

## Changing Climate Case Studies

Topic	Case Study
<b>Short Term Historical Climate event</b>	<u><b>Little Ice Age</b></u> <ul style="list-style-type: none"> <li>• It was a colder period in northern Europe</li> <li>• Started in the 15<sup>th</sup> century and lasted till about mid-19<sup>th</sup> century</li> <li>• <b>Possible causes:</b> <ul style="list-style-type: none"> <li>○ Fewer sunspots</li> <li>○ Volcanic ash in the atmosphere</li> <li>○ It is unlikely to be caused by humans as there were not enough people or industry to cause climate change</li> </ul> </li> <li>• <b>Impacts:</b> <ul style="list-style-type: none"> <li>○ Baltic sea froze over, as well as most of the rivers in Europe including the River Thames</li> <li>○ Winters were much colder and longer, reducing the growing season leading to crop failure and famine</li> </ul> </li> <li>• <b>Evidence:</b> <ul style="list-style-type: none"> <li>○ Diaries, newspapers and paintings</li> <li>○ Tree rings in old trees are thinner during cold years</li> <li>○ Charles Dickens wrote his novels as the Little Ice Age was coming to an end. Many of his books describe cold, snowy winters in London.</li> </ul> </li> </ul>
<b>MEDC Climate Change Impacts</b>	<u><b>UK</b></u> <ul style="list-style-type: none"> <li>• The UK has a temperate maritime climate – mild and wet</li> <li>• All months have a significant level of precipitation, although May to July are driest</li> <li>• Temperature is rising due to an increase of greenhouse gases in our atmosphere</li> <li>• The weather is hard to predict</li> <li>• <b>Environmental Impacts:</b> <ul style="list-style-type: none"> <li>○ Sea level rises will flood coastal areas</li> <li>○ More severe storms and longer summer droughts</li> <li>○ Fish species may move to different waters</li> <li>○ Animals may migrate to cooler climates</li> <li>○ Malaria could thrive in warmer temperatures</li> </ul> </li> <li>• <b>Economic Impacts:</b> <ul style="list-style-type: none"> <li>○ Warmer weather could mean greater variety of crops farmers can grow</li> <li>○ Longer growing season for and more domestic tourism</li> <li>○ Cost of protecting areas from flooding could be expensive</li> <li>○ Expensive damage and a lot of disruption to cities affected by flooding</li> </ul> </li> </ul>
<b>LEDC Climate Change Impacts</b>	<u><b>Bangladesh</b></u> <ul style="list-style-type: none"> <li>• World's 7<sup>th</sup> most populous country with 160 million people</li> <li>• Very poor population who are vulnerable to climate change</li> <li>• Low-lying country with many existing problems from coastal and river flooding</li> <li>• Sea level rises will flood coastal areas = agricultural land lost = hunger and lower GDP</li> <li>• Flooding interrupts schooling = lower education levels = less development</li> <li>• <b>Environmental Impacts:</b> <ul style="list-style-type: none"> <li>○ Rising sea levels erode the country's vital coastal mangrove swamps</li> <li>○ Some regions could become more prone to drought</li> <li>○ More frequent and/or stronger cyclones in the Bay of Bengal</li> </ul> </li> <li>• <b>Economic Impacts:</b> <ul style="list-style-type: none"> <li>○ More frequent flooding from melting of the Himalayan glaciers and increased rainfall, destroying crops and homes</li> <li>○ Sea level rises could claim 10% of the land, leaving people landless and short of food</li> <li>○ Failure of the monsoon rain could cause severe water shortages leading to widespread famine</li> </ul> </li> </ul>