The Caribbean is an area cited as being at risk from rising sea level by the Intergovernmental Panel on Climate Change (IPCC). Local regions in the Caribbean experience different rates of sea level change according to tides, global ocean circulation (e.g. El Nino Southern Oscillation and North Atlantic Oscillation), steric effects (due to temperature and salinity), tectonic setting and the contribution of Glacial Isostatic Adjustment (GIA) due to their location relative to the late Pleistocene ice complex in North America. To quantitatively assess sea level change, we compile prehistoric sea level indicators (e.g. coral and mangrove deposits) and recent sea level observations (tide gauge and satellite altimetry) across the Caribbean region. The IPCC estimate of Caribbean sea level rise for the 20th century (1mm/yr) is too broad for such a complex region. For example, localities such as Cartegena (Colombia) and Magueyes Island (Puerto Rico) have present rates of 5.78 and 1.29 mm/yr respectively. We calculate rates of change of sea level for small areas of the Caribbean at time scales of 10, 100, 1000 and 10000 years. These are compared to global rates over the same time periods. Observed rates of change vary geographically for each period and between periods. A comparison of rates at different time scales will help to disentangle the effects of different mechanisms. By combining our results with details of local geography and infrastructure we will aid subsequent research and development strategies for nations in the Caribbean.