

CLIMATE SCIENCE

To solve a problem you need to understand it, and scientists called climatologists are trying to do just that. They study the climate by examining data from archives, weather stations and satellites, also by using computer models to make predictions.

Models provide theories of how the climate works, but our atmosphere is a fiendishly complicated system. Climatologists test their models by working backwards in time to see if they can accurately predict things we know have already happened, like our last ice age. If a model works well, they can be more confident in its predictions for the future.



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Climatologists gather historical data and use them to improve climate models.



©Harald Loeffler, Wilhelma Zoo

The work of climatologists will help us protect amazing animals like these Sumatran tigers.

There are modelling centres all over the world, and the UK Met Office Hadley Centre is one of the most advanced. We have used their models in this exhibition because they are the best predictions we have to understand what climate change will do to the wild habitats and animals that zoos aim to protect.

PREDICTION



PRECIPITATION

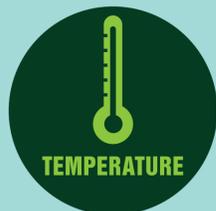
RAIN, RAIN, GO AWAY...
Well be careful what you wish for! Extra heat in the atmosphere and oceans will change rainfall patterns. Some areas of Earth will get more rain; others will see their rains dry up.



RIVERS & SEAS

WATER WATER EVERYWHERE...
As rainfall patterns change some rivers will swell and flood, others will dry up. All over the world both humans and wildlife will be affected.

Source: UK Met Office Hadley Centre 



TEMPERATURE

BURNING DOWN THE HOUSE...
Here, the key prediction is that as CO₂ levels increase so does the average global temperature. This change is not constant; some areas may warm more than others.



ICE CAPS

DO YOU WANT ICE WITH THAT?
A warmer earth means the ice caps and glaciers will melt. Bright white ice reflects heat back to space so as the ice goes, the planet heats even more.



Find out more at zsl.org/climatechange