East Sussex
Environment Board

East Sussex Environment Strategy 2020

‘At pace & at scale’



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Foreword

Climate change and the degradation of the world's natural capital assets are defining issues of our time. The recent reports by the intergovernmental panels on climate change and biodiversity make a clear case for urgent action, as a healthy and productive environment is an essential pre-requisite for sustainable social and economic prosperity.

No single organisation, acting alone, can secure the changes that we need. Therefore, a partnership of private, public and educational sector organisations has formed the Environment East Sussex Board, which has developed this Environment Strategy and will steer its implementation. The main aim of the Board is to drive measurable improvements in our environment, to ensure East Sussex continues to be where people want to live, work, study, visit and do business. We are grateful to the Board members for their commitment to developing and delivering this Strategy.

The Environment Board is accountable to Team East Sussex (TES), which is the East Sussex board of the wider South East Local Enterprise Partnership (SELEP) and to the East Sussex Strategic Partnership. The Environment Strategy is one of a suite of Team East Sussex documents detailing priorities for the county which aim to create a more productive, healthier, happier and more sustainable county, and it will inform the updated East Sussex Growth Strategy for 2020+.

The challenges are huge. But the opportunities, and the impacts if we get this wrong – economically and socially – are even larger. This Strategy is a sound start to addressing these challenges and securing the opportunities. We look forward to working with many of you in achieving a healthier and more productive environment.

Graham Peters

Chair, Team East Sussex

Michael Turner

Chair, Environment East Sussex Board

Why do we need an Environment Strategy?

The purpose of the Strategy is to set out the transformational change that is required and why, and what new steps we are going to take to help address the urgent environmental challenges and to maximise the available opportunities. The evidence set out in this Strategy makes it clear that the pace and scale of action needs to be far greater, and that co-ordinated local action is an essential part of adding to the action already being taken by many private and public sector organisations, community groups and individuals.

The first Environment Strategy for East Sussex was adopted in 2011. It brought together the high level aims, objectives and actions of a wide range of organisations in East Sussex into one shared, long-term strategic environmental plan for the county. Since then there have been significant changes to national, regional and local policy and strategies, including Parliament declaring a climate emergency (2019), the 25 Year Environment Plan (2018), the Clean Growth Strategy (2018) and the Environment Bill of 2020. Consequently, this updated Environment Strategy for East Sussex seeks to:

- align with these latest national, regional and local strategies;
- set out an updated and robust local evidence base;
- identify the key challenges and opportunities; prioritise achievable actions for the Environment Board to deliver in the next 1-2 years.
- set out what we will do to review and report on progress.

This Strategy is only one amongst many strategies that addresses the environment of East Sussex. Consequently, it does not attempt to cover all aspects of the environment and does not replicate what is dealt with in other strategies. For instance, many aspects of transport are addressed in the Transport Strategy developed by Transport for the South East and in the East Sussex Local Transport Plan. Instead, the Environment Board will use this Environment Strategy as a framework to:

- challenge other strategies and plans to contribute to delivering the aims of this Strategy;
- lobby government to develop clear, stable and well-designed policies and interventions that help to deliver the aims of this Strategy.

A supporting Technical Appendix sets out the legislative and policy context, signposts to the extensive work that is already in progress to address the environmental priorities, and provides a more detailed explanation for why the short term actions have been chosen. The Technical Appendix can be found here: **www.eastsussex.gov.uk/environment/priorities/environmentstrategy**

Vision and Priorities

The shared vision of this strategy is to:

'Protect and enhance our natural and built environment for current and future generations and tackle and adapt to climate change.'

Five priority environmental themes have been identified, namely: climate change, natural capital, air quality, water and resource efficiency. These priorities are in line with the Sustainable Development Goals developed by the United Nations in 2015 and the priorities identified in recent national strategies. As the environment is complex and functions as an integrated system, so there is considerable overlap between the five themes, such as climate change and air quality.

