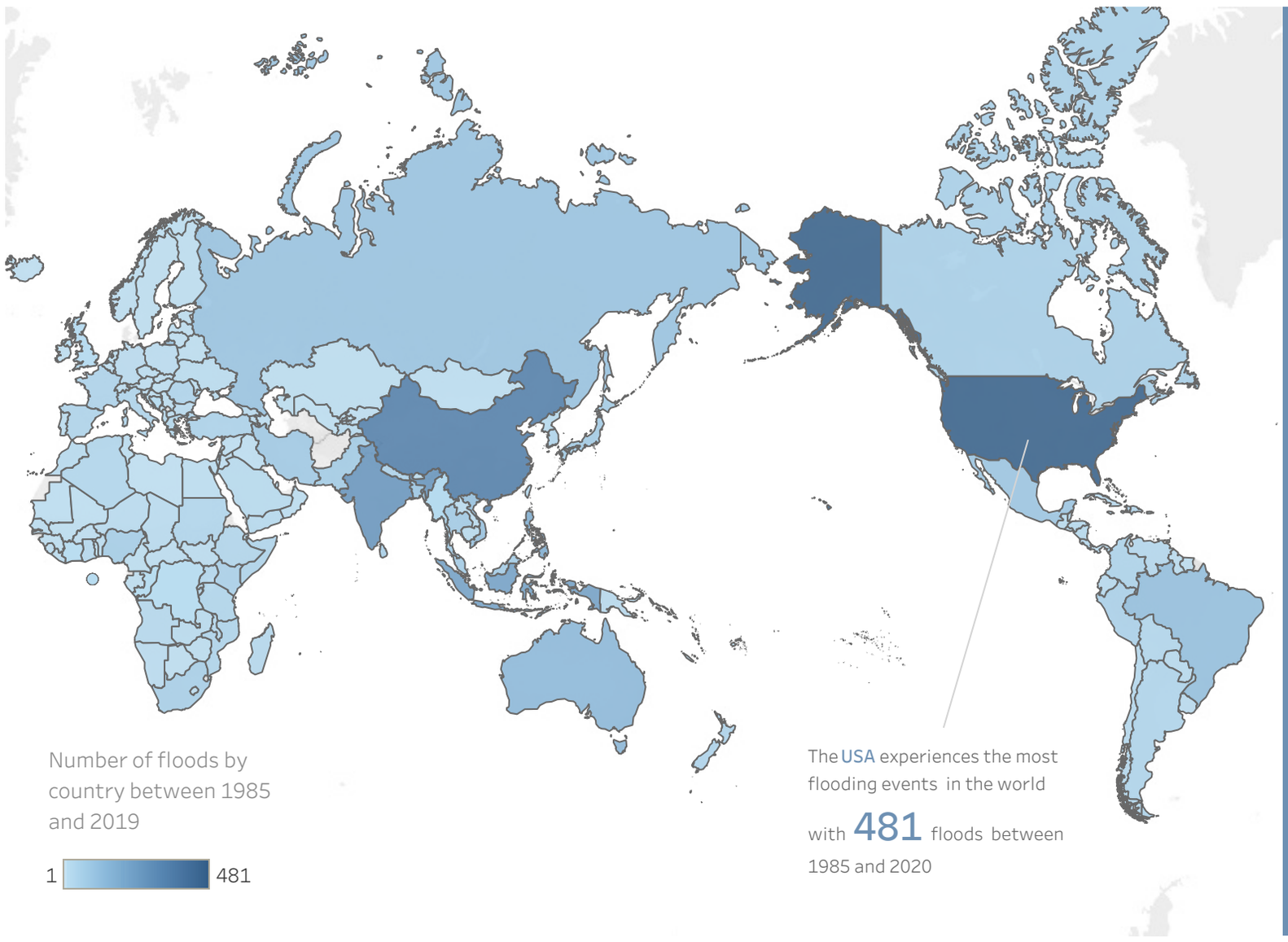
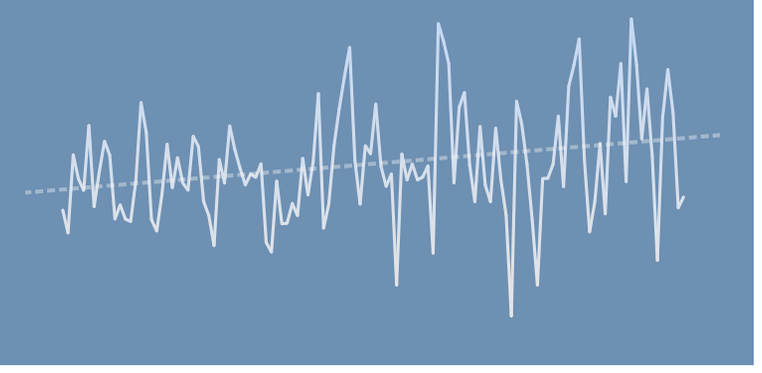
Floods

