

# Climate Change and Extreme Weather

Anthony J. Broccoli Co-Director, Rutgers Climate Institute Department of Environmental Sciences Rutgers University

#### **Temperature extremes**

• Frequency and intensity of heat waves will increase in a warming climate.

## **Hydrologic extremes**

• Climate models project that heavy rains will become heavier and dry spells will lengthen in a warming climate.

### Severe thunderstorms and tornadoes

 Climate models cannot directly simulate these extreme weather events, but they do project an increase in environmental conditions favorable for their formation. (More research needed.)





### Wildfires

 Higher temperatures lead to more favorable conditions for wildfires to occur, particularly in seasonally dry climates such as those in the western United States.

### Hurricanes

 Hurricanes are expected to become stronger because of warming oceans, but not necessarily more frequent. This is an area of very active research.

#### **Coastal flooding**

• Sea level rise will raise the baseline for coastal flooding events, which will make such events more frequent in the future.