Monitoring and reporting

The Environment Board will produce an annual report on progress in implementing the Environment Strategy, for review and challenge by Team East Sussex. Performance indicators have been taken from the larger set of national indicators used by government. These indicators will help to measure progress towards the longer-term aims, which are summarised in the table on page 15. The Board will add new actions every year, will carry out a light-touch review of the Strategy every year and a more detailed review every five years, to ensure that it remains fit for purpose and is contributing to shifting the local economy towards a sustainable future.

The main environmental challenges

A healthy and productive environment is essential for sustainable social and economic prosperity: it provides all the raw materials for the resources we use in our daily lives, the soil in which we grow our food, clean air and drinking water, and a range of services such as natural flood attenuation and a contribution to mental well-being. Our environmental assets, and the services and benefits they provide, have a significant value, some of which can be quantified, such as food production, but others cannot and so are missing from decision-making. However, as with financial capital, poorly managed environmental capital will fail to provide the returns that are necessary for sustainable economic prosperity. The erosion of local environmental capital, sometimes irreversibly, undermines economic prosperity and health.

Additional local pressures on environmental assets include a projected increase in the population of East Sussex of about 10% by 2032 and a 14% increase in the number of households, as average household size declines. This will require over 2,000 additional homes to be built per year, alongside investment in transport, utilities, employment workspace, health and social care, education and community infrastructure.



The key challenges and opportunities with the five priority environmental themes are set out on the following pages. ➔



"Companies that don't adapt, including companies in the financial system, will go bankrupt, without question. But also there will be great fortunes made along this path aligned with what society wants."

Mark Carney (August 2019)

Climate change

The 2018 report from the United Nations Intergovernmental Panel on Climate Change concluded that without substantial efforts to curb greenhouse gas emissions over the next decade we are likely to face severe, widespread, and irreversible impacts on societies. Human activity has already led to 1°C of global warming from pre-industrial levels, which is resulting in damaging impacts on lives, infrastructure and ecosystems that are apparent today.

The predicted impacts of climate change in East Sussex include more frequent and intense flooding, drought and episodes of extreme heat, as well as impacts from the effects of climate change overseas, such as on food supply. This will lead to an increase in heat-related deaths, particularly amongst the elderly, damage to essential infrastructure, impact on food production, disruption to supply chains and service provision, greater coastal erosion and impact on coastal habitats and wetlands.

Carbon emissions in East Sussex fell by 27% between 2005 and 2016. This excludes emissions that occur outside the boundary of East Sussex as a result of the demand for goods and services that are consumed in East Sussex. This level of reduction is similar to the national rate of reduction, as it has been driven by the same changes, notably the switch from coal to gas and renewables to generate electricity.

The UK's Tyndall Centre for Climate Change Research has estimated that, based on current scientific understanding, East Sussex needs to cut carbon emissions by about 13% per year to keep within its share of the total global carbon budget. This rate of reduction is higher than has been achieved in the past.

This Strategy sets out an aim for East Sussex to meet the Tyndall reduction target. This will require extensive changes across all levels of society within a short time frame, set against a predicted increase in the demand for energy due to a growing population and economic growth. It's widely recognised that the legislation and resources currently being deployed to meet this national target are inadequate.

Even if global warming can be limited to 1.5°C, significant additional investment will still need to be made in measures to adapt to the effects of climate change that are already locked in due to past emissions of greenhouse gases. The main effects include increased flooding, droughts and heat waves. For instance, in England around one in six properties and over half of water and sewage treatment works are in areas already at risk of flooding from rivers, the sea or surface water.

The long term aims on climate change of this Strategy are for East Sussex to:

1. ***Remain within its science-based carbon budget.***
2. ***Be adapted to the effects of climate change that are already locked in.***



"Business stands squarely behind the ambition for the UK to have a net-zero emissions economy by 2050."

