For each of the cards

1. As a group, look at each card.
2. Talk about what you think it represents **prior** to looking at the questions for this station.
3. Feel free to ask each other questions about parts of the graph that you don't understand or point out parts of the graph that you think are important. It is helpful to start by identifying what each axis represents.
4. After looking at the graph, read the questions for this station that appear below. Discuss each question as a group.
5. After you are finished discussing the questions, individually answer the questions for each station

Cards

1. Temperature
2. Temperature Predictions
3. Sea Level Rise
4. Sea Level Rise Predictions
5. Rain fall Predictions
6. Extreme Temperatures
7. Melting Glacier
8. Extreme Weather Events

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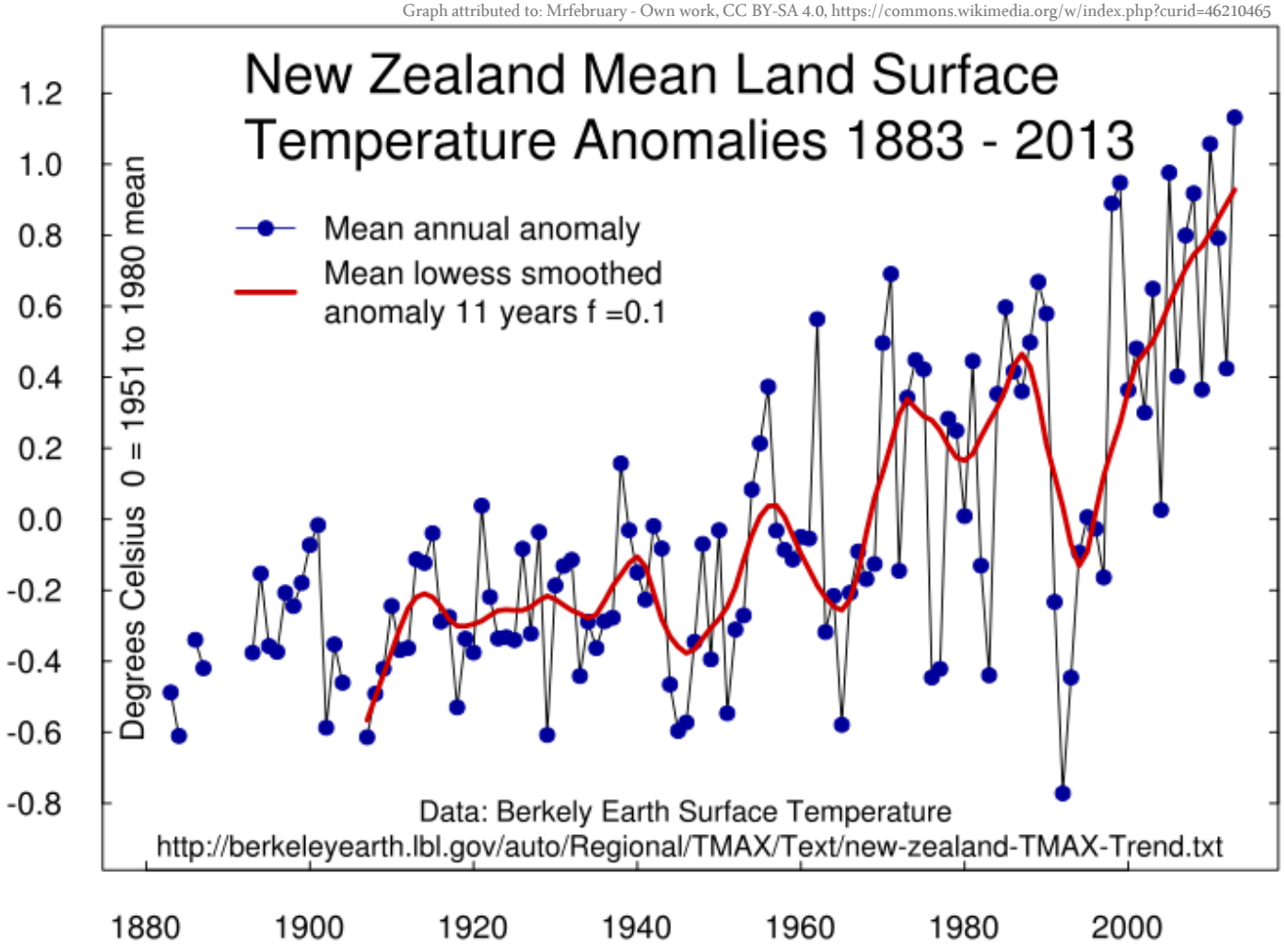
adapted from https://pangea.stanford.edu/programs/outreach/climatechange/curriculum

Card 1. Temperature

Use the following information to make an **evidence supported** claim



Card 1

1. What is the difference between the blue dots and the red line?

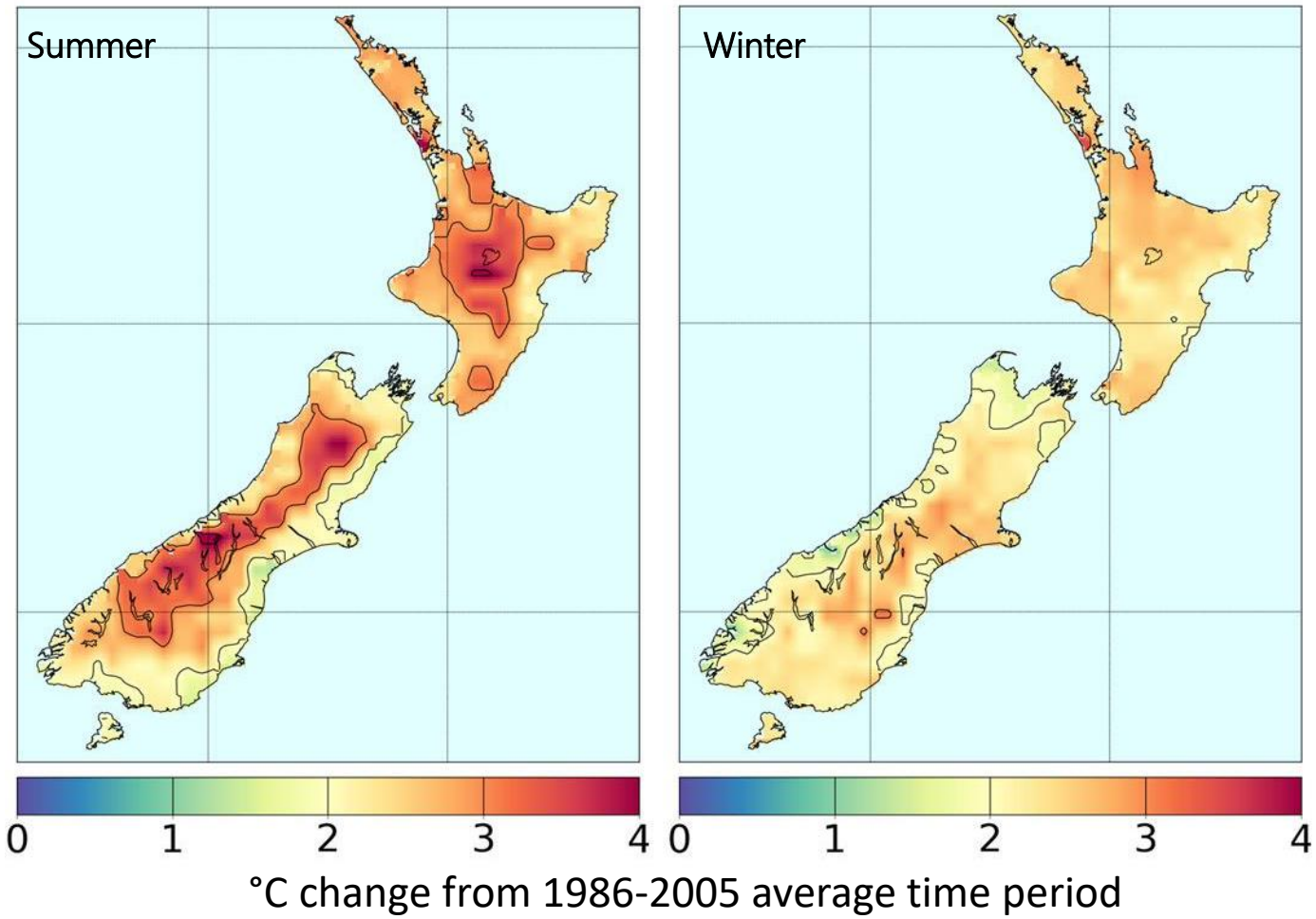
2. How much has temperature, in degrees Celsius, changed since 1880?