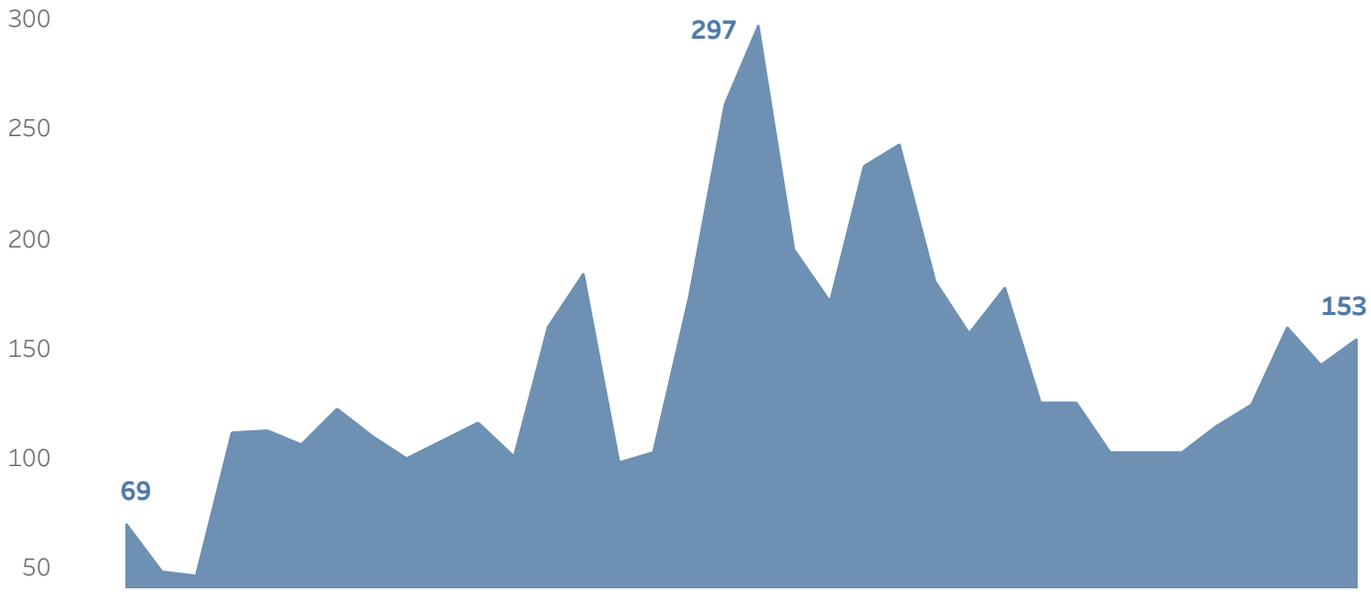
As climate change warms up the atmosphere, the air can hold 7% more water vapour for every one-degree Celsius rise in temperature. When this air rapidly cools, water vapour turns into droplets which join together to form heavy rainfall resulting in increasing frequency and severity of global flooding events.



Precipitation worldwide from 1985 to 2020
Based on difference in inches compared to 20th century average



Flooding event frequency worldwide from 1985 to 2020



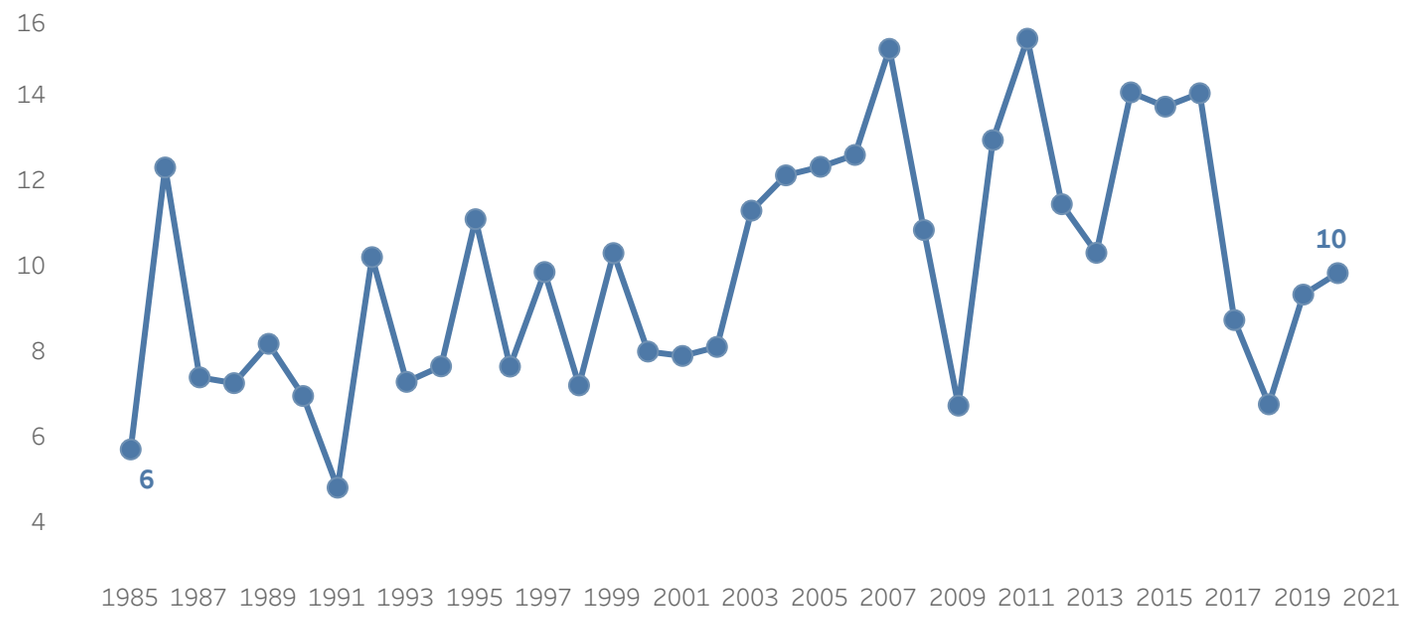
Contrary to the drying of soils in some regions due to elevated temperatures resulting in droughts, the evaporated water in other areas causes heavier rainfall and results in flooding.