Carolyn Fairbairn, CBI Director-General

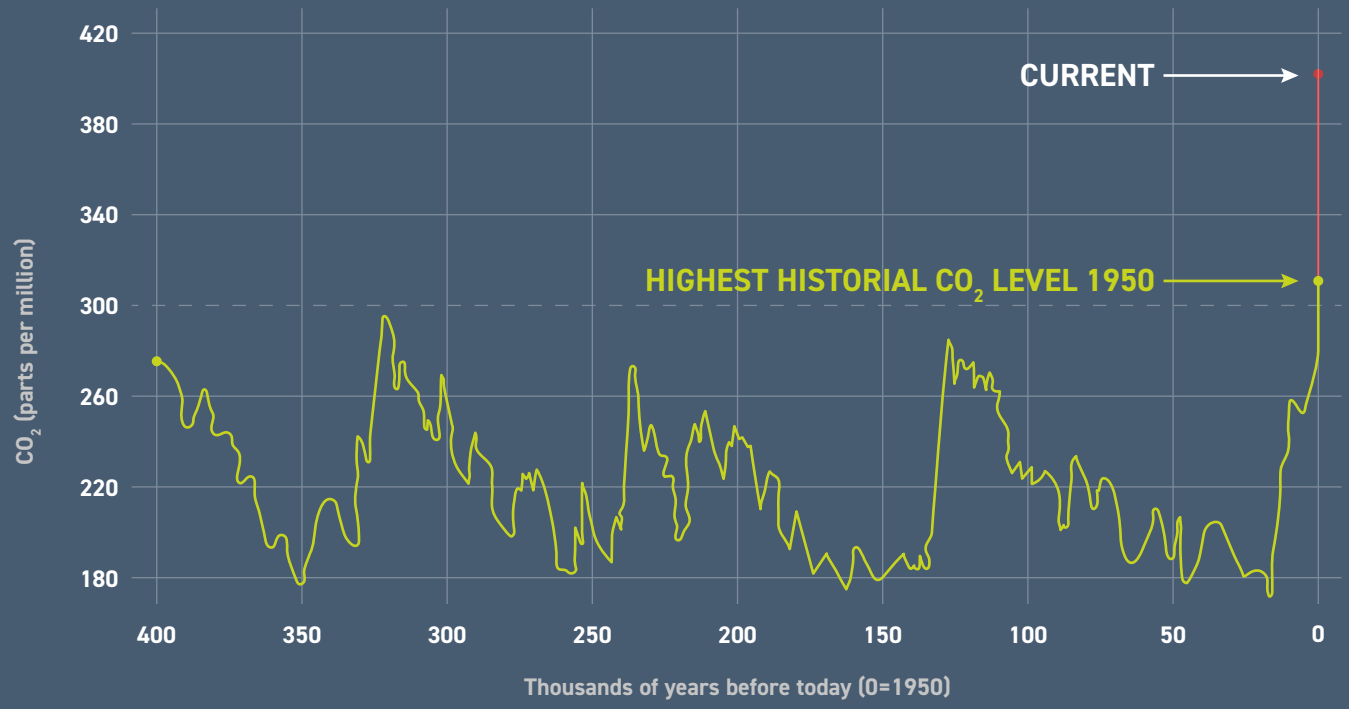


Figure 1: Changes in atmospheric carbon dioxide levels over the last 400,000 years



Case study:

The Lewes-based energy cooperative OVESCO installed solar PV panels on the Harvey's Brewery depot roof in Lewes, saving about 26 tonnes of CO2e per year and providing a healthy annual return of 11.7%.



Natural capital

Natural capital is the stock of renewable and non-renewable resources (e.g. plants, animals, air, water, soil) that yield a flow of benefits to people, including food, fuel, clean water, climate regulation, pollination of crops by insects and flood defence. This multitude of services and benefits all have a value, some of which can be quantified, such as the value of timber or food produced from farmland, and others cannot and so are missing from decision-making. Consequently, natural capital is often degraded or lost because it's free, yet it regulates numerous life-supporting processes and is the foundation on which our economy, society and prosperity are built. For example, more than two billion people rely on wood fuel to meet their primary energy needs and about four billion people rely mainly on natural medicines for their health care (Intergovernmental Platform on Biodiversity and Ecosystem Services, 2019).

The long term aim of this Strategy is for East Sussex to achieve a growing and resilient stock of natural capital.

