

# England's natural environment in 2060 - issues, implications and scenarios

**The world in which we live and work is constantly changing and evolving - the precise nature of the future that actually unfolds is inherently uncertain. Surprise is inevitable. Natural England needs to be aware of the wide range of potential circumstances that could affect its operations to deliver its goals for the natural environment and the benefits it delivers to everyone.**

For this reason and as a tool to aid thinking and stimulate new ideas about the future, a set of scenarios - stories setting out a range of possible pictures of the future - that are plausible and represent the breadth of possible circumstances have been developed.

The scenarios will help Natural England build a robust perspective on the long-term challenges to the natural environment. In addition to underpinning the creation of a clear integrated vision for the natural environment to 2060, the scenarios will be used to inform and test its strategies and policies.

Covering the full span of Natural England's remit the scenarios set out a range of paths along which terrestrial and marine environments could develop, including implications on how we might live in 2060. The focal question was 'What could influence the English natural environment by 2060?' The interaction of people and society with the environment and how the environment affects people and society formed a core focus.

This report is an initial assessment of how we think the next fifty years might unfold in relation to England's natural environment. It provides a starting point for exploring the implications of how life in 2060 might affect biodiversity, landscape and people's engagement with the natural environment.

Two further documents, providing a supporting evidence base for our scenarios work, are also available on line as Natural England commissioned reports:

- 'Global drivers of change to 2060' provides a synthesis of fourteen global drivers of change to 2060 considered to represent the most significant trends, factors and pressures that could affect the natural environment to 2060.
- 'Scenarios compendium' describes what other scenarios exist and how ours complement/plug gaps that these do not. The document positions Natural England's scenarios.

## What was done

This report was prepared in-house by individuals within the Strategy and Environmental Futures Team. Following project review within the team, a number of specialists within Natural England, together with one external partner, have provided quality assurance inputs.

The scenarios themselves were created over six months using in-house expertise complemented by specialist consultancy input from SAMI Consulting (St Andrews Management Institute) and the Centre for Urban and Regional Ecology (CURE) at Manchester University.

They were prepared through extensive desk research, interviews and a series of

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workshops, involving staff and stakeholders. The research and interviews shaped the identification of fourteen global drivers of change to 2060.

The basic storylines for the scenarios were created over a series of three workshops involving staff and key stakeholders. The major factors likely to affect the natural environment were discussed. Three big questions emerged:

- Will the world have found a way to live sustainably?
- Will technology have provided a 'get out of jail free' card or will lifestyle changes still be necessary?
- What will be the world order? Will it be dominated by free market globalisation?

Combinations of possible answers to these questions were explored, along with an appreciation of how the 14 factors influencing change might evolve over the next 50 years. From this, four qualitatively different scenarios were identified to analyse further. We did not adopt a quantitative, modelling or forecasting approach, given the immense complexity and long time scales involved.

The draft scenarios were tested and refined through broad engagement with both Natural England staff and external stakeholders including members of the public, through a series of workshops and other processes including peer reviewers from outside the UK. In addition to providing a critique of the scenarios, this engagement provided an opportunity to develop timelines for the scenarios up to 2060, and, to explore the scenarios in a range of natural environments covering the span of Natural England's interests.

The scenarios were developed along consistent 'narrative threads' in which the stories start out grounded in the present, highlighting current emphasis on certain strategic issues but also pointing out where other emerging trends or issues are ignored or downplayed. The stories then develop along those tracks until a 'response' occurs in which the dominant policies and emphases are challenged and new

pathways open. These pathways are then followed through to the outcomes in 2060.

The scenarios developed in the project were influenced strongly by the central role of people's values, culture and behaviours in shaping how the future may develop. With this in mind, the Ethnographic Futures Framework (EFF) was adopted as the central unifying structure to explore how the drivers may develop over the next 50 years and then to develop and structure the scenarios. The EFF complements the timeframe of the scenarios to 2060, as the values, cultures and behaviours of people are central to determining potential outcomes in long-term scenarios. The focus on the EFF lies in where the effects of changes in the future are felt. This is different from the more usual 'drivers of change' approach, which focuses on where changes originate. This approach was adopted because it aligns well with Natural England's purpose to ensure that the natural environment is conserved, enhanced and managed for the benefit of present and future generations - people being at the heart of our purpose.