4 out of the 5 years with the most flooding events globally have occurred after the year 2000.

In addition to a rise in the frequency of global flooding events, the average length of each flood is also increasing, reaching a high of an average duration of 15.3 days in 2011.

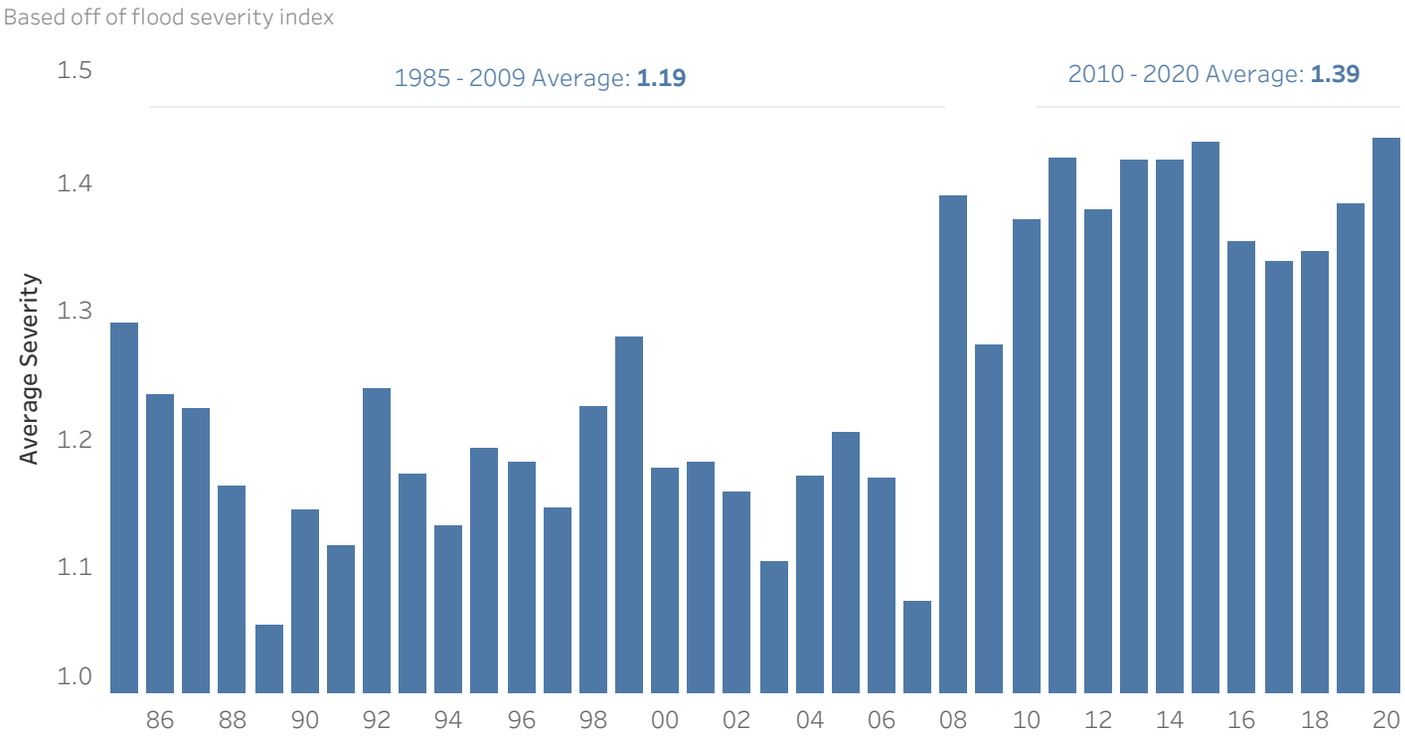
Length of flooding events worldwide from 1985 to 2020

Measured in days



Severity of flooding events worldwide from 1985 to 2020

Based off of flood severity index



The Severity Index is used to evaluate the intensity of individual flooding events. It rates each event based on the estimated time interval between similar events, with scores of 1 (less than 10 years), 1.5 (between 10 and 100 years), or 2 (at least 100 years).

Since 2010, the average severity of floods have been higher annually than all years prior.

Sources: (1), EPA's Climate Change Indicators in the United States: www.epa.gov/climate-indicators, (2), floodobservatory.colorado.edu/Archives/index.html