The 2019 Intergovernmental Platform on Biodiversity and Ecosystem Services concluded that:

- The diversity within species, between species and of ecosystems is declining faster than at any time in human history, with the UK estimated to have lost significantly more nature over the long term than the global average. In Sussex we currently have over 470 species that are globally threatened or in rapid decline.
- About 60% of the world's major ecosystem goods and services are being used unsustainably, where the natural assets are being used faster than they can regenerate.

The main causes are the intensification of the use of land and sea resources, pollution, invasive species, and climate change. The consequences include risks to food security, reduced productivity and impacts on quality of life. For example, over-fishing saw the collapse of cod stocks in the North Sea in the 1980s and 1990s, which led to controls on fishing that had a major social and economic impact on fishing communities.

The Sussex Local Nature Partnership has produced a Natural Capital Investment Strategy which identifies where natural capital assets in East Sussex are at risk of degradation and where new natural capital assets would add significant value.



"We are eroding the very foundations of our economies, livelihoods, food security, health and quality of life worldwide."

Robert Watson

Chair of the UN's Intergovernmental Platform on Biodiversity and Ecosystem Services (2019).

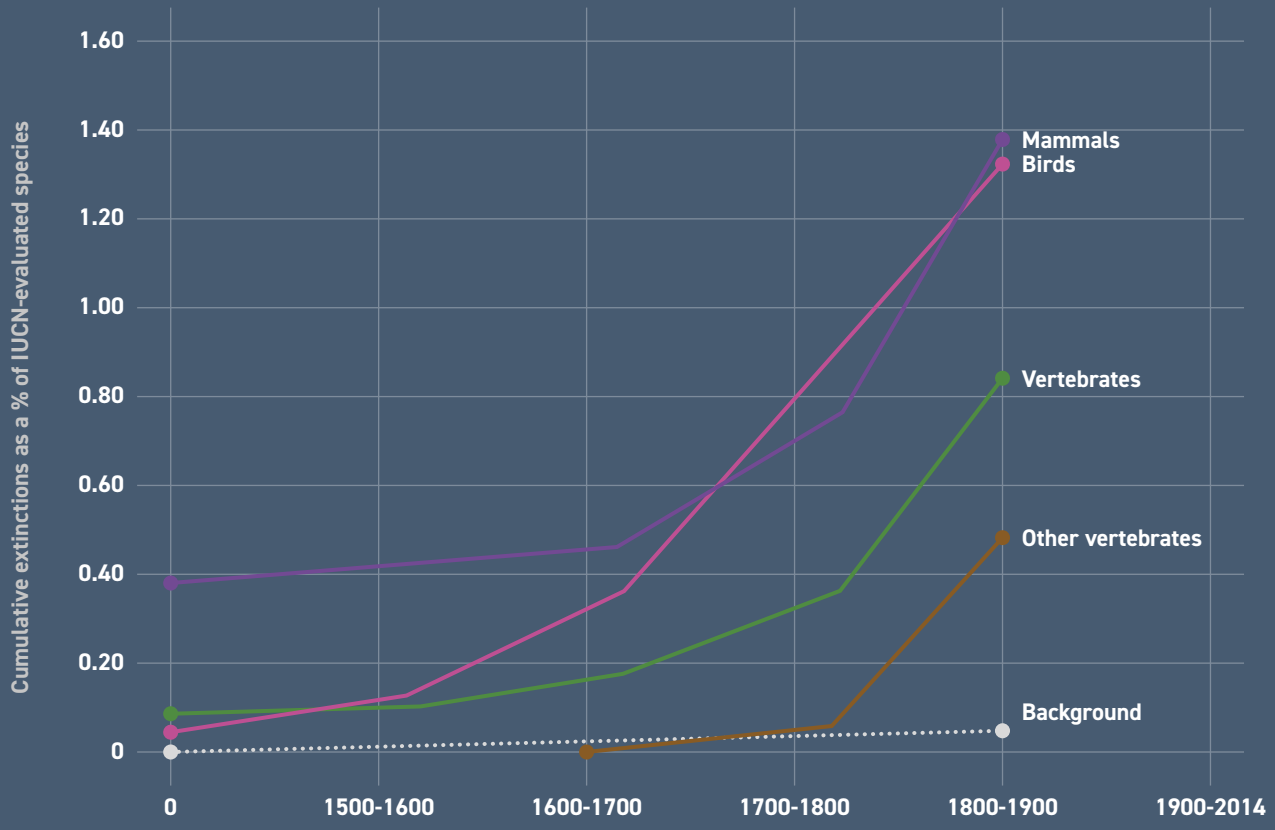
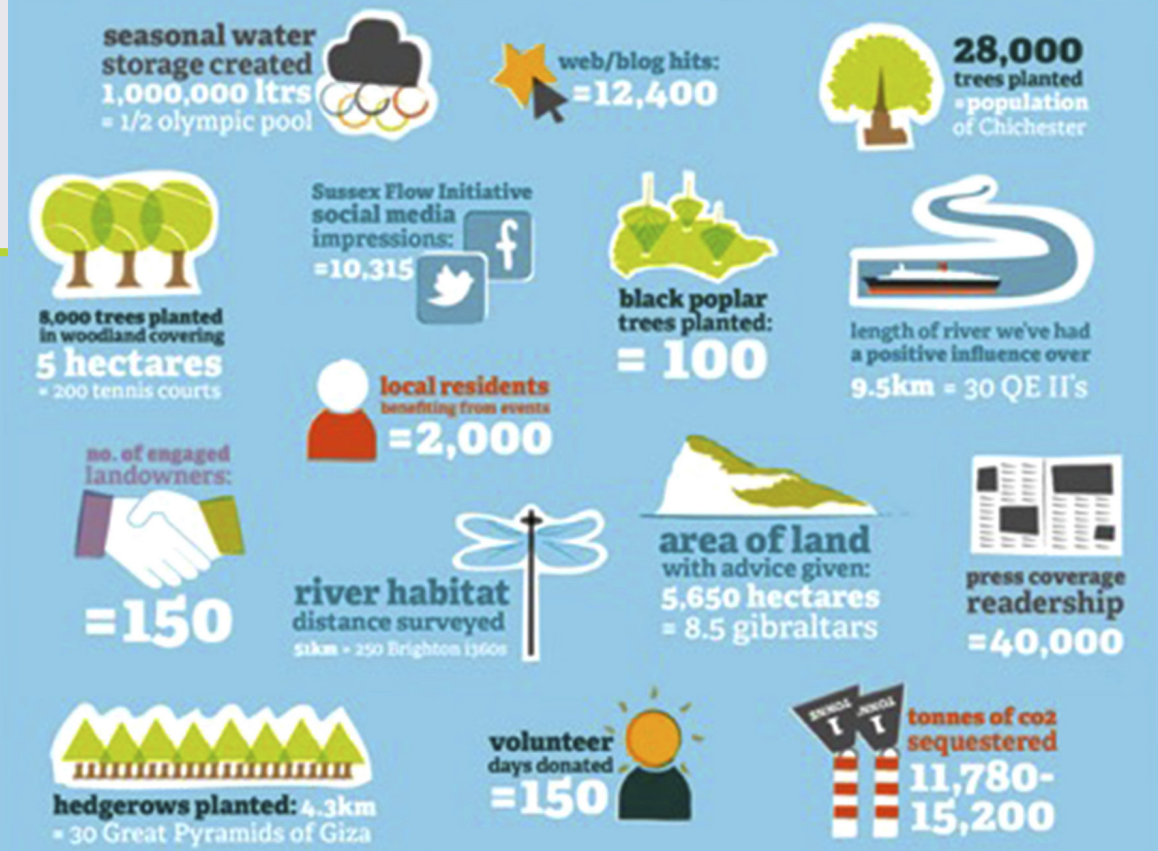


Figure 2: The cumulative percentage global loss of species since 1500

Case study:

Sussex Flow Initiative Natural Flood Management Project. 5 year summary of achievements 2012-2017.



