

# Natural England Board



Meeting: 19  
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Paper No: **NEB PU19 06**

Title: **Evidence and Analysis Priorities for Natural England 2010/11**

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## 1. Purpose

1.1 The purpose of this paper is to secure the Board's agreement to priorities for our evidence and analysis work for 2010/11, specifically for the work that Natural England should do to:

- develop the positions that the organisation should adopt to steer our delivery and advocacy work,
- develop the evidence base that underpins these positions and our wider environmental delivery.

## 2. Recommendation

2.1 That the Board endorses the evidence and analysis priorities for 2010/11.

## 3. Introduction

3.1 Board paper (NEB PU14 04) presented the evidence and analysis priorities for 2009/10 reflecting the need to ensure that both our position development work and environmental delivery are evidence based. Annex 1 shows progress against the 2009/10 advice and analysis priorities. Annex 2 reviews progress against the 2009/10 evidence priorities.

3.2 For 2010/11 the Board is invited to consider a more integrated approach to presenting our priorities for evidence and analysis.

3.3 To guide our identification of priorities we have drawn on the following:

- Our refreshed Strategic Direction
- Reports submitted to Evidence and Policy Steering Groups by the eight Communities of Practice (CoP)
- Regional perspectives (captured within CoP reports)

- Outputs from discussions with Board and BOGs
- Known initiatives and priorities in Whitehall, Westminster and Europe
- Views from key stakeholders
- Significant events and trends in the external environment.

3.4 Our thinking on these priorities has helped guide the wider discussions on the development of the current draft Corporate Plan.

#### **4. Proposed evidence and analysis priorities for Natural England in 2010/11**

##### **4.1 Context**

4.1.1 Natural England needs to be placed firmly as leading the drive towards an environmentally sustainable, low carbon, resource efficient inclusive society which is resilient to climate change, both now and in the future. We need to ensure that the natural resources which underpin economic activity are managed in a way which enables sustainable growth (acknowledging the importance of food, water climate, energy security) and engages people.

4.1.2 As an environmental delivery body, we need regularly updated information on the state of, and trends, in the natural environment and on the external factors impacting on the environment – this will enable us to determine where and when action for the natural environment is needed. Monitoring the impact of our interventions will provide the evidence we need to demonstrate their value.

4.1.3 In summary, we need a cohesive and integrated overall programme of evidence, analysis and advice across our agenda.

##### **4.2 Definitions**

4.2.1 Natural England uses a wide range of evidence to determine and support its positions. We build our evidence base through a combination of monitoring and research:

- Monitoring includes both general surveillance of state and trends, and monitoring of specific schemes, together with evaluation of results.
- Research covers specific projects designed to explore ideas and concepts, design and test techniques and undertaking modelling. Natural England's research may relate to a number of scientific disciplines relevant to our remit including social science, biology, geological science. As well as commissioning research in these areas, we also seek to inform relevant external research programmes (notably Defra's), to ensure coordination and avoid duplication.

4.2.2 Our analysis sets out the environmental implications of specific aspects of national public policy, to advise government policy making and review in the

future. Our positions are drawn from delivery experience, an understanding of evidence findings or the interplay between policies, and of their combined impact on the natural environment. We also seek to analyse implications of policy development and implementation by other stakeholders, outside other Government bodies.

### **4.3 High level priorities for 2010/11**

4.3.1 The priorities were identified by a process led by the Communities of Practice (CoPs). Each has reviewed both its evidence and its analysis priorities by systematically reviewing the existing portfolios of work and highlighting future needs and challenges. These perspectives were reviewed by the Evidence Steering Group and the Policy Steering Group in their meetings of July and September 2009. This paper incorporates the approved recommendations.

This work of our Communities of Practice is shaped by ongoing engagement with stakeholders and external experts to ensure that our evidence and analysis priorities are informed by external work and thinking. We continue to develop effective processes for this engagement and, most recently, have trialled a series of webinars with stakeholders and external experts to share and test our evidence priorities.

#### **4.3.2 Landscape, Historic Environment and Geodiversity**

Our review has identified a number of key drivers for our evidence and analysis work, most notably implementation of the European Landscape Convention at a national scale and the need for integrated landscape objectives.

Areas of particular focus will be:

- Reviewing and confirming our Character Area objectives.
- Commencing the Character and Quality of England's Landscapes (CQuEL) project to monitor changes in the quality of the English countryside.

#### **4.3.3 Biodiversity**

Key drivers for our evidence and analysis work include International Year of Biodiversity; the need to review biodiversity achievements against 2010 targets; growing interest in and evidence of the value of biodiversity and ecosystem services; and the opportunity created by the Government review of ecological networks.

Areas of particular focus will be:

- Developing the evidence base to support the establishment of a coherent and resilient ecological network, including establishing the role of designated sites as a core component of this.

