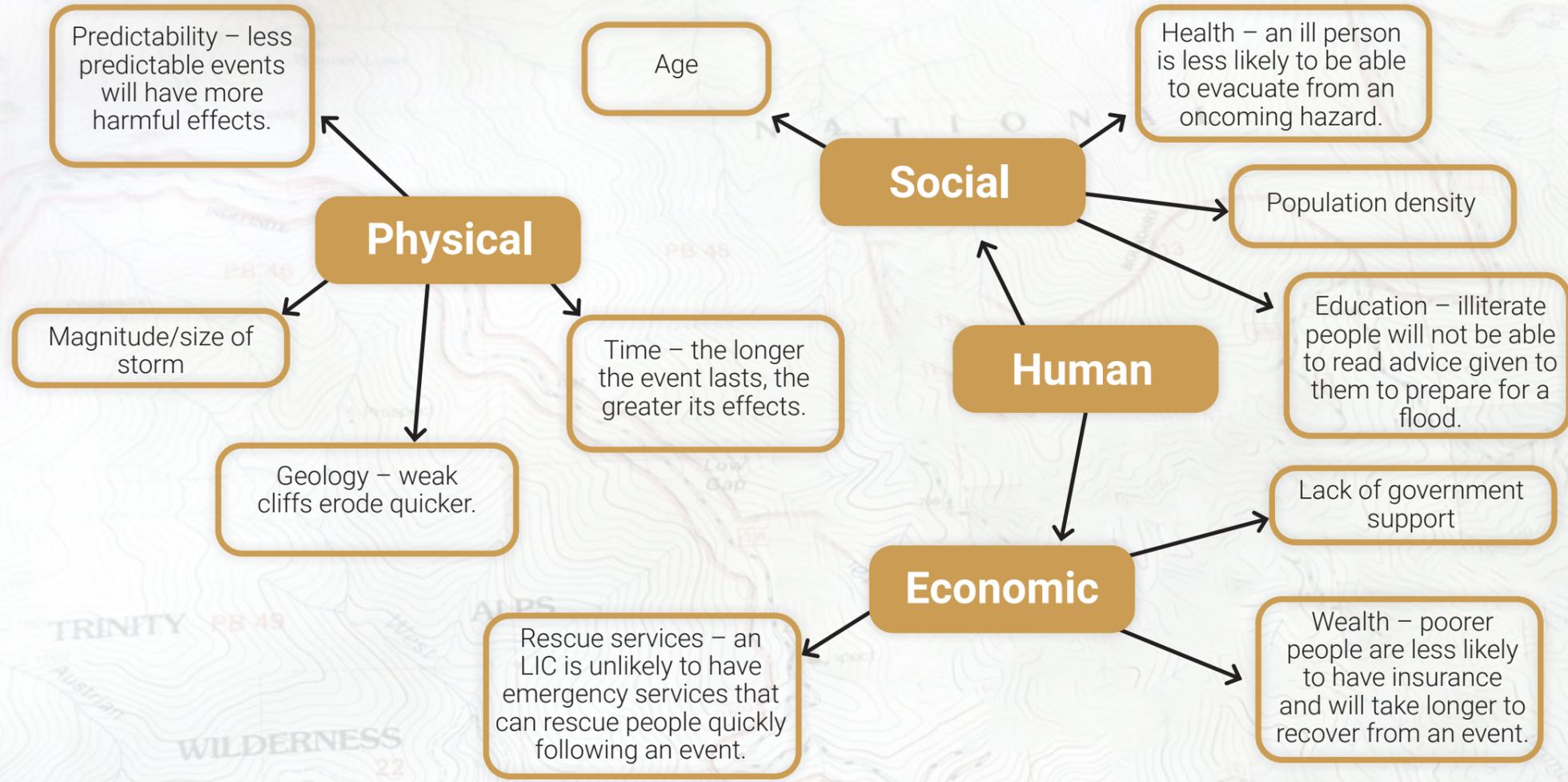


4.1 Why are some coastal communities vulnerable to erosion and flooding?



How do severe weather events make coasts vulnerable to flooding?

In the UK, 3 million people live on the coast, and many of these are vulnerable to flooding. The North Sea is famous for its winter storms and these often create storm surges that affect communities along the east coast of the UK. Sometimes these storm surges can be 2 metres above normal sea level. When they hit the coast, they can wash over coastal defences and move inland, flooding coastal communities. Big storms often cause more flooding.

How does climate change exacerbate vulnerability?

Rising sea levels, due to melting ice caps and glaciers, increase the vulnerability of **LECZs**. People living on deltas, such as the Ganges delta in Bangladesh, and **SIDS** are more vulnerable to storms that inundate their communities, forcing some of them to move away permanently as environmental refugees. Climate change has also been linked to the increase in size of future storms and consequently the magnitude of their impact on the people of the area.

Are less developed communities more vulnerable to coastal hazards?

Poor farmers living on the Nile delta in Egypt are particularly vulnerable. Rising sea levels are eroding natural sea defences and contaminating their fresh water supplies, which destroys crops. Many are being forced to leave their land as flooding becomes an increasingly frequent event, and with little money they cannot afford to build coastal defences against these hazards.

Are communities in HICs less vulnerable to coastal hazards?

The Thames Estuary in Essex has a history of experiencing storm surges produced by storms in the North Sea. Over ½ million people and many properties are vulnerable to the effects of these events as sea water can be channelled up the Thames Gateway area. Vulnerability to future sea-level rises and storm surges has been reduced since the construction of the Thames Barrier in 1984 and the TE2100 Plan which has a number of strategies to protect London, such as raising embankments.

SIDS – small island developing states such as Samoa and Fiji.

LECZ – low elevation coastal zones – coastlines that are within 10 metres of present sea level.

Storm surge – the abnormal rise in sea level during a storm.

Vulnerability – the possibility of being harmed physically or emotionally.