Find out more at **www.sussexflowinitiative.org**



Air quality

Air quality in the UK has improved significantly since the first Clean Air Act of 1956, mainly due to the reduction in coal-fired power stations and an increase in cleaner transport. However, about 36,000 deaths per year in the UK are still attributable to outdoor air pollution, which makes it the 4th greatest threat to public health after cancer, heart disease and obesity (National Clean Air Strategy, 2019). The economic cost of air pollution is estimated at up to £20 billion per year, due to the healthcare costs, premature illness and days lost from work. In East Sussex, poor air quality is estimated to contribute to at least 5% of deaths per year.

Being exposed to poor outdoor air quality is not a lifestyle choice, as is smoking or drinking. Those most affected are children, pregnant women, those with existing cardiovascular and/or respiratory disease, the elderly and those who spend more time in polluted locations, for instance people who live and work near busy roads.

Different pollutants have different impacts on health and the environment. The three main pollutants in East Sussex are particulate matter (PM), nitrogen dioxide (NO_2), and ozone (O_3). The main man-made sources are the combustion of fuels by vehicles, industry and, increasingly, from domestic wood burners. The largest local contribution is from vehicles. Some air pollutants have no safe levels of exposure. Consequently, any improvement in air quality generally brings public health benefits to everyone and in all locations where there is exposure, not just identified hotspots of poor air quality.

The long term aim of this Strategy is for all of East Sussex to meet the air quality standards recommended by the World Health Organisation.



PREGNANCY

- Low birth weight



CHILDREN

- Asthma
- Slower development of lung function
- Development problems
- More wheezing and coughs
- Start of artereosclerosis



ADULTS

- Asthma
- Coronary heart disease
- Stroke
- Lung cancer
- Chronic obstructive pulmonary disease (as chronic bronchitis)
- Diabetes



ELDERLY

- Asthma
- Accelerated decline in lung function
- Lung cancer
- Diabetes
- Dementia
- Heart attack, heart failure and strokes

Air pollution affects people throughout their lifetime
(Source: Public Health England, 2019)



Water

Water is essential to life: for drinking, sanitation, farming, industrial and commercial uses, the natural environment and recreation. We assume that it's an infinitely renewable resource, yet freshwater makes up only 2.5% of all Earth's water and much of this is either polluted or abstracted more quickly than it is being replenished.

The UN's latest report on global water resources (2019) highlights that:

- a quarter of humanity already lives where water is severely scarce.
- 340,000 children under five die every year from preventable diarrhoeal diseases caused by water contaminated with faeces.
- water is a growing cause of conflict within and between states.

In the UK, regulation has helped to drive a significant improvement in water quality over the last 30 years, with 99% compliance with statutory drinking water quality standards and 98% compliance with bathing water standards. However, In East Sussex the quality of waterbodies has deteriorated in recent years. For instance, the quality of some ground waters, which provide about 70% of drinking water, has decreased due to rising nitrate levels, mostly due to historic farming practices.

East Sussex is also recognised by government as an area of serious water stress, as demand sometimes exceeds supply. This will be exacerbated by population & housing growth, which will drive greater demand for water, and by climate change, which will increase the frequency and duration of droughts. This may have an impact on all water users. For instance, the National Infrastructure Commission has concluded that, without further action to reduce demand, there is a 25% chance over the next 30 years that large numbers of households in East Sussex will have their water supply cut off for an extended period because of severe drought.

Other key issues include over-abstraction of water, with about a third of groundwater bodies in England seeing abstraction levels that are unsustainable, and leakage rates throughout the treatment and distribution process of about a third of the water taken from the natural environment (Environment Agency, 2018).



The long term aim of this Strategy is for East Sussex to achieve a resilient and sustainable water supply for consumers and the environment.



Case study:

Akro Valve Ltd, an East Sussex business which supplies flow control valves and water distribution systems including for overseas aid, has developed the Quick Stop tap, which can't be left on and so saves water.

Resource efficiency

The current scale of resource use in developed countries is not sustainable. If the total global population consumed resources at this same rate then, on the basis of known global reserves of materials, we would need 1.7 Earths to provide the resources we use and absorb the waste we generate (Global Footprinting Network, 2019). For example, over a third of global fish stocks are being fished at a biologically unsustainable rate, which impacts on food security and the long-term prosperity of some coastal communities.

