



SEA LEVEL RISE

Fact Sheet



Sea level rise refers to the gradual increase in the average level of the world's oceans over time. This is mainly caused by the melting of polar ice caps and glaciers due to global warming, along with the expansion of seawater as it warms up.

Why Does Sea Level Rise Matter?

Coastal Flooding:

Higher sea levels mean more frequent and severe coastal flooding and storm surge, putting communities, homes and infrastructure at risk.



Erosion

Rising seas lead to increased erosion of beaches and shorelines, threatening habitats and coastal ecosystems.



Displacement

Sea level rise can force people living in coastal areas to move inland or to higher ground leading to population displacement or migration.

Saltwater Intrusion

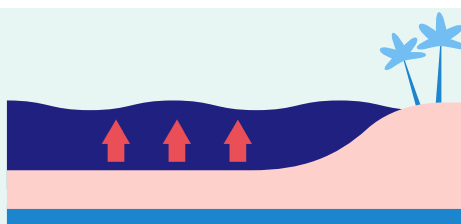
As the sea levels rise, saltwater can infiltrate freshwater lenses making them saltier than normal. They may become so salty that the water is no longer fit to drink by humans and animals, and may cause plants to die.

Habitat Loss

Coastal habitats such as marshes, mangroves, and sea grass beds are vulnerable to sea level rise, leading to habitat loss for various species.

Threatened Species

Sea level rise puts many species at risk including sea turtles, birds and marine mammals who rely on coastal habitats for breeding and feeding.



Historical records from tide gauges near George Town show that between 1972 and 1996, the sea level in the Caribbean was rising at a rate of about 1.76 millimeters per year.

Looking ahead, scientists predict that **by the 2050s**, the sea level could be **0.29 to 0.32 meters higher** compared to the years between 1986 and 2005. These changes matter because rising sea levels can lead to flooding and erosion, especially for communities living near the coast. Understanding these trends helps us prepare and take action to protect ourselves and our surroundings from the impacts of sea level rise.

What's raising the level of the ocean?

THERMAL EXPANSION

As the Earth's atmosphere warms due to climate change, the oceans absorb much of this heat. Warmer water expands, causing the volume of seawater to increase. This thermal expansion is a significant contributor to rising sea levels.

MELTING ICE SHEETS & GLACIERS

The warming climate also accelerates the melting of ice sheets and glaciers, primarily in Greenland and Antarctica. As these massive ice formations melt, they release large volumes of water into the oceans, further raising sea levels.

MELTING ARCTIC SEA ICE

Arctic sea ice, which floats on the ocean's surface, does not directly contribute to sea level rise when it melts. However, its loss accelerates warming by reducing the Earth's albedo, or reflectivity, which increases the absorption of solar radiation by the ocean, leading to further melting of ice sheets and glaciers.

CHANGES IN LAND USE

Human activities such as groundwater extraction, deforestation, and land subsidence can also impact sea levels regionally. For example, excessive groundwater extraction can lead to land subsidence, causing coastal areas to sink and experience relative sea level rise.

HOW DO YOU THINK THIS IS GOING TO EFFECT CAYMAN?

[illegible]