- Setting out the challenges and our ambitions for biodiversity including post 2010 biodiversity targets and using this to develop our overarching position on Biodiversity.

#### **4.3.4 Marine**

Key drivers for our evidence and analysis work include the Marine and Coastal Access Act, the Marine Strategy Framework Directive, reform of the Common Fisheries Policy; and requirements of existing and new Natura 2000 sites.

Areas of particular focus will be:

- Developing the evidence base required to support the implementation of new Natura 2000 designations and the Marine and Coastal Access Act, and using that evidence to inform the development of an overarching position on Marine and the update of our Position Statement on Marine Protected Areas.
- Using the evidence available from our report on Sea fisheries (NE193 Sea fisheries: steps to sustainability), developing our position on the reform of the Common Fisheries Policy.

#### **4.3.5 People and Access**

Key drivers for our evidence and analysis work include the Marine and Coastal Access Act and the need to underpin our future targeted actions around people and access with a sound understanding of people's use of the natural environment.

Areas of particular focus will be:

- Continuing implementation of our monitoring of people's engagement with the natural environment.
- Establishing an integrated monitoring and evaluation framework for our interventions in this area of work, for example coastal access.

#### **4.3.6 Sustainable Land Use**

The key drivers for our evidence and analysis work include a rapidly changing land use planning framework and the increasingly important political driver of 'localism' which will mean an growing trend to determine land use and other investment decisions at local and sub-regional level.

Areas of particular focus will be:

- Further developing our evidence base by monitoring the effectiveness of our interventions through planning casework while tracking reforms to national planning policy and implications for land use, and drawing on the breadth of our current evidence to develop our position on water.

#### **4.3.7 Land Management**

Key drivers for our evidence and analysis work include the debate on food and energy security and sustainable agricultural production; review of CAP post 2013 and the opportunity to shape a successor programme to RDPE (Rural Development Programme for England).

Areas of particular focus will be:

- Gathering further evidence on the impact of agri-environment schemes.
- Consolidating our evidence, on scheme delivery as well as on wider themes such as climate change, to develop our position on the EU budget review and associated CAP reform (CAP 2013), including Mid Term Evaluation.

#### **4.3.8 Vision, Strategy and Opportunities**

Key drivers for our evidence and analysis work include Vision 2060 which requires us to identify future threats and opportunities, particularly to place an ecosystem approach at its core.

An area of particular focus will be:

- Further development of our understanding of the ecosystem services approach and how to implement it, including valuing ecosystem services.

#### **4.3.9 Climate Change**

Key drivers for our evidence and analysis work are implementation of the Climate Change Act including the statutory climate change risk assessment; continuing scientific uncertainty about impacts and the effectiveness of adaptation measures, as well as the need to understand the impact of human responses on the natural environment and how the natural environment can help society adapt.

An area of particular focus will be:

- Further development of our evidence base to inform effective adaptation and mitigation responses to climate change.

#### **4.3.10 Cross-cutting evidence priorities**

Although our evidence priorities have been presented separately in the above summary, we have sought to identify the interactions between the different needs and have developed a suite of integrated projects that will specifically meet the priority evidence needs across a range of communities, particularly in the context of climate change:

- Mapping and modelling ecosystems services
- Definition and development of a 'landscape' approach to delivery
- Resilience to climate change: what is it and what makes ecosystems and landscapes resilient?

- Evaluation of adaptation measures in response to climate change
- Contribution of habitats to carbon storage
- Development of the evidence base to inform future land management schemes under the Rural Development Programme

#### **4.3.11 Monitoring**

Similarly, we have brought the monitoring priorities together within Natural England's integrated monitoring programme, within which we have four development projects to provide multiple benefits across our outcomes:

- Integrated SSSI and HLS monitoring.
- Long-term monitoring to detect environmental change.
- Landscape-scale integrated monitoring pilot.
- Environmental monitoring database.

#### **4.4 Delivering the evidence and analysis priorities**

- 4.4.1 The overall programme of evidence and analysis work will be refined and embedded within Natural England's target plans with a strategic overview maintained by PSG and ESG.
- 4.4.2 The planned budget for the 2010/11 evidence programme is £7.5m, of which 80% will be spent on monitoring and 20% on wider research.
- 4.4.3 In delivering this work, we will continue to work closely with stakeholders to best co-ordinate and integrate our efforts. With specific reference to our evidence work, we will continue to develop our partnership with Defra, for example in the co-ordination of our research programmes on ecosystem services and agri-environment schemes.

