

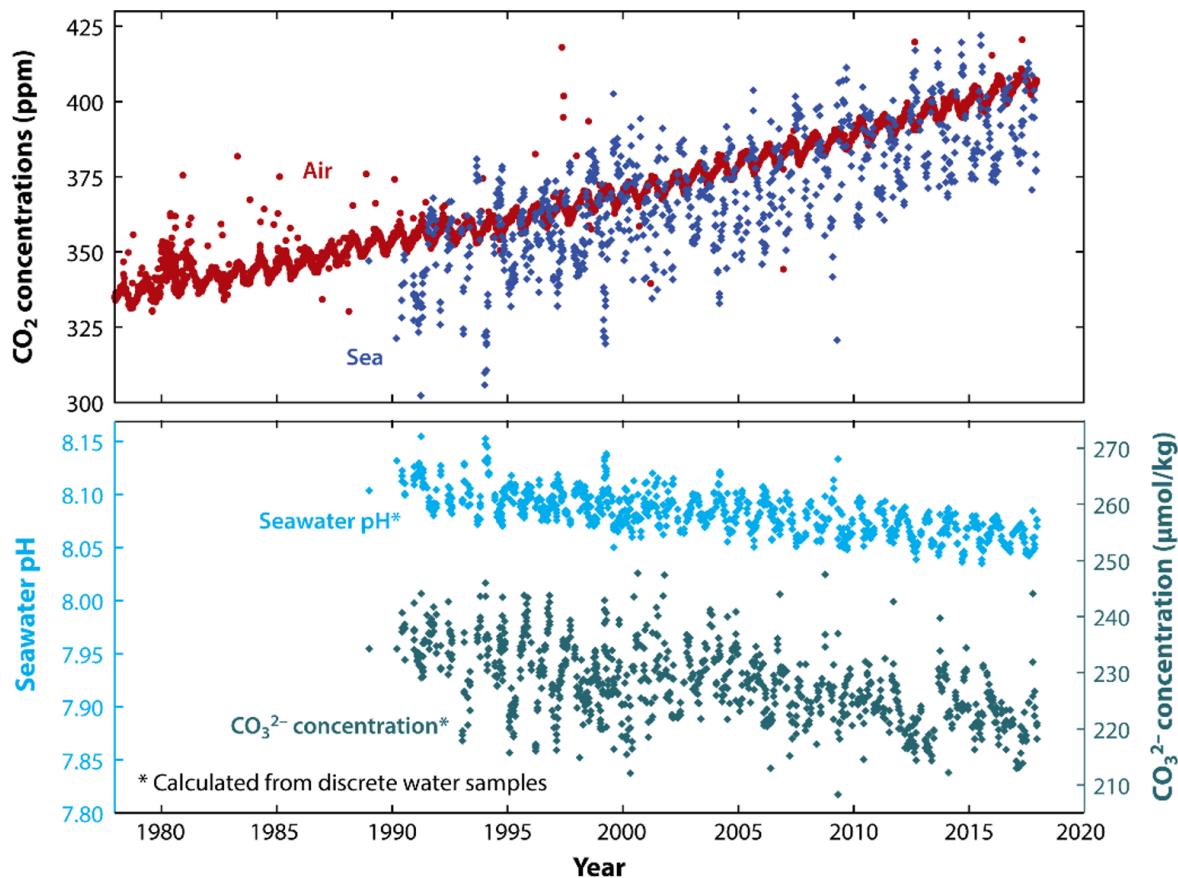
# **Marine impacts of climate change**

## **Overview**

In this presentation we will consider the impact of climate change on the marine environment.  
In particular, we will discuss

- Sea surface temperature rise
- Sea level rise
- Acidification
- Local changes in salinity
- Geopolitical issues
- Change in frequency and severity of extreme events

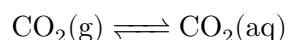
## Ocean Acidification



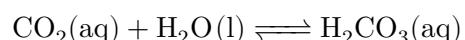
Doney SC, et al. 2020.  
Annu. Rev. Environ. Resour. 45:83–112

#<sup>#</sup> CO<sub>2</sub> Absorption in Oceans

### 1. Dissolution of CO<sub>2</sub> in seawater:



### 2. Formation of carbonic acid:



### 3. First dissociation:



4. Second dissociation:

