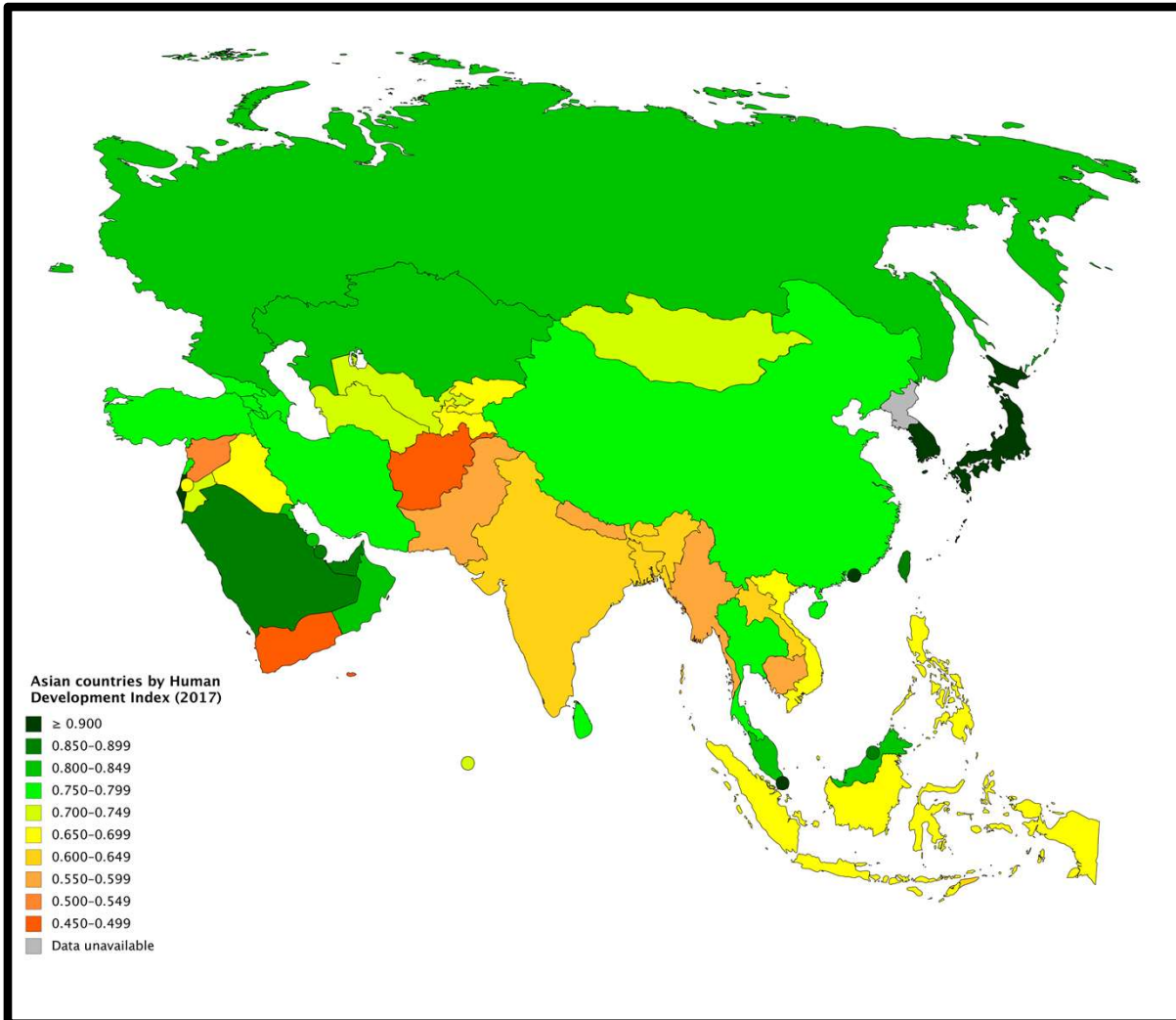## WHAT IS A CHOROPLETH MAP?

A choropleth map uses varying shades of colour to represent spatial patterns. A darker shade generally represents a higher value and a lighter shade a lower value. An example is shown below.


Asian countries by Human Development Index (2017)

- ≥ 0.900
- 0.850–0.899
- 0.800–0.849
- 0.750–0.799
- 0.700–0.749
- 0.650–0.699
- 0.600–0.649
- 0.550–0.599
- 0.500–0.549
- 0.450–0.499
- Data unavailable

INTERPRETING CHOROPLETH MAPS

Using the legend as a guide, respond to the following questions:

- Which nations have a HDI of over 0.900?

- Which two nations have the lowest HDI?

- What range does the HDI of the following nations sit within?
- o India:
- o Saudi Arabia:
- o Indonesia:
- o Mongolia:
- o Thailand:

- Which nation has no available data? Why might this be the case?

- Based on the overall trend shown on the map, which region of Asia has the lowest HDI?

WHAT IS A SCATTER PLOT?
A scatter plot is used to describe the relationship, or correlation, between two variables. Data points are marked on the scatter plot; points that are clustered together and come close to making a straight line on the plot are suggested to be highly correlated, points that do not do this are suggested to have a low correlation.
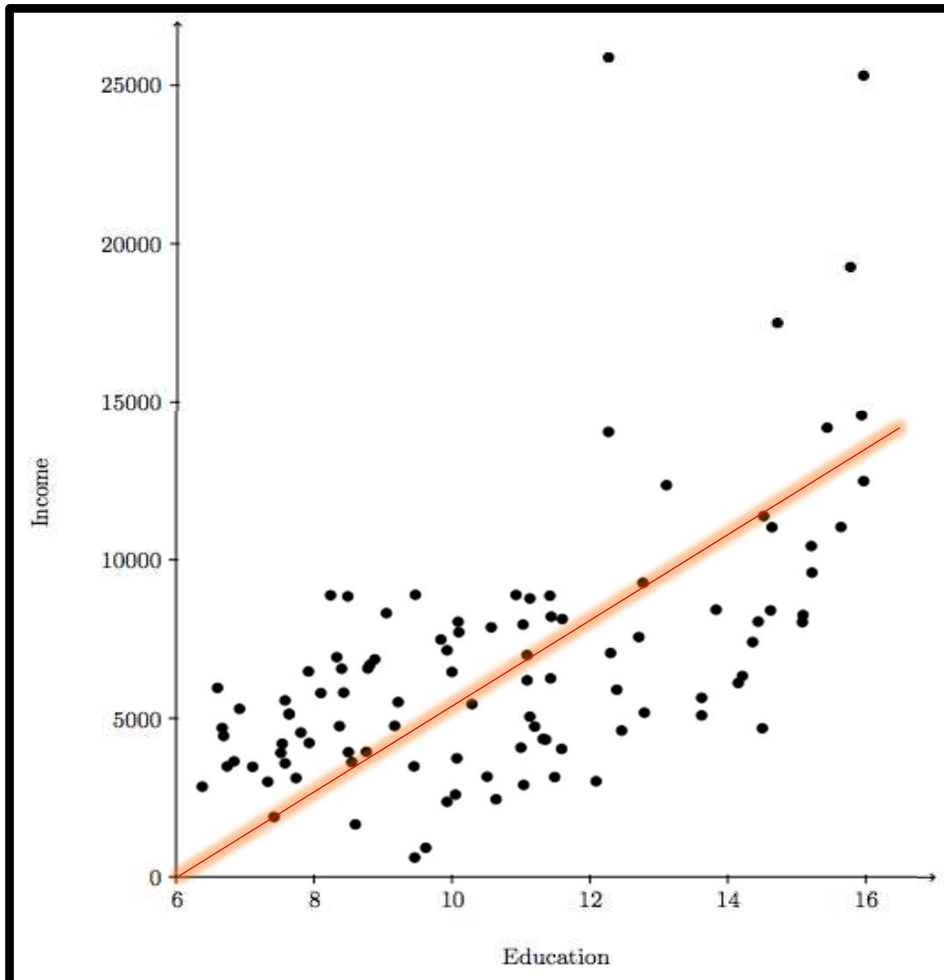
INTERPRETING SCATTER PLOTS
Respond to the following questions based on the information provided to you in the scatter plot.

What two variables are being measured by the scatter plot?

The scatter plot indicates a positive correlation. When examining the scatter plot, do you think the strength of the positive correlation is low or high?

Based on the data presented in the scatter plot, what assumptions could you make about the relationship between the two variables?

WHAT IS A POPULATION PYRAMID?

A population pyramid is a visual representation of the number of people within a population. Generally, the pyramid is divided so that one gender is shown on each side of the pyramid. Population pyramids are useful tools for ascertaining the number of people in each age group within a nation or population group.

INTERPRETING POPULATION PYRAMIDS

Use the data presented in the population pyramid to respond to the following questions.
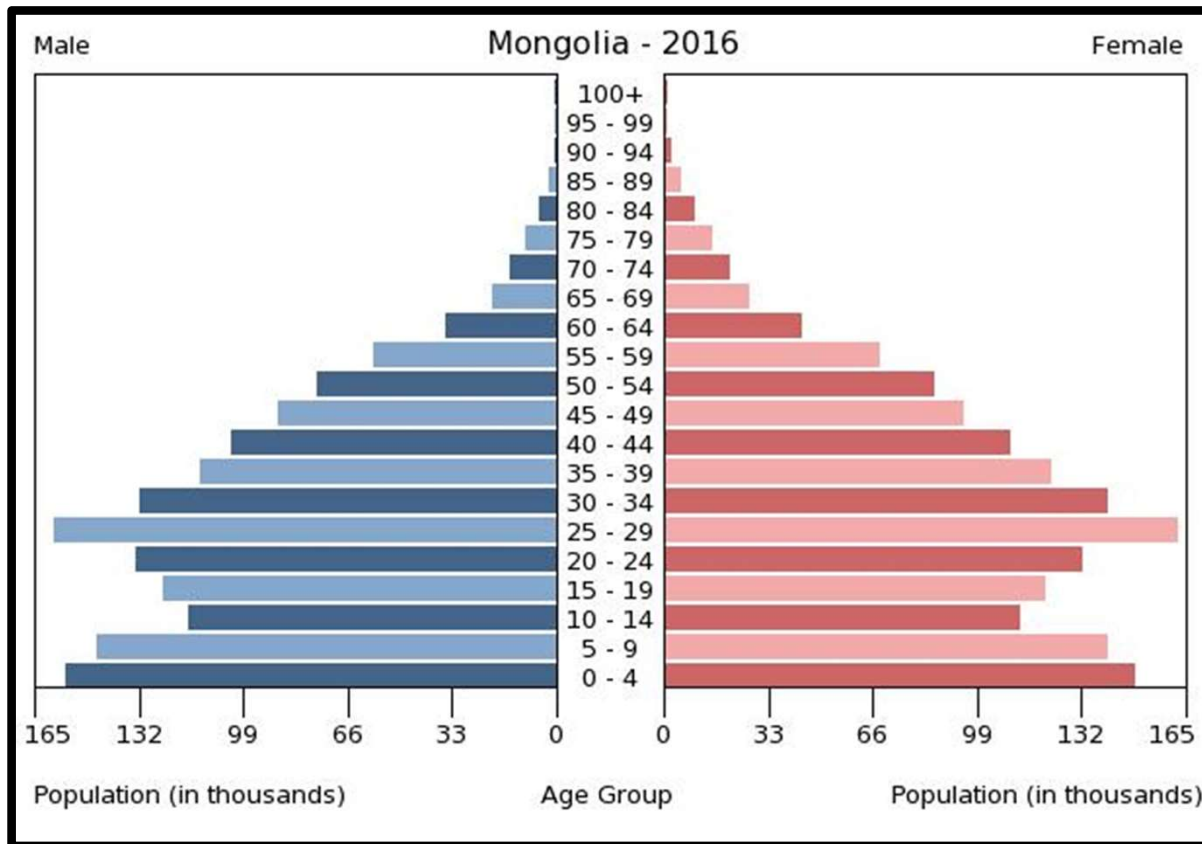
Which age group in Mongolia has the highest number of people?

How many women are there in the 55-59 year old age group?

How many men are there in the 30-34 year old age group?

Which gender appears to have the longest life expectancy?

Suggest reasons why there might be more children in the 0-4 and 5-9 age groups than the 10-14 age group.

Mongolia - 2016 population pyramid. Male (left) and Female (right). Age groups from 0-4 up to 100+. Population (in thousands): 165, 132, 99, 66, 33, 0.

WHAT IS A STACKED AREA CHART?

A stacked area chart is used to show change over time. Each layer of colour is used to represent part of the 'whole' or 100% of the variable being measured (e.g. population growth, school enrolments, birth rates). Changes in the shape of each segment can be used to measure changing trends in the data.
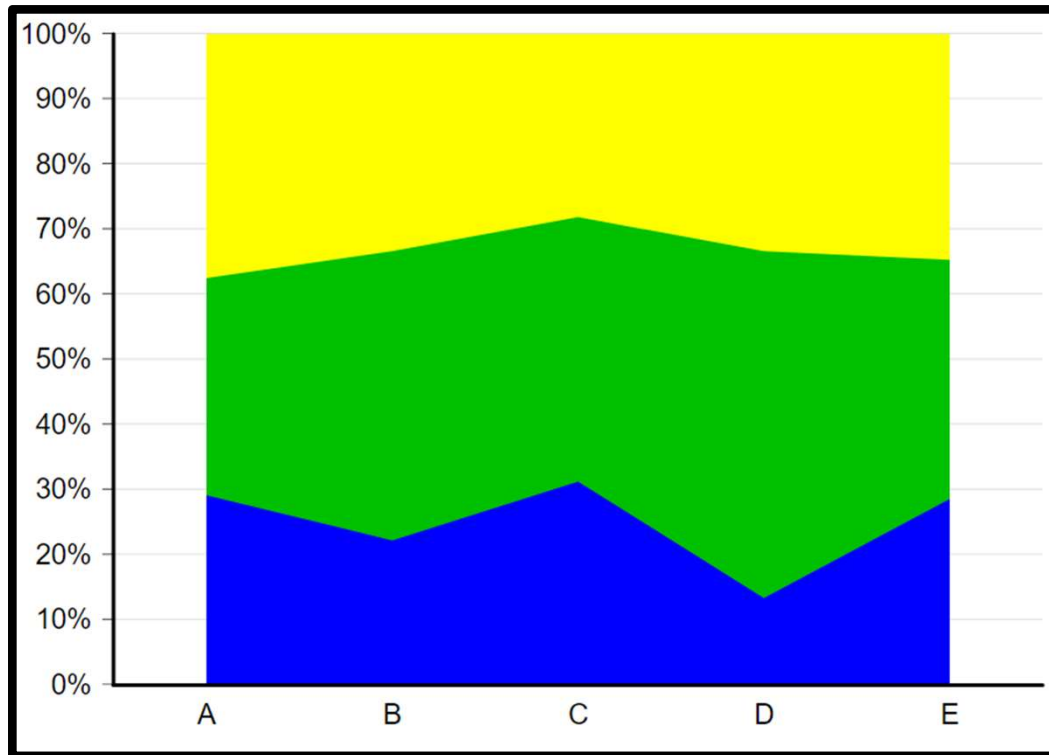
INTERPRETING STACKED AREA CHARTS

Use the data presented in the stacked area chart to respond to the following questions. Assume that each letter represents a year, e.g. Year A, B, C…

In year A, which of the three groups made up the largest proportion of the 100%?

What proportion of the 100% did the green group represent during Year C?

By what percentage did the size of the blue group change from Year A to Year B?

What proportion of the 100% did each group represent in Year D?

WHAT IS A CARTOGRAM?

A cartogram is a map where the size of a geographic location is based on the variable that is being mapped. For example, the cartogram of population in Scotland shows areas with higher populations as being larger on the map than areas with lower populations.
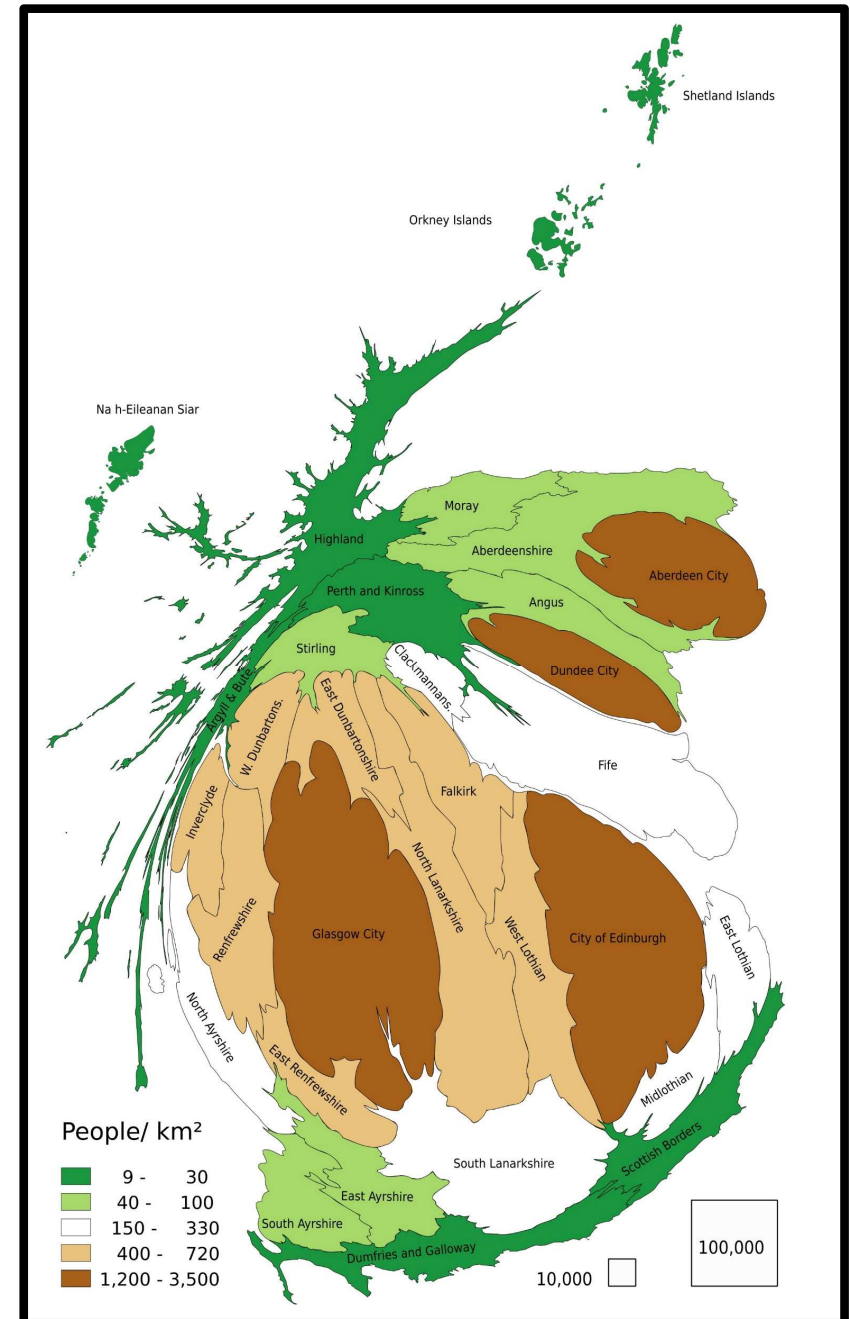
INTERPRETING CARTOGRAMS

Use the data presented in the cartogram to respond to the following questions.

What are the most densely populated areas of Scotland?

How many people/km2 are found of the Shetland and Orkney islands?

Why might there be such a large difference between the population in the cities and the population on the islands?

People/ km²

■ (dark green)	9 - 30
■ (light green)	40 - 100
□ (white)	150 - 330
■ (tan)	400 - 720
■ (brown)	1,200 - 3,500

10,000

100,000

WHAT IS A SPATIAL CHANGE OVER TIME?
Spatial change over time is the degree to which the geographical characteristics of an area have changed over time. This can be used to measure changes to geographical features and patterns within certain areas.

1883

2015
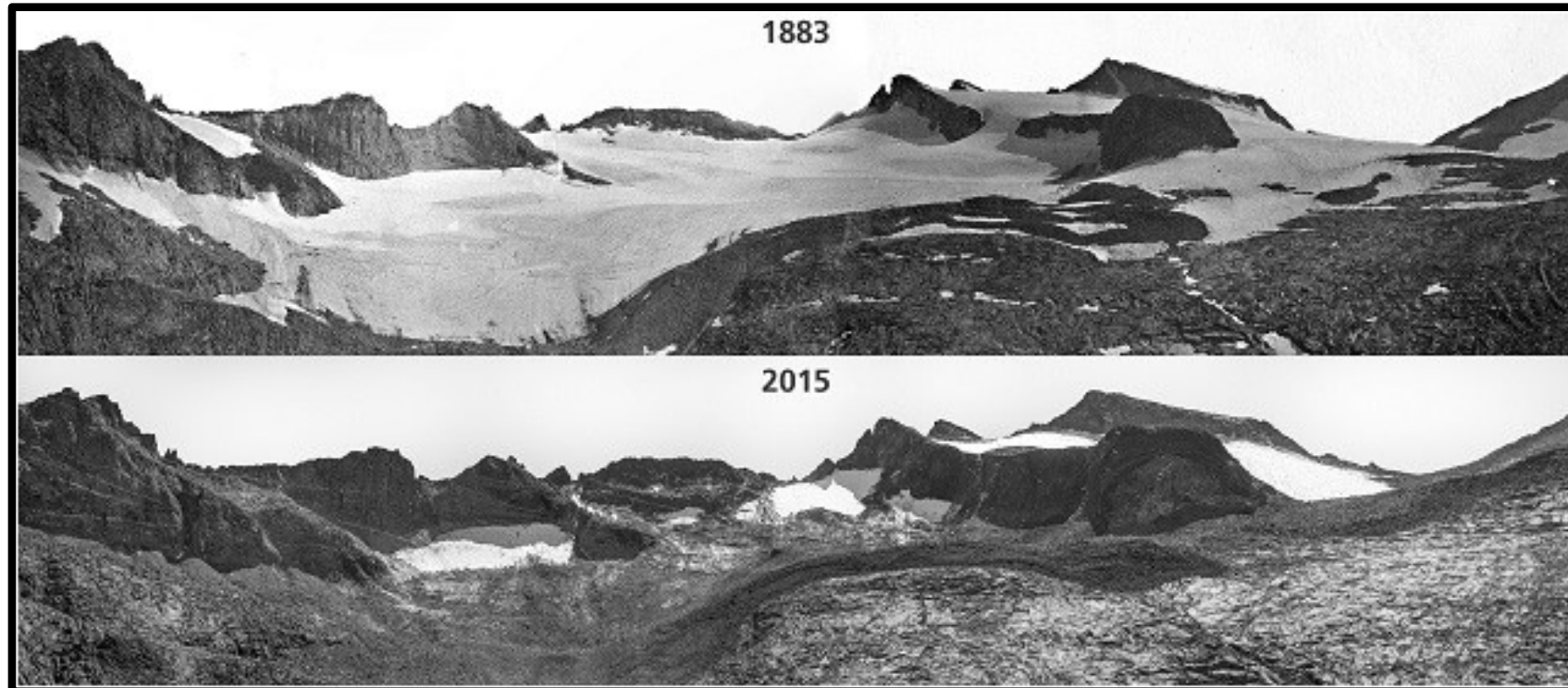
INTERPRETING SPATIAL CHANGE OVER TIME
Use the data presented in the image above to describe what changes have occurred in the glacier: