illustrate the relative vulnerability to sea-level rise along the New York and New Jersey coastline as assessed by ongoing USGS research. Note that the vulnerability mapped here is likely to change as methodologies in this pilot program are critically evaluated and improved (Source: USGS).