



## 5 Pressures and risks

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## 5.1 Introduction

England's natural environment is not static – millennia of complex changes have given us our landscapes, habitats and wildlife of today. Changes have been long-term and short-term, natural and man-made. They range from the impacts of centuries of agricultural activity to the effects of the enormous economic growth of the last 100 years and the recent effects of individual extreme weather events.

This chapter provides a summary of the major drivers of change, then examines the key pressures that have major direct effects on the state of our natural environment. These pressures arise from climate change, invasive species and diseases; how we allocate land and the sea to different uses; how we manage land, sea and freshwater; and pollution.

For each of these pressures, we describe the current situation and the implications for the natural environment. We provide a brief forward look at the risks to England's natural environment from these pressures in the immediate future, based on current understanding of their pace and direction.

### 5.1.2 Major external drivers of change

Social, technological, environmental, economic and political factors provide the context for the pressures directly affecting our natural environment.

#### 5.1.2.1 Social factors

Social issues are increasingly dominated by population change. Population in England increased steadily through the last century and will grow further, with a projection of 60.4 million in 2031 compared with 50.8 million in 2006 (National Statistics 2006). It is also predicted that there will be a higher proportion of older people among the population and more single-person households. The trend of higher population increase in southern and eastern England is expected to continue, leading to further demands for housing, transport and infrastructure development there. Increased migration introduces some uncertainty and could lead to unexpected demands on infrastructure and extra pressures for housing in both rural and urban areas.

Improved health and increased longevity will continue, but these are accompanied by trends such as increased obesity rates. Obesity coupled with inactivity is costing £10 billion per annum in England alone (Department of Health 2008; Cabinet Office 2002). Poor diet and unhealthy lifestyles (for example, seven out of ten people do not exercise enough) lead to more people having long-term health problems. Such people are less likely to be engaged with the natural environment. There is also evidence that physical health needs to be accompanied by improvements in mental wellbeing – one in four people consult their GP over their mental health. The natural environment has a crucial role to play in providing space and opportunities for engagement, understanding and re-connection. There remains a section of society still suffering from poverty and deprivation in which these physical and mental issues are at their most acute and access to the natural environment is limited.

Leisure time has increased and there is a significant amount of direct contact with the natural environment. Annually there are 74.8 million visits to England's National Parks (National Parks Portal 2008) and over 16 million visits to National Nature Reserves (see Chapter 4). Leisure time is expected to increase further as people's average age and prosperity go up. At the same time younger people spend less time outdoors, so there is an emerging generation who have little engagement with, or direct knowledge of, the natural environment.

### 5.1.2.2 Technological factors

The enormous changes in agricultural technology since the Second World War, for example in pesticides, plant breeding and mechanisation, continue to have a major impact on England's natural environment. Genetic engineering is a significant emerging technology that could have a profound influence on climate change issues, for example by using engineered micro-organisms to capture and convert carbon dioxide, or to produce biofuels. However there are concerns over the potential effects of genetically modified organisms on biodiversity and landscapes.

### 5.1.2.3 Economic factors

Economic drivers are increasingly influenced by climate change, described in the Stern Review (HMSO 2006) as 'the greatest and widest-ranging market failure ever seen'. The development of carbon pricing (placing a financial value on likely emissions) is already affecting decision-making, notably on energy generation. Global economic issues are driving trade liberalisation, better regulation and influencing investment in education and research as the UK seeks to increase its competitiveness and productivity in the face of global competition. There is also risk and uncertainty over global food production, in part driven by biofuels replacing food crops on agricultural land, which may lead to higher food prices. England's natural environment is thus increasingly affected by efforts to both respond to climate change and sustain UK economic growth.

### 5.1.2.4 Political factors

The domestic political will to tackle environmental issues has increased protection for our biodiversity and landscapes. This has been increasingly driven by action at European and wider international levels, notably over agricultural policies (for example the shift in the European Union's Common Agricultural Policy towards delivering environmental gains) and global arrangements (for example the Kyoto Protocol for reducing emissions of greenhouse gases; and the World Trade Organisation seeking to remove market barriers). Current Common Agriculture Policy reform will move to a more market-based approach for agriculture, which may provide opportunities as well as risks. The European Union's Common Fisheries Policy has been unsuccessful in halting biodiversity loss.

Action at national level is being accompanied by moves to devolve more political power in England to regional and local levels. This gives an opportunity to deliver a quality natural environment for the whole of England that also reflects local distinctiveness and local people's needs.



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