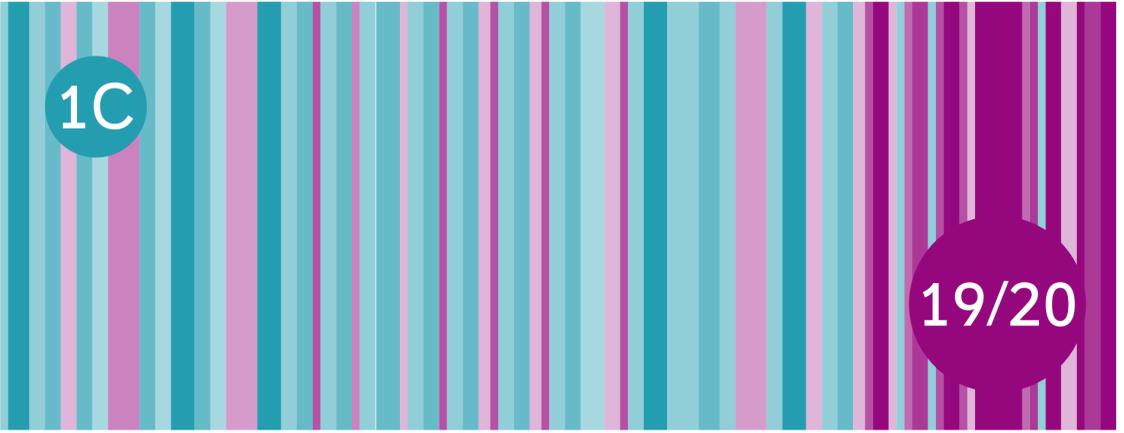


# How can finance help combat climate change?

## RBS economist Katerina Lisenkova explores the relationship between climate change and the finance sector.

Warming stripes show the average temperature in the UK between 1884 and 2018



The current level of warming globally is about 1C above the pre-industrial level. Globally, 19 out of 20 of the warmest years happened this century.

**110%** Human activity is responsible for about 110% of global temperature increase since 1950 – natural causes on their own would lead to global cooling.

**97%** There's a 97% expert consensus on human-caused global warming.



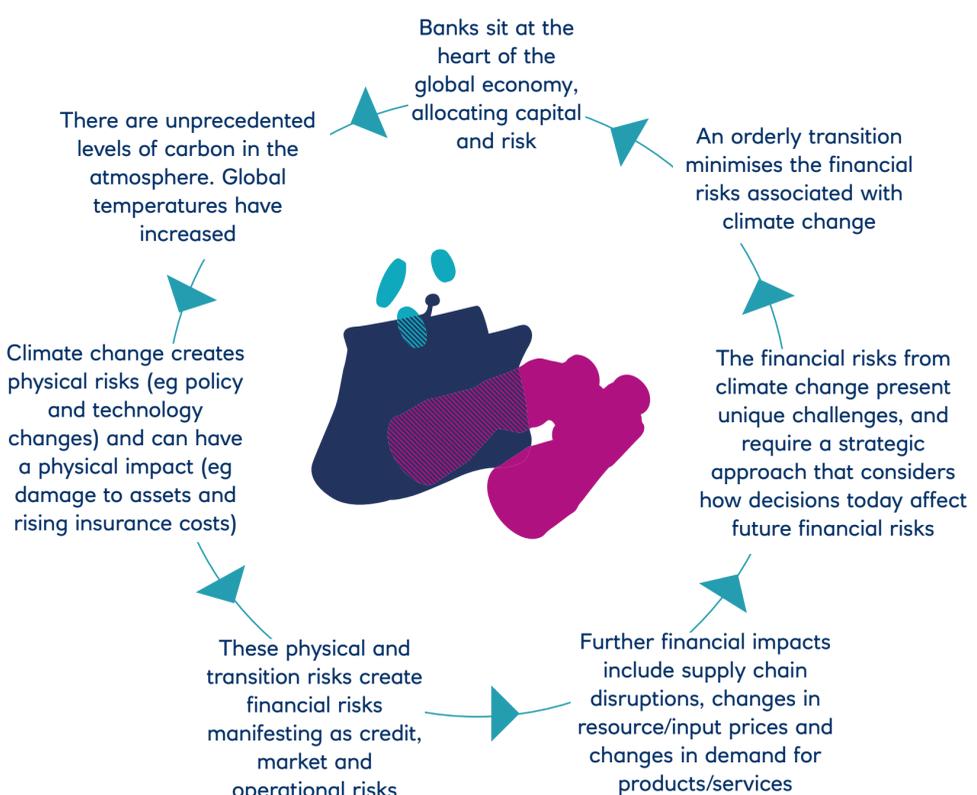
“We are more sure that greenhouse gas is causing climate change than we are that smoking causes cancer”

Kate Marvel  
Nasa atmospheric scientist

### The 2020s are crucial for setting up transition

	2020s	2030s	2040s
<b>Electricity</b>	Largely decarbonise electricity: renewables, flexibility, coal phase-out	Expand electricity system, decarbonise mid-merit/ peak generation (eg using hydrogen), deploy bioenergy with carbon capture and storage (CCS)	
<b>Hydrogen</b>	Start large-scale hydrogen production with CCS	Widespread deployment in industry, use in backup electricity generation, heavier vehicles (eg HGVs, trains) and potentially heating on the coldest days	
<b>Buildings</b>	Efficiency, heat networks, heat pumps (new-build, off-gas, hybrids)	Widespread electrification, expand heat networks, gas grids potentially switch to hydrogen	
<b>Road transport</b>	Ramp up electric vehicle market, decisions on HGVs	Turn over fleets to zero-emission vehicles, cars and vans before HGVs	
<b>Industry</b>	Initial CCS clusters, energy and resource efficiency	Further CCS, widespread use of hydrogen, some electrification	
<b>Land use</b>	Afforestation, peatland restoration		
<b>Agriculture</b>	Healthier diets, reduced food waste, tree growing and efficiency on farms		

### Climate change is a financial problem with a (partially) financial solution



Sources: IPCC, Intergovernmental Panel on Climate Change, Nasa, YPCCC, Climate Central, Bank of England; Cicero, IOP Science, Committee on Climate Change, RMetS, Showyourstripes.info. This infographic has been adapted from a presentation delivered by RBS economist Katerina Lisenkova in March 2020.