## Results and conclusions

In combination, the scenarios highlight six key questions about how England's natural environment might be affected between now and 2060:

- **What can the environment do for the individual?** How will the relationship between people and the natural world change as they increasingly look to the natural environment to provide benefits for their wellbeing?
- **How will changing landscapes be valued?** Will society resist or embrace landscapes as they change over the next 50 years?
- **What will be the geographic context of change?** How and where can the natural environment best provide services and distinctive places for people?
- **How will resource pressures be governed?** Will markets, voluntarism or regulation dominate?
- **What is the scale of response?** Will action on the environment be on a local, national or global scale?

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- **How does the future look?** How might people think about their own futures?

After looking at common themes and, significant differences across the scenarios, we have identified two issues that are central to helping society make better and more informed decisions about the natural environment.

Firstly, **in all four scenarios, the natural environment has value in some form.** The question of values boils down to 'where will the balance sit between valuing the environment for its own sake and for the social and economic benefits it can bring?' All the scenarios hint at both these positions, but it is a question of degree, rather than a discrete position at one or other extreme. In all scenarios, nature's value is grounded in the benefits it delivers to people (ecosystem services). Here, nature is very much at the service of humanity and it is conserved, enhanced and managed primarily for the benefit of people. But at the same time, there are those who value nature for its own sake, regardless of the benefits it brings to them. Here, the human/nature relationship has no clear functional purpose and nature serves both itself and humanity. Its conservation, enhancement and management enables natural systems to maintain their integrity into the long term.

Secondly, **in all four scenarios, the future state of the natural environment is determined largely by the choices that people make, shaped by their values and the broader context in which they live.** The scenarios describe the effects of different ways that choices can be made, leading to the second key question: 'what will drive decision-making?' The nature of the choices and the systems in place to make those choices vary across the scenarios, but essentially they are shaped by:

- the availability of resources - for example, energy supplies, food or water;
- scientific and technological capabilities - for example, innovation for low-carbon energy, industrial food production and information technology;

- societal preferences around trade-offs - for example, balancing renewable energy generation against nature conservation; and
- the scale and nature of decision-making - for example, spatially (from global to local), over time (from short to long term) and through relationships (directed to voluntary).

So as changes take place over the next 50 years, the extent to which implications for the natural environment are (or are not) taken into account depends on the willingness and ability of society to:

- Take a **systems approach** that enables it to understand and manage better the broad, cross-cutting and complex situations in which it finds itself, rather than tackling individual issues in isolation.
- Adopt a **futures approach** that enables it to anticipate how unknowable futures give rise to a range of risks and opportunities.
- Build **institutions and processes** that help society make choices in the face of uncertainty and take robust decisions about which risks it approaches or avoids and which opportunities it pursues or forgoes.

The report provides a synthesis of the key issues emerging from the scenarios in terms of how we might live and the implications for the natural environment. We have not specified the likelihood, nor judged the desirability of those futures. The scenarios provide the basis for challenging and forward-looking debate and discussion.

## Natural England's viewpoint

The output of the report is already shaping Natural England's upland vision and vision for the wider natural environment in 2060 and strategy. It will also form the basis for future-proofing of emerging Natural England advice and positions.

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## Selected references

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## Further information

Three scenario reports are available online:

- Natural England Research Report NERR031 '*England's natural environment in 2060 – issues, implications and scenarios*'. This describes how the future could unfold; the factors that might shape the future; how we might live; and the implications for the natural environment.
- Natural England Commissioned Report NECR030 '*Global drivers of change to 2060*'. This provides a synthesis of fourteen global drivers of change to 2060 considered to represent the most significant trends, factors and pressures that could affect the natural environment to 2060.
- Natural England Commissioned Report NECR031 '*Scenarios compendium*'. This describes what other scenarios exist and how ours complement/plug gaps that these do not.

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