

KENT CHARACTERISTICS

CLIMATE CHANGE RISKS AND IMPACTS FOR AGRICULTURE IN KENT

Approx. 65% of land in Kent is arable; 35% (137,277 ha) horticulture, and 30% (116,319 ha) improved grassland

The best and most versatile land farmed in Swale is worth £360m and is estimated to support £105-225m of agriculture output

The rural economy in Kent employs 46,000 people. Swale and Maidstone are in the top 20% of local authorities in England with the highest number of agricultural workers

52.6% of agricultural holdings in Kent are involved in growing plants and vegetables (cereals, cropping, horticulture), and 39.2% are involved in animal production

Previous

and current

Climate Impacts



In 2014, at least 5 farmers markets were cancelled due to storms flooding agriculture land for up to 2 months.



The closure of the Faversham farmers market resulted in a loss of £7,600.



In 2018, parts of England had no rain for more than 50 days, resulting in a reduction of lettuce yields by 25%, while demand increased by 40%.



Agricultural land on Romney Marsh (worth approx. £290m) is low lying and some areas have a 20% chance of being flooded by the sea in any year.

FUTURE CLIMATE IMPACTS

RISK	RATING	RECOMMENDATION
Storm events/intense rainfall and flooding could lead to a loss of productivity due to flooding of agriculture land.	High	Research priority
Increasing temperatures and drought could change crop yields.	Medium	Research priority
Sea level rise and coastal erosion could lead to loss of agricultural land.	Medium	More action needed
Increase in pests and disease from increasing temperatures.	Medium	Research priority
Soil erosion and destabilisation as a result of flooding and drought causing a reduction of quality of agricultural land.	Medium	More action needed
Increased nitrate leaching as a result of flooding causes a reduction in quality of agricultural land.	Medium	More action needed

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CLIMATE CHANGE RISKS AND IMPACTS FOR INDUSTRY IN KENT

90% of companies in Kent are in the micro category (<10 employees).

Professional, Scientific and Technical services are the biggest sectors in Kent and make up 17% of all businesses in the county.

Tourism is a key industry in Kent, accounting for 76,828 jobs in 2017. The county saw almost 65 million visitors in 2017, and the visitor economy rose by 7.8% to £3.8bn.

A KCC survey found that export-oriented activities make up over 50% of turnover for 36% of businesses who took part in the survey.

Construction businesses in Kent and Medway make up 17% of all businesses in the county, higher than the UK national average.

Previous

and current

Climate Impacts



Surface water flooding from heavy rainfall costs Kent industries £31.1m on average each year.



Every hour the port of Dover has to close due to stormy conditions costs the UK economy £14.4m.



The heatwaves of 1997 and 2008 had a positive impact on tourism, with increases in leisure activities and sales of products such as ice cream.



Tourist assets on beaches in areas such as Margate and Ramsgate may disappear over the next 50-100 years due to flooding and sea level rise.

FUTURE CLIMATE IMPACTS

RISK	RATING	RECOMMENDATION
Negative impacts of flooding and sea level rise on industry.	High	Research priority
Higher temperatures and water scarcity could impact horticulture sector.	Medium	Research priority
Higher temperatures and water scarcity could impact the energy, manufacturing and utilities sectors.	Medium	Research priority
Impacts of higher temperatures on tourism.	Medium	Research priority
Higher temperatures leading to overheating buildings.	Medium	More action needed

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CLIMATE CHANGE RISKS AND IMPACTS FOR PEOPLE AND THE BUILT ENVIRONMENT IN KENT

Kent & Medway population projected to grow to 2.1m by 2040.


There is a greater proportion of those under 19 and over 65 than the UK average.

82% of residents are in good or very good health. Key health issues are respiratory (asthma, emphysema) and cardiovascular (angina).


Relatively affluent overall but some coastal areas are deprived - Folkestone, Dover, Margate, Ramsgate and Sheerness.

The number of primary age pupils is set to increase from 160,000 to 177,000 by 2031; secondary age pupils from 78,000 to 93,700 by 2023.


Previous and current Climate Impacts




The Southeast is an area of water stress, putting people at greater risk from drought events.



July 2007, 500 houses flooded in Medway – costing the community £14.3m.



The heatwaves of 2003 and 2006 caused an increase in 999 calls related to excess heat and insect bites. In the 2003 heatwave, there were 130 excess deaths in over 65s, at a cost to the of NHS - £41.4m.



There are 88,000 properties at risk of flooding. During winter 2013/14 flooding – over 700 residential properties flooded, costing £4.4m.