Yet, global demand for resources continues to increase, driven by population growth and improving standards of living. Many resources we depend on are finite, such as fossil fuels, and the way in which we use resources is often inefficient. This reduces productivity and generates more waste, which can cause significant pollution, clean-up costs and health impacts. For instance, in the UK about 10 million tonnes of food and drink, most of which is usable, is wasted every year. This is worth around £20 billion and generates about 20 million tonnes of greenhouse gases (Resources and Waste Strategy, 2018).

There are no data on the flow of materials through the East Sussex economy. However, what we do know is that approximately 1.75 million tonnes of solid waste is generated each year in East Sussex and Brighton and Hove, most of which is recycled, composted or incinerated with energy recovery. For households, this equates to an average of about 1 tonne per year. Over the last few years re-use and recycling rates have remained fairly static, in line with national rates, which means that we are still some way off the statutory re-use and recycling targets for 2020. Consequently, there is a clear need to drive greater waste prevention and increase the re-use and recycling rates of key materials.

The long term aim of this Strategy is to achieve a more circular economy.

TOTAL FOOD WASTE: 10.2m TONNES



EQUIVALENT TO 156KG PER PERSON



BY SECTOR THIS BREAKS DOWN AS:



HOUSEHOLDS
7.1m tonnes
(£15bn)



MANUFACTURING
1.85m tonnes
(£1.4bn)



HOSPITALITY & FOOD SERVICES
1.0m tonnes
(£2.9bn)



RETAIL
0.25m tonnes
(£0.8bn)

Total food waste in the UK in 2015
(Source: UK Resources and Waste Strategy, 2019)

The key opportunities

The environmental challenges outlined in the previous section make it clear that urgent action is needed on a number of fronts. However, these challenges are also opportunities, because investing in a healthier and more productive environment will deliver a number of economic and social benefits. These include:

1. **Clean growth:**
    - The Low Carbon and Environmental Goods and Services sector includes a range of businesses working to decarbonise the energy sector, improve resource efficiency and preserve and enhance the natural environment. This sector is recognized in the East Sussex Growth Strategy (2014) and the South East Local Enterprise Partnership's Economic Strategy Statement (2019) as a key growth sector. The sector has grown consistently at around 5% per year over the last 10 years, compared with annual UK GDP of 1.5-3.1% (Grantham Institute, 2019).
    - The extensive environmental designations in East Sussex provide a competitive advantage for the visitor economy, which makes up nearly 1 in 5 businesses and a quarter of all jobs in East Sussex. Enhancing local natural capital will help grow the visitor economy, as well as improve mental and physical health by providing access to quality outdoor spaces.

Case study:

Resource and energy efficient modular housing, designed and built by Boutique Modern who are based in East Sussex, being installed in Peacehaven.





Case study:

Java and Jazz pizzeria in Forest Row doubled its oven capacity and cut energy costs with a new energy efficient oven, saving 8 tonnes of CO2 per year.

2. Improved productivity and resilience:

- Adapting to climate change will ensure the economy is more resilient to impacts that are likely to be unavoidable due to past emissions of greenhouse gases that are already locked in.
- Improving resource efficiency contributes to increasing productivity and competitiveness by delivering more with less and deploying new technologies, reduces operating costs and exposure to future risks such as scarcity of materials.
- Measures that reduce local air pollution and carbon emissions, such as walking and cycling, help to alleviate congestion and extend the capacity of our existing transport infrastructure over a longer timeframe.
- New legislation and policy, such as the ban of the sale of petrol and diesel cars and vans from 2035, is helping to drive innovation, for instance the growing use of artificial intelligence and digital. Our two local universities have innovation teams that can help drive productivity growth.
- There is a growing body of evidence that the unique and extensive natural environment of East Sussex helps to attract and retain skilled workers and increase the area's appeal to business start-ups and inward investors.
- It's also clear that making improvements to local natural capital is likely to play an essential role in both mitigating and adapting to climate change. Farmers and landowners are well-placed to employ nature-based solutions to help protect against the impacts of climate change and improve the natural environment.'