#### **4.5 Looking beyond 2010/11**

- 4.5.1 A significant proportion of the evidence and analysis priorities identified in this paper are likely to remain important to Natural England beyond 2010/11. Several of our key programmes of monitoring and research will be further developed, ranging from ecosystem services, climate change and carbon storage, through implementation of the Marine and Coastal Access Act to people's engagement with the natural environment. The key areas of national policy significance will remain, particularly around climate change, energy and CAP reform. It is likely that natural resource management issues will become increasingly significant in the drive towards an environmentally sustainable, low carbon, resource efficient inclusive society which is resilient to climate change.

## Annex 1 - Progress with Environmental Advice and Analysis priorities agreed by the Board in 2009/10

2009/10	Board consideration
Land management	<ul style="list-style-type: none"> <li>• Soils draft position approved for external consultation</li> <li>• Biotechnology in the environment position approved</li> <li>• Invasive non-native species position approved</li> <li>• More sustainable agriculture draft position (approved for external consultation)</li> <li>• Food Security and the natural environment draft position approved for external consultation</li> <li>• Policy input to mid-term evaluation of RDPE 2009.</li> </ul>
Planning and sustainable land use	<ul style="list-style-type: none"> <li>• Transport and the natural environment position approved</li> <li>• Road and Rail draft position approved for external consultation</li> <li>• Aviation draft position approved for external consultation</li> <li>• Trees and Woodland draft position approved for external consultation</li> <li>• Port Development draft position awaiting approval</li> <li>• Spatial Planning position approved</li> <li>• Wave and Tidal Energy position approved</li> <li>• Environmental Advice and Analysis input to 9 National Policy Statements and 2 Planning Policy Statements</li> <li>• Environmental Advice and Analysis input to EAC Inquiry on Floods and Water</li> <li>• Environmental Advice and Analysis input to draft Floods and Water Bill</li> </ul>
Climate change adaptation	<ul style="list-style-type: none"> <li>• Environmental Advice and Analysis response to EAC Inquiry into climate change adaptation</li> </ul>
Inspiring people to enjoy, understand and act for the natural environment	<ul style="list-style-type: none"> <li>• Inspiring people to value and conserve the natural environment draft position approved</li> </ul>
Sustainable use of the marine environment	<ul style="list-style-type: none"> <li>• Marine Fisheries and Aquaculture draft position approved for external consultation</li> <li>• Environmental Advice and Analysis response to EU Common Fisheries Policy</li> <li>• Environmental Advice and Analysis input to guidance accompanying the Marine and Coastal Access Act</li> </ul>
Landscape scale integration	<ul style="list-style-type: none"> <li>• All Landscapes Matter position approved</li> <li>• Future Landscapes position approved</li> <li>• Protected Landscapes draft position approved for external consultation</li> <li>• Historic Environment draft position approved for external consultation</li> <li>• Ecosystems Approach draft position approved for external consultation</li> <li>• Agreed action plan linked to the European Landscape Convention</li> </ul>

## Annex 2 - Progress with Evidence priorities agreed by the Board in 2009/10

Evidence priorities 2009/10	Progress
<ul style="list-style-type: none"> <li>• Maintenance of the monitoring programmes that enable Natural England to both target resources effectively and understand the impact of our own work and that of others.</li> </ul>	<ul style="list-style-type: none"> <li>○ We have established our Integrated Monitoring Programme to effectively target and integrate all monitoring activity (incorporating surveillance, monitoring and evaluation) across Natural England.</li> <li>○ One area of particular focus has been taking forward the suite of habitat inventories. We have now updated inventories for fens, reedbeds, coastal &amp; floodplain grazing marsh and lowland heathland habitats. These now feed into our agri-environment targeting and underpin our strategy for reporting on the Habitat Regulations.</li> <li>○ External papers published on issues relating to our monitoring work include: <ul style="list-style-type: none"> <li>▪ Forty-year changes in the canopy and the understorey in Wytham Woods. Forestry. K Kirby et al.</li> <li>▪ Birds of Conservation Concern 3: the population status of birds in the United Kingdom, Channel Islands and Isle of Man. British Birds. A Brown et al.</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>• Broadening our monitoring work to include robust programmes for monitoring landscape and people's engagement with the natural environment.</li> </ul>	<ul style="list-style-type: none"> <li>○ We commenced MENE (Monitor of Engagement with the Natural Environment) as an initial three-year programme providing survey-based evidence on people's behaviours and attitudes with regard to the natural environment. This programme is being progressed in partnership with Defra and the Forestry Commission.</li> <li>○ We are developing the methodology for our new CQuEL survey which will monitor the condition and quality of England's landscapes from 2010/11.</li> <li>○ We have initiated a major project to refresh the descriptions and objectives for all 159 National Character Areas to provide a landscape framework for monitoring and integrated delivery.</li> </ul>
<ul style="list-style-type: none"> <li>• Developing our understanding of, and ability to articulate, the impacts of agri-environment delivery.</li> </ul>	<ul style="list-style-type: none"> <li>○ We have published a well-received report on the achievements of agri-environment schemes over 20 years: NE194 Agri-environment schemes in England 2009.</li> </ul>

	<ul style="list-style-type: none"> <li>○ We have established a broad programme monitoring the impacts of HLS at the agreement level, working in partnership with the Centre for Ecology and Hydrology (CEH).</li> <li>○ Our ongoing ‘Hillesden Experiment’ is quantifying the impacts of Entry Level Stewardship on biodiversity at farm scale.</li> <li>○ We have used our accumulated evidence and analysis on the impact (and the potential) of agri-environment schemes to inform and shape the work of the Land Use Policy Group – with key outputs including: <ul style="list-style-type: none"> <li>▪ Securing our common future through environmentally sustainable land management (LUPG, 2009)</li> <li>▪ Estimating the scale of future environmental land management requirements for the UK – Report for the Land Use Policy Group (ADAS, 2010)</li> </ul> </li> <li>○ External papers published on issues relating to agri-environment impacts include: <ul style="list-style-type: none"> <li>▪ Bird use of cultivated fallow ‘Lapwing plots’ within English agri-environment schemes. Bird Study. P Grice et al.</li> <li>▪ Bird conservation and agriculture: a pivotal moment? Ibis. P Grice et al.</li> <li>▪ Assessing the impact of Entry Level Stewardship on lowland farmland birds in England. Ibis. (Natural England funded)</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>• Working on the wider social and economic valuation of the natural environment.</li> </ul>	<ul style="list-style-type: none"> <li>○ We continue to work with Defra, the Environment Agency and other partners to build the evidence base on valuing the natural environment.</li> <li>○ We published a major report: NE220 No charge? Valuing the Natural Environment.</li> <li>○ We are exploring the cultural services provided by landscapes, as reported in: NECR024 Experiencing Landscape: capturing the cultural services and experiential qualities of landscape.</li> </ul>
<ul style="list-style-type: none"> <li>• Development of the scientific understanding needed to define an ecologically coherent network of marine protected areas, and monitor their condition.</li> </ul>	<ul style="list-style-type: none"> <li>○ We hosted a major international MPA conference in December.</li> <li>○ Commissioned research is currently underway to develop guidelines about the viable size of Marine Protected Areas (MPAs).</li> </ul>

	<ul style="list-style-type: none"> <li>○ We have a joint project with JNCC to consider the future monitoring requirements for MPAs.</li> <li>○ Relevant publications include: <ul style="list-style-type: none"> <li>▪ NECR008 Adapting effective stakeholder engagement processes to deliver regional (MPA) network</li> <li>▪ NECR018 Representativity and replication for a coherent network of Marine Protected Areas in England's territorial waters.</li> </ul> </li> </ul>
<ul style="list-style-type: none"> <li>● Further develop and refine an ecosystem services approach that will enable the development of a practical delivery model.</li> </ul>	<ul style="list-style-type: none"> <li>○ We have produced a key set of publications on upland ecosystems based around Natural England's Uplands Vision: <ul style="list-style-type: none"> <li>▪ NE210 Vital uplands, Natural England's vision for the upland environment in 2060</li> <li>▪ NE209 Mapping values: the vital nature of our uplands – an atlas linking environment and people</li> <li>▪ NECR028 Upland Ecosystem Services: assessing the links between environment, land management and service delivery for 4 key services</li> <li>▪ NECR029 Economic valuation of upland ecosystem services.</li> </ul> </li> <li>○ We are developing our three upland ecosystem services pilots which will provide critical evidence about the viability of implementing the ecosystem service principle in real places.</li> </ul>
<ul style="list-style-type: none"> <li>● Development of our understanding of how Natural England's delivery will need to evolve in order to deliver effective adaptation of the natural environment to climate change.</li> </ul>	<ul style="list-style-type: none"> <li>○ We have presented a paper on our approach to ecosystem based responses to climate change at a major international climate change conference '4 degrees and beyond', Oxford, September 2009</li> <li>○ We have produced a number of relevant publications including: <ul style="list-style-type: none"> <li>▪ NECR004 Climate Change and Biodiversity Adaptation: The Role of the Spatial Planning System</li> <li>▪ NECR009 Horizon scanning for new invasive non-native animal species on England</li> <li>▪ NECR033 The management of natural coastal carbon sinks</li> <li>▪ NECR034 Ocean acidification: the facts</li> </ul> </li> </ul>

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|  | <ul style="list-style-type: none"><li>○ We have produced a peer-reviewed paper on the Environmental Change Network: C Bealey, M Morecroft et al. The UK Environmental Change Network: emerging trends in the composition of plant and animal communities and the physical environment. Biological Conservation.</li></ul> |
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