**Changing UK Climate**

**Changing temperature in the UK**

|  |  |  |
| --- | --- | --- |
|   | 1901-1930 temperature averages | 1981-2010 temperature averages |
| JAN | 4.2 | 4.4 |
| FEB | 4.2 | 4.4 |
| MAR | 5.5 | 6.6 |
| APR | 7.6 | 8.5 |
| MAY | 11.3 | 11.7 |
| JUN | 13.8 | 14.5 |
| JUL | 15.8 | 16.7 |
| AUG | 15.2 | 16.4 |
| SEP | 13.1 | 14.0 |
| OCT | 9.8 | 10.7 |
| NOV | 5.8 | 7.1 |
| DEC | 4.5 | 4.6 |
| Mean |   |   |
| Range  |   |   |

1. Calculate the Mean for both time periods
2. Calculate the Range for both time periods
3. What has happened to temperature over time?
4. Is this pattern the same for all months?
5. Overall what does this show us about the climate in the UK?

What does this graph show:

1. About the extreme rainfall from 1960 to 2014?
2. How could this impact upon people?

Complete the summary table

|  |  |
| --- | --- |
|  | **What happens over time?** |
| Average temperatures |  |
| Number of extreme rainfall days |  |

**What impacts could a changing climate have on the UK in the FUTURE?**

|  |  |  |  |
| --- | --- | --- | --- |
| 1. In cities heatwave temperatures will become a normal summer by 2040
 | 1. There could be a move to electric vehicles which will also reduce urban air pollution
 | 1. Coastal regions will experience more tidal flooding and coastal erosion
 | 1. UK sea waters will become warmer and this will affect fish stocks
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| 1. Hospitals, care homes ad schools are not being adapted for warmer weather
 | 1. More variation in rainfall could lead to water shortages
 | 1. The area of urban greenspaces in the UK is no longer falling and could even increase
 | 1. There is evidence that plankton (the base of ocean food chains) is becoming less abundant in UK waters
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| 1. 11,000 homes were protected against coastal erosion between 2010 and 2015
 | 1. Climate change will increase the frequency and intensity of floods, with 4 million homes in England already at risk
 | 1. Sewerage networks lack the capacity for heavier rainfall
 | 1. Fewer people will die from cold related deaths and fuel poverty
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| 1. £15 million has been given for natural flood management projects
 | 1. Extreme rainfall will bring more flooding to our rivers
 | 1. Habitats and natural flood protection will be lost to sea level rise
 | 1. There are opportunities to use more sustainable energy such as solar and wind. These could provide local energy rather than imports of fossil fuels.
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| 1. More coastal storms threaten coastal infrastructure such as power stations and ports
 | 1. There could be more water bourn pathogens, pests and diseases
 | 1. Coastal areas will see an increase in tourism and leisure visitors
 | 1. New species will colonise our seas and our land
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| 1. Some crops will see an increase in productivity
 | 1. Moving away from coal and oil to wind and solar energy also improves air quality.
 | 1. There will be more heat related health impacts for people
 | 1. There will be more wildfire risks to farming and forestry
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Classify the slips in the table as either **OPPORTUNITIES** or **RISKS – use colours or the letters O and R**

Overall does it look as though the UK is ready for the risks and opportunities faced by climate change?