3. Improved health outcomes and reduced health costs:

- Reducing the impact of environmental pollution on health, notably air pollution, will reduce mortality and morbidity rates. For instance, reducing PM exposure by 10ug/m3 would potentially extend lifespan in the UK by five times more than eliminating casualties on the roads (Public Health England, 2017).
- Spending time in the natural environment improves mental health and wellbeing, by reducing stress, anxiety and depression, whilst physical activity measurably reduces the risk of type 2 diabetes (by 40%), heart disease (by 35%) and hip fractures (by 68%).

The scale of many environmental challenges requires co-ordinated international, national, regional and local action. Action includes regulation, fiscal incentives, investment and behavioural change. Local interventions are most effective if underpinned by consistent national policies and long-term investment.

Many organisations, businesses, community groups and individuals are already taking action. But the evidence above makes it clear that the pace and scale of change needs to be far greater to manage the challenges and to capitalise on the opportunities.

Our action plan

The table below sets out the priority actions that the Environment Board will look to deliver over the next 1-2 years. These actions have been prioritised because they will address important gaps and will deliver county-wide benefits. The action plan will be updated every year with further actions, to ensure the Board is driving continuous improvements.

For further details about why the actions below have been chosen please see the accompanying Technical Appendix at **www.eastsussex.gov.uk/environment/priorities/environmentstrategy**

Our aims and actions

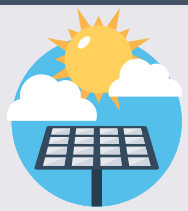
Theme	Long term aim	Actions	Indicators	Lead
Climate change	East Sussex to remain within its science-based carbon budget	1. Develop a road map for cutting carbon emissions. 2. Develop a pipeline of projects that deliver a reduction in carbon emissions. 3. Develop and implement an electric vehicle strategy for East Sussex.	CO2e emissions from East Sussex.	District, Borough and County Councils
Natural capital	Achieve a growing and resilient stock of natural capital.	Develop a Natural Capital Investment Plan	Area of new or restored habitat.	Sussex Local Nature Partnership
Air quality	Meet the air quality standards recommended by the World Health Organisation.	Develop a Local Cycling and Walking Infrastructure Plan.	Levels of key air pollution.	East Sussex County Council.
Water	Achieve a resilient and sustainable water supply for consumers and the environment.	Deliver advice and home visits/ business audits to assist households and businesses to reduce water usage.	Reduction in water demand.	Southern Water and South East Water.
Resource efficiency	Achieve a more circular economy.	Establish a network to reduce food waste from businesses in East Sussex.	Amount of waste produced.	Environment Board.

What can you do?



"The future of life on earth depends on our ability to take action."

Sir David Attenborough
Broadcaster and Natural Historian



Climate change

Join or support your local community energy group.
Go to **www.communityenergysouth.org/engage**



Natural Capital

Volunteer for an organisation such as the Sussex Wildlife Trust.
Go to: **sussexwildlifetrust.org.uk/get-involved/volunteer**



Air quality

Get support with journey planning for walking, cycling or using public transport.
Go to: **www.eastsussex.gov.uk/roadsandtransport/localtransportplan/funding/active-access-for-growth/active-access-for-growth**



Water

Get free advice and water-saving visits from your water company.
Go to: **www.southernwater.co.uk/help-advice/how-to-save-water** or **www.southeastwater.co.uk/my-water-supply/save-water-save-money**



Resource efficiency

Buy a garden compost bin or wormery for your food waste.
Go to: **www.getcomposting.com/profile/login**



What can your organisation do?

Energy: contact LoCASE for free audits and grants at **locase.co.uk/register-here**

Air quality: contact the Energy Savings Trust for free advice and support at: **energysavingtrust.org.uk/transport**

Water: contact your water supplier for advice and support on water efficiency.

Resource efficiency: contact WRAP for sector-specific support at: **www.wrap.org.uk/category/what-we-offer/business-support**



Feedback on the Environment Stategy

If you have any questions or comments on the Environment Strategy please email: **eastsussexenvironmentstrategy@eastsussex.gov.uk**

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