3. Now make an **evidence supported** claim about mean surface temperature in New Zealand.

Card 2. Temperature predictions

Use the following information to make an **evidence supported** claim

Predicted increase in average temperature (°C) by 2090, relative to 1986-2005. (for highest CO_2 emissions prediction)



Graph attributed to: https://www.niwa.co.nz/our-science/climate/information-and-resources/clivar/scenarios

Card 2

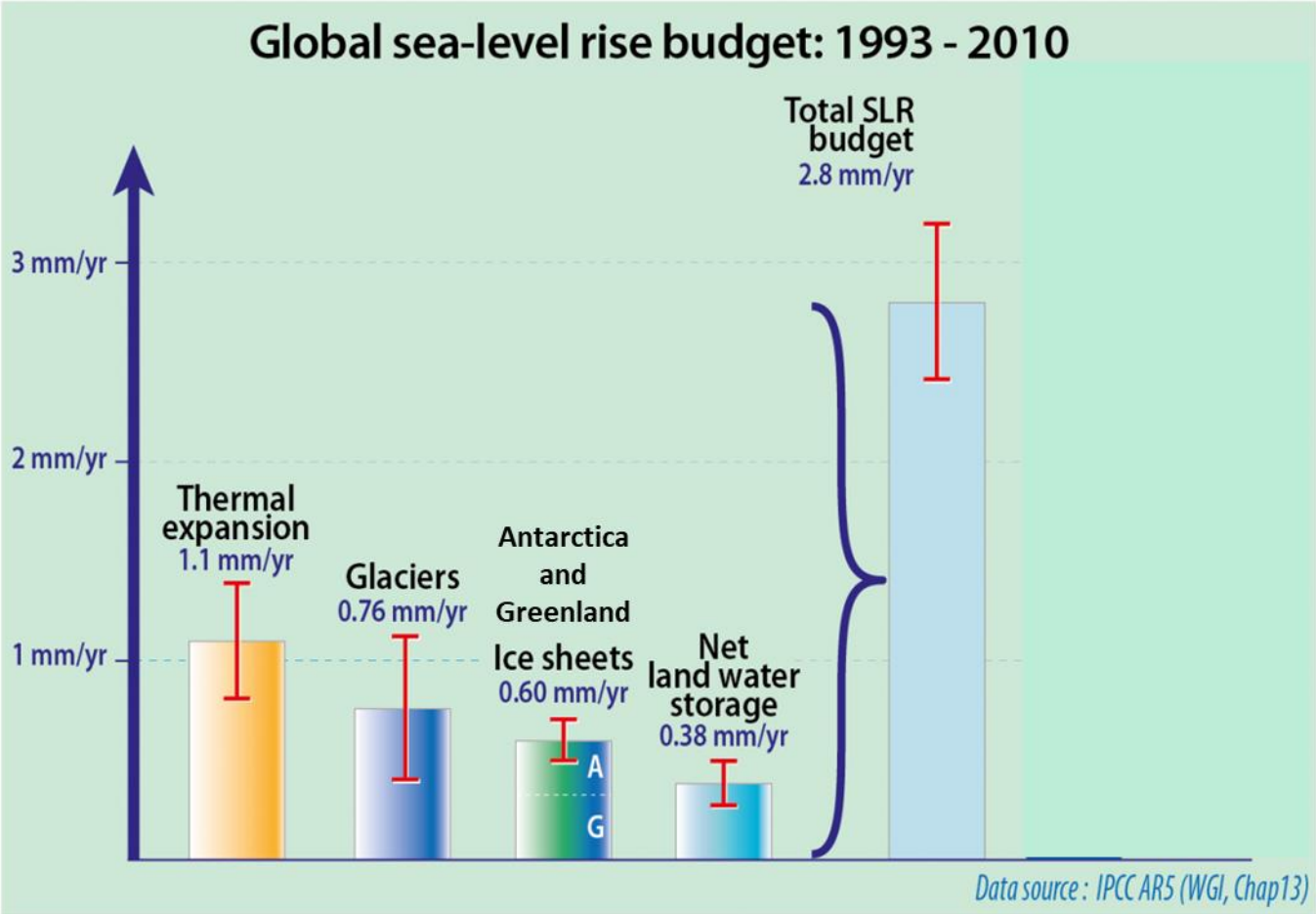
1. Which season will experience the most impact from the temperature increase, created from climate change?

2. Why do you think some areas of New Zealand experience a difference in temperature increase??

3. Now make an **evidence supported** claim about the 2090 **predicted** mean surface temperature in New Zealand.

Card 3. Sea Level Rise

Use the following information to make an **evidence supported** claim



Sourced from: https://www.niwa.co.nz/natural-hazards/hazards/sea-levels-and-sea-level-rise

Card 3

1. What are the two main processes that are contributing to sea level rise?

2. What 'melting' does not contribute to sea level rise, and why?

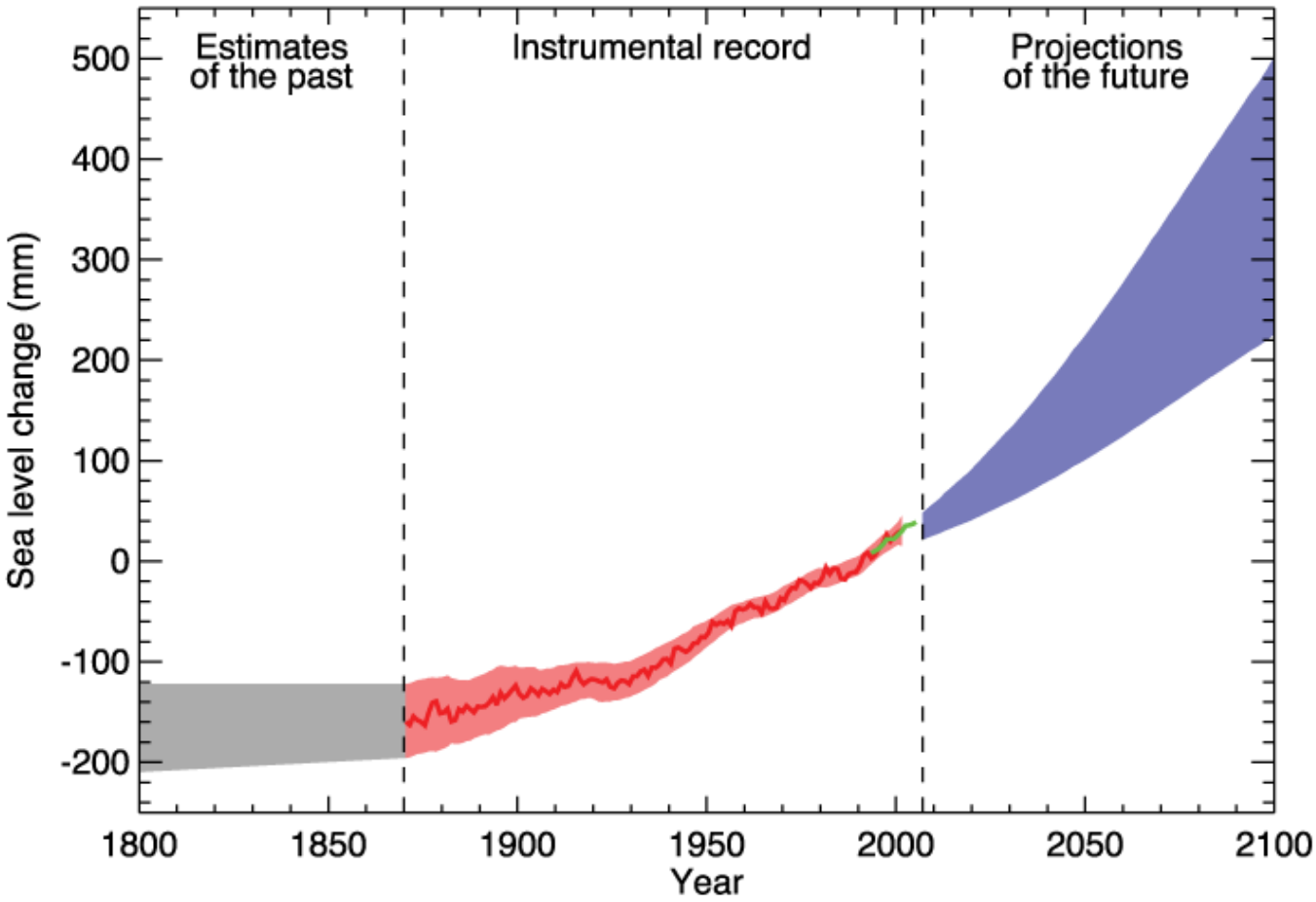
3. What is the total sea level rise from

4. Now make an **evidence supported** claim about the 1993 – 2010 global sea level rise.

Card 4. Sea Level Rise Predictions

Use the following information to make an **evidence supported** claim

Sourced from: http://thebritishgeographer.weebly.com/sea-level-change.html



Card 4

1. Why does the most recent instrumental recording have the narrowest range of sea level rise?

2. Why does the range for the projections of the future sea level rise get larger as time goes by?

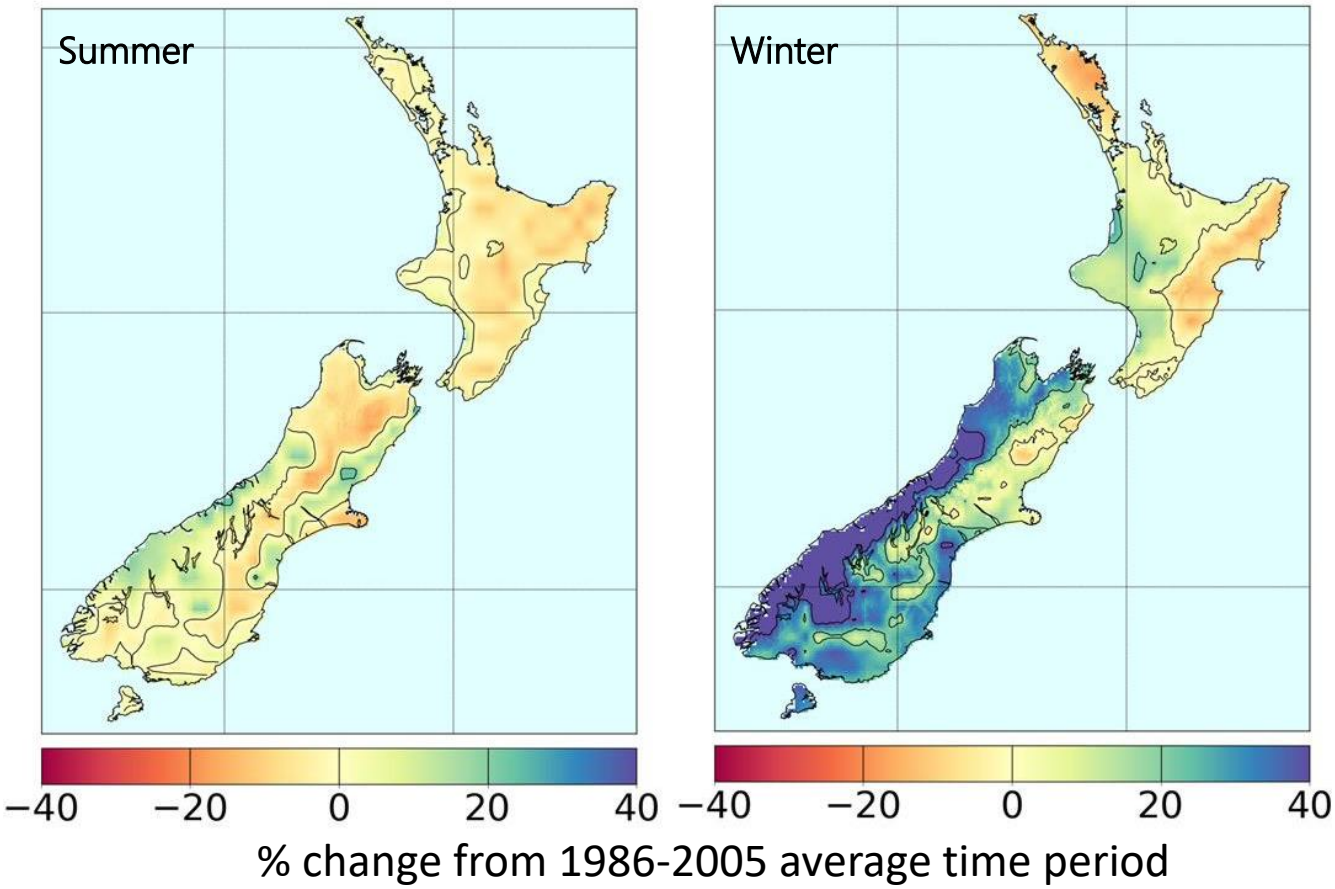
3. Now make an **evidence supported** claim about the global sea level rise.

adapted from https://pangea.stanford.edu/programs/outreach/climatechange/curriculum

Card 5. Rainfall Predictions

Use the following information to make an **evidence supported** claim

Predicted increase in precipitation (rainfall) (%) by 2090, relative to 1986-2005. (for highest CO_2 emissions prediction)



Sourced from: https://www.niwa.co.nz/our-science/climate/information-and-resources/clivar/scenarios

Card 5

1. What areas of New Zealand are projected to get drier by 2090, due to Climate change?

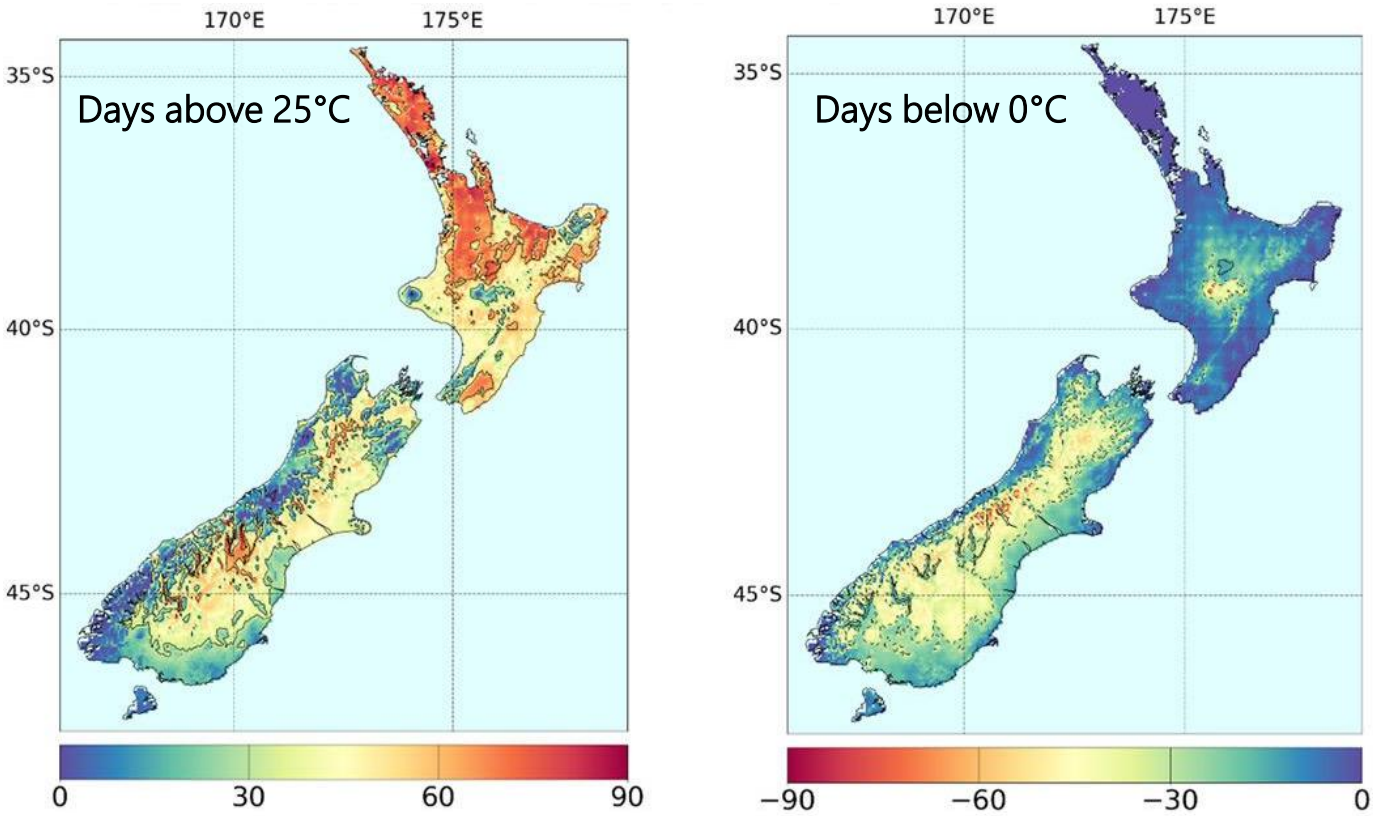
2. What areas of New Zealand are projected to get wetter by 2090, due to Climate change?

3. Now make an **evidence supported** claim about the predicted changing precipitation rates in New Zealand.

Card 6. Extreme temperatures

Use the following information to make an **evidence supported** claim

Predicted change in number of extreme temperature days by 2090, relative to 1986-2005. (for highest CO_2 emissions prediction)



Number of days change from 1986-2005 average time period

Sourced from: https://www.niwa.co.nz/our-science/climate/information-and-resources/clivar/scenarios

Card 6

1. What areas of New Zealand are projected to have more hot days by 2090, due to Climate change?

2. What areas of New Zealand are projected to have fewer frosts by 2090, due to Climate change?

3. Now make an **evidence supported** claim about the predicted changing extreme **hot** AND **cold** days in New Zealand.

adapted from https://pangea.stanford.edu/programs/outreach/climatechange/curriculum

Card 7. Melting Glaciers

Use the following information to make an **evidence supported** claim

Change in Fox Glacier, West Coast, New Zealand from 2008 to 2014

Sourced from: http://glacierhub.org/2016/07/26/as-glaciers-melt-tourists-keep-on-coming-in-new-zealand/

Change in Franz Joseph Glacier, West Coast, New Zealand from 2009 to 2013

Sourced from: http://glacierhub.org/2016/07/26/as-glaciers-melt-tourists-keep-on-coming-in-new-zealand/

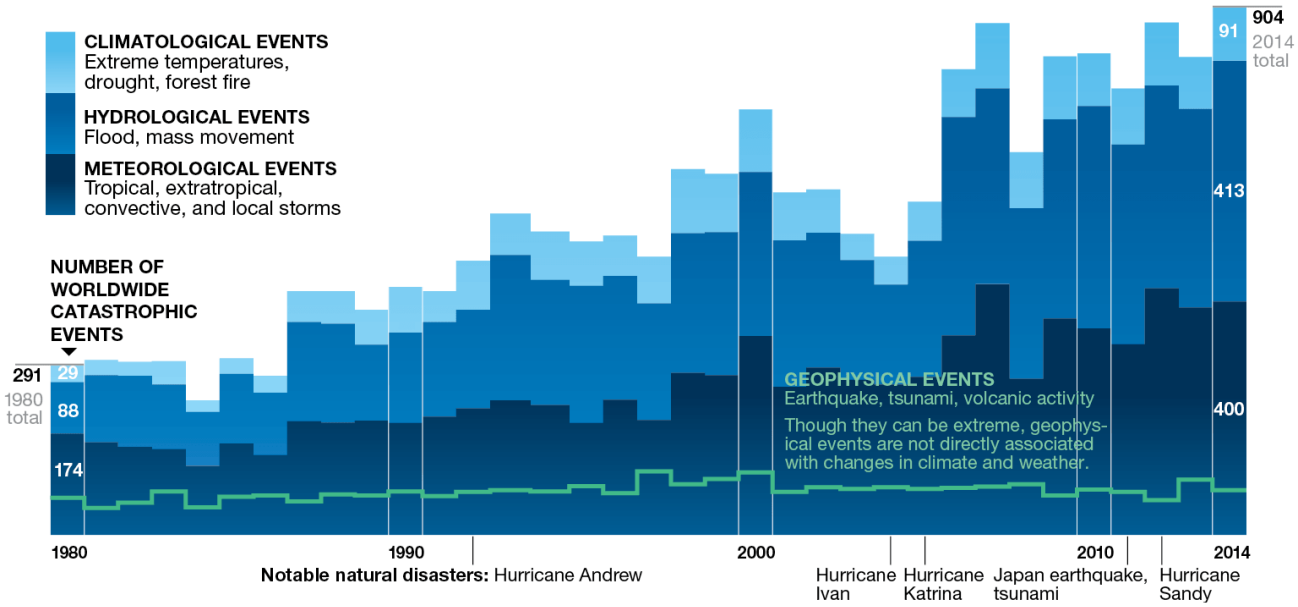
Card 7

1. Where do you think the ice/snow from the glaciers is going?
2. What do you think is eventually going to happen to the glaciers?
3. Now make an **evidence supported** claim about the change in size of the Glaciers in New Zealand.

Card 8. Extreme Weather Events

Use the following information to make an **evidence supported** claim

Numbers of Extreme Weather event from 1980 to 2014



Sourced from: https://www.nationalgeographic.com/climate-change/how-to-live-with-it/weather.html

Card 8

1. What type of events have increased the most from 1980 to 2014?

2. Which events are not attributed to Climate change?

3. Now make an **evidence supported** claim about the change in Extreme weather Events in New Zealand.

adapted from https://pangea.stanford.edu/programs/outreach/climatechange/curriculum