

Summary

1 The National Audit Office has prepared this briefing on environmental protection for the new members of the Environmental Audit Committee. This document summarises the key environmental protection issues facing the UK. We have prepared a separate briefing for the Committee covering sustainable development issues more broadly.

2 The environment is a complex ecosystem of inter-related parts including air, water and soil. This briefing addresses 10 areas: atmospheric pollution and climate change; air pollution; biodiversity; forestry; soil; flooding and coastal protection; waste; the freshwater environment; water availability; and the marine environment. The chosen areas are interrelated. For example, atmospheric pollution is thought to lead to climate change, and drier summers and wetter winters, which in turn may lead to more soil erosion and river pollution due to soil deposited in watercourses. Increased river pollution potentially reduces the amount of clean fresh water available for natural habitats and makes it harder for freshwater fish to thrive.

3 We have summarised below the key issues within the 10 environmental protection areas addressed in the brief:

- Scientists consider **climate change** to be under way and caused by increased levels of man-made carbon dioxide and other greenhouse gases (including methane and nitrous oxide) in the atmosphere. The UK is on course to meet its international greenhouse gas emission reduction obligations.
- **Air pollution** has been improving across the UK for a number of years, but the UK has been unable to comply with all the concentration limits and emission targets for particulate matter and nitrogen oxides within the deadlines set by the European Union (EU). The EU did not accept the UK's original request for an extension to the deadline for complying with particulate matter targets, but is reconsidering the request following receipt of further information.
- Following widespread declines in key wildlife groups in the last 30 years, some measures of **biodiversity** are now improving. For example, important improvements have been made to the condition of the UK's Sites of Special Scientific Interest. However, some priority species and habitats continue to decline, and the UK has been unable to meet its original international commitment to arrest biodiversity decline by 2010.

- Key national and international **forestry** objectives are to increase land in England dedicated to forestry, combat diseases suffered by trees, and tackle imports of illegally felled timber into the EU. Forest cover in England is increasing year on year, but the rate of increase is falling.
- The UK needs to maintain and in some cases improve **soil** quality, to ensure that soil continues to provide the food needed and store some 10 billion tonnes of carbon, which if mismanaged, could be lost as carbon dioxide emissions. Threats to soil quality include erosion, compaction, loss of organic matter and historic contamination, which can pose a significant risk to people or the environment.
- Some 5.2 million properties are at risk from **flooding** in England and Wales. The Environment Agency focuses its resources on areas of highest risk, but still estimates the average level of flood damage to properties to be some £1 billion a year.
- Nearly half of all **waste** is sent to landfill. The amount of domestic waste sent to landfill per person has been greater in the UK than many other EU countries. As well as being an inefficient use of resources, landfill is harmful to the environment, especially in terms of greenhouse gas emissions.
- **The freshwater environment** in England has improved over the last 20 years. However, there are still problems with high levels of nitrates, phosphates, sediment and pesticides from agricultural sources and sewage effluents entering rivers and a number of species of fish (such as salmon and eels) are under threat. Some 27 per cent of rivers have a 'good' ecological status, but not all rivers are expected to meet EU Directive quality standards by 2015.
- A number of areas in England and Wales face pressure on **water availability**. Increasing problems are forecast with a warmer climate and increases in the population.

- Climate change and over-fishing are having an adverse impact on **the marine environment**. Increased water temperatures are inducing fish to migrate north of the UK into colder waters, and ocean acidity levels have risen to their highest levels in the last 200 years, making it harder for fish to thrive. Only 50 per cent of the different fish stocks living in UK waters are fished sustainably.
- 4 There are two broad ways in which the Committee might choose to address environmental protection issues:
- An enquiry could focus on one of the environmental protection areas listed above. The Committee has covered some of these issues before, such as air quality, biodiversity, forestry, or climate change. In these cases, the Committee may wish to follow up its previous coverage to assess the current position. Other areas have not been covered to the same extent, such as water related issues, over-fishing or soil. An enquiry focusing on a particular issue could cover links with other related areas of environmental protection.
 - Alternatively an enquiry could focus on a particular type of approach to the protection of the environment. The Committee may wish to continue its previous interest in the Government's success in increasing environmental taxes' contribution to the tax base whilst making polluters pay. It may wish to focus on other types of measures, including consideration of regulations and their compliance and enforcement costs and delivery of intended benefits. A number of initiatives are currently under way that aim to understand and shape the way the Government and society respond to the challenge of environmental protection in terms of climate change, financial constraints, and increasing demand for natural resources. Current initiatives include the National Ecosystem Assessment, the proposed Natural Environment White Paper, and new biodiversity targets. The Committee could build on this work to identify key areas that should receive priority and define its focus.