FUTURE CLIMATE IMPACTS

RISK	RATING	RECOMMENDATION
Heat leading to increased mortality.	High	Research priority
Overheating homes and public buildings causing productivity and health issues.	High	Research priority
Overheating of public spaces affecting health.	High	Research priority
Water scarcity and droughts affecting access to water.	High	Research priority
Increase in flood risk impacting people’s homes, businesses, health and social care facilities and access.	High	More action needed
Increased rates of coastal change particularly impacting vulnerable communities.	Medium	Research priority
Declining air quality affecting health.	Medium	Research priority

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CLIMATE CHANGE RISKS AND IMPACTS FOR THE NATURAL ENVIRONMENT IN KENT

Kent has 116 sites of national and international importance for nature conservation and 455 wildlife sites.

There are over 6900 km of Public Rights of Way and 5700 km of public footpaths in Kent.

The habitats in Kent support a variety of rare species including rare orchids, moths and several rare arable field wildflowers.

Over the past 5 years, 30% of local wildlife sites in Kent have been damaged, and 2% have been lost completely.

70% of Kent residents rated the countryside as important to them, and 80% use the environment for leisure and recreation purposes at least once a fortnight.

Previous

and current

Climate Impacts



Gales in a January 2007 caused 500 trees to fall across Kent.



In December 2000, heavy rain led to 2 major cliff falls in one day at St Margret’s Bay, causing thousands of tons of chalk to fall onto the beach.



Kent has had 7 heatwaves between 1996-2010. The River Stour saw its lowest levels for 200 years in 1997 and 2006 due to droughts.



Droughts have caused low flows and oxygen depletion, leading to fish kills in the River Cray in 1902.

FUTURE CLIMATE IMPACTS

RISK	RATING	RECOMMENDATION
Increasing temperatures and extreme events causing an increase in plant and animal disease and habitat fragmentation.	High	Research priority
Sea level rise impacts on coastal and estuarine habitat.	High	More action needed
Increase temperatures and drought causing low river flows.	High	Research priority
Higher temperatures could cause a loss of tree species and increased risk of wildfire.	Medium	Research priority

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CLIMATE CHANGE RISKS AND IMPACTS FOR TRANSPORT IN KENT

In 2017, the Port of Dover handled 17% of the UK’s trade in goods totalling approximately £122bn.

68,000 people travel into central London by train each day in the peak hour (8:00-8:59).

Kent’s proximity to London and connections to the rest of the UK and Europe provide opportunities for growth.

Kent faces increasing congestion problems between 2006 and 2016 there was an 14.3% increase in the number of vehicles on major roads.

Operation stack costs £103,000 from public services and £1,445,000 from the local economy each day it is implemented.

Previous

and current

Climate Impacts



In winter 2013/14, the costs of damage to roads and highways from fluvial and surface water flooding were £1.5 million.



The 2018 heatwave caused 5 hour delays to Channel Tunnel services due to issues with air conditioning.



High temperatures cause rails to buckle, overhead power cables to sag sagging and carriages to overheat. When rail tracks reach 48°C, trains have to travel 30% slower.



The Ports of Dover and Folkestone are likely to need to reduce services more often as sea levels rise and storm events become more frequent.

FUTURE CLIMATE IMPACTS

RISK	RATING	RECOMMENDATION
Higher temperatures damaging transport infrastructure.	High	More action needed
Sea level rise impacts on the ports.	High	More action needed
Flooding affects transport infrastructure, causing disruption.	High	More action needed
Storm events impacting transport infrastructure causing disruption.	High	More action needed
Heavy rainfall and drought impact on soil destabilisation and slope failure.	Medium	More action needed

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CLIMATE CHANGE RISKS AND IMPACTS FOR UTILITIES IN KENT

70% of water in Kent is derived from groundwater and 20% is taken from rivers.

Oil and gas makes up 54% of energy used in Kent, however gas consumption is falling.

Water usage in Kent is the highest in the UK - 152 litres per person per day.

To meet future demand, this will need to decrease to 130 litres per person per day by 2030.

The Dungeness B nuclear power station in Kent generates enough energy for 1.48 million homes.

Previous

and current

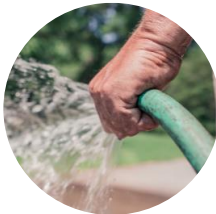
Climate Impacts



In 2016, flooding of Southern Water’s wastewater pumping station in Margate caused the closure of beaches due to untreated sewage contamination.



In 2016, 2 winter storms (Storms Katie and Angus) caused widespread power outages across Kent.



In 2012, water companies in Kent had to implement temporary usage bans on water to preserve supply which causes losses of £96 million for businesses.



There could be water shortages of between 1.5 billion litres/day and 2.6 billion litres/day by in the Southeast of England by 2080.

FUTURE CLIMATE IMPACTS

RISK	RATING	RECOMMENDATION
Drought in already water-stressed areas.	High	More action needed
Flooding and heatwaves making energy generation and transfer more difficult.	Medium	More action needed
Soil destabilisation land-slips as a result of over-abstraction of water and increased rates of subsidence.	Medium	Research Priority
Increased rainfall and flooding of landfill sites, electricity substations and other infrastructure.	Medium	More action needed