

# Climate Change

Warmer temperature and sea level rise affect island communities

## What is Climate Change?

- Long term changes in the weather, over the course of decades, affecting temperature, rainfall, cloudiness, etc.

## What causes Climate Change?

- Natural patterns and cycles.
- Human activities that add greenhouse gases (most importantly, **carbon dioxide**) to the atmosphere.
- The increase in Earth's average temperature due to human activities is called **global warming**.



## Human-induced Climate Change

According to the Intergovernmental Panel on Climate Change (IPCC), the increase in globally averaged temperatures during recent decades has largely been driven by human activities. Burning coal, natural gas, and oil; and clear cutting forests release carbon dioxide, a greenhouse gas, into the atmosphere.

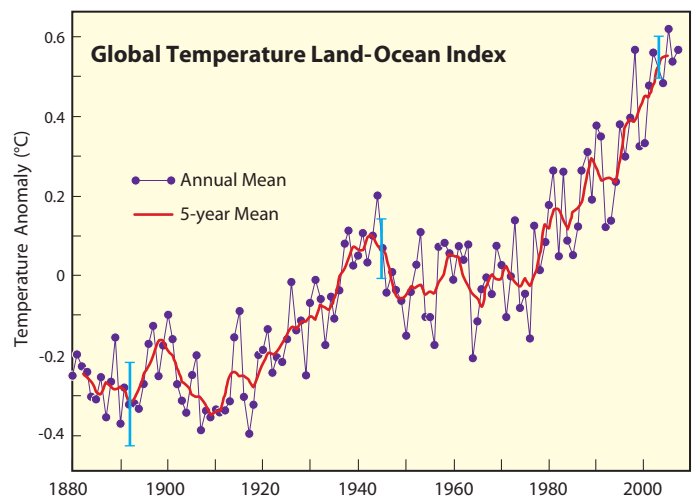
## What does the future hold?

- Computer models of the Earth's climate system are used to make predications.
- The best estimates suggest that the Earth will warm 3.2–7.2 °F (1.8–4.0 °C) by the end of this century (IPCC, 2007).

Look for other PacIOOS & Sea Grant factsheets to find out how you can prepare for climate change!

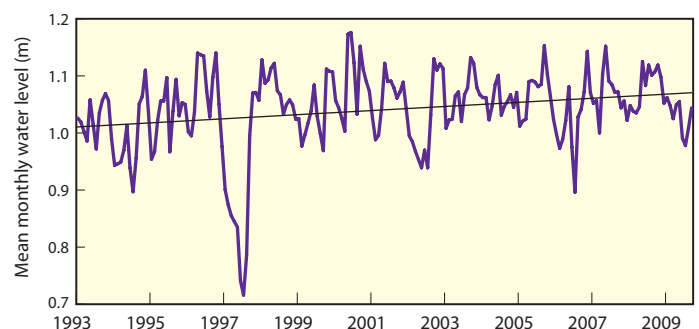
## How does Climate Change affect Pacific Islands?

- Sea level rise.
- Coastal flooding.
- Saltwater intrusion into groundwater.
- Coastal erosion.
- More frequent bad weather events.
- Potential drought as rainfall patterns change.



## Temperature Record

In this graph, you see that globally averaged temperature has increased since the beginning of this record (1880).



## Sea Level Rise

Data from the Uliga dock tide gauge show that sea level in the Marshall Islands has been rising over the last 17 years.

For more information, visit [www.pacioos.org](http://www.pacioos.org)

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Pacific Islands Ocean Observing System