Mevagissey Climate Action Group: Relevant figures

International figures:

- "Stabilizing temperature increase to below 2°C relative to pre-industrial levels will require an urgent and fundamental departure from business as usual. Moreover, the longer we wait to take action, the more it will cost and the greater the technological, economic, social and institutional challenges we will face". [1]
- Pre-industrial atmospheric carbon dioxide concentration = 280 parts per million (ppm). August 2019 concentration = 409.95ppm. [2]
- Global average for land and ocean warming from 1880 to 2012 = 0.8-1.2°C. [3]
- Expected temperature rises: Global warming is expected to reach 1.5°C above PIL between 2030 and 2052 [3].
- Paris Climate Agreement: Limit global warming to 2.0°C above pre-industrial levels and pursue efforts to limit warming to 1.5°C. [4]
- Projected warming by 2100 under current global climate policies= 3.1-3.5°C. Under optimistic policies=3.0°C. If current pledges and targets are met= 2.7-3.0°C. [5]

National and local figures:

- The UK aims to be carbon neutral by 2050. [6]
- Cornwall county council announced a climate emergency in August 2019, and aims to become carbon neutral by 2030. [7]
- Cornwall Council Strategic Flood Risk Assessment: "The effect of climate change and sea level rise is identified as being of particular concern in Truro and Penryn and climate change is also an issue for Looe, Mevagissey, Pentewan, Fowey and Flushing." [8]

- Cornwall and Isles of Scilles Shoreline Management Plan [9]:

A). "Mevagissey is very vulnerable to extreme tide levels and future sea level rise may mean that high spring tides bring significant flooding several times each year".

B). "The outer breakwaters of the harbour act to prevent a great deal of the offshore wave energy propagating into the harbour area. Without these in place, significant wave energy would reach the quaysides, resulting in significantly greater impacts than those observed during recent events (such as the storm of October 2004). An ongoing concern therefore is the costly maintenance of these structures and identifying alternative funding routes".

C). "Because flexible adaptation of the community needs to be matched with careful management and improvement of defences, the preferred policy is a joint hold the line / managed realignment approach in the short and medium term".

D). “Priority Actions for Mevagissey: Wave climate study & monitoring, Breakwater condition assessment and economic benefits study, Community adaptation strategy to climate change”.

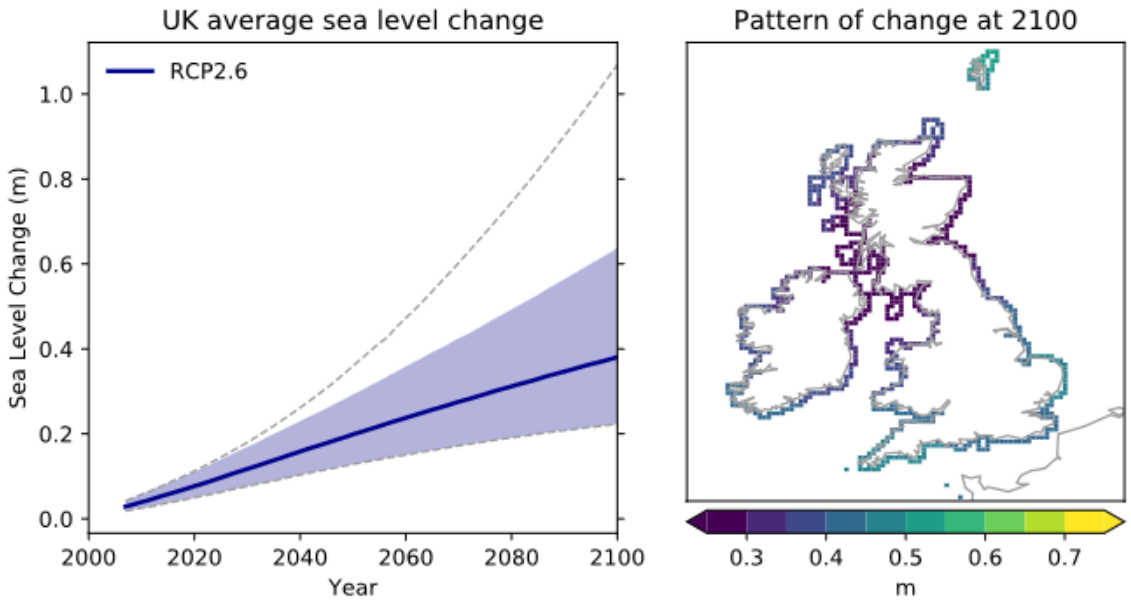

Figure 1: Met Office predictions for UK Sea level rise. The bold lines are the median change and the shaded area the likely range output. The dotted line shows the range across low to high emissions scenarios [10]

Under current high emissions scenarios, London is predicted to face a rise in sea levels of 1.15 metres by 2100. Sea level rise in the UK will not be spread evenly, certain coastal areas will be more or less affected (as shown in figure 1).

- DEFRA Agricultural report [11]:

A). “High-quality horticultural and arable land likely to be flooded at least once every 3 years: 35,000 ha by the 2020s, 75,000ha by the 2050s and 130,000 ha by the 2080s (current figure: about 30,000 ha).

B). Other UK agricultural threats from climate change: livestock heat stress, limited water availability for irrigation, increased risk from pests and diseases, increased extreme weather events.

- Climate change and fisheries [12]:

A). Between 1970-2008, some North Sea fish stocks underwent temperature driven reductions in body size, resulting in an average 23% decline in potential yield across stocks including whiting, haddock and some herring.

B). Risks to UK fishing industry include: migration of fish stocks north to avoid warming waters, resulting in depletion of southern stocks, invasion of alien species into UK waters, reduced body size, ocean acidification.[12]

References

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