

Natural England Board



Meeting: 13

Date: 5 November 2008

Paper No: **NEB PU13 03**

Title: **Natural England Science Advisory Committee (NESAC) Update**

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1. Background

1.1. The Natural England Science Advisory Committee (NESAC) has met twice since the last update, in April and September.

2. Recommendation

2.1 It is recommended that the Board notes the work of the NESAC to date.

3. NESAC April meeting – non-native species

3.1. There are a number of Natural England policies and work programmes in development that refer explicitly to climate change and the April NESAC were asked to consider and input into two of these. Previous positions on non-native species have been relatively straightforward – the evidence for negative effects to native species and ecosystems when non-native species are introduced by humans is substantial, and non-native introductions have always been discouraged. Active control of non-native species has often been taken by Government, even when this has proved publicly controversial (e.g. ruddy duck, grey squirrel).

3.2. Climate change, however, is changing the context for 'non-native species', with many new species now colonising the country, in ways which blur the distinction between 'natural migration' and 'introduction'.

The NESAC considered a paper that summarised these issues and advised, inter alia that:

- clarity is now critical to differentiate 'non-native species' from 'malign invasive species';
- a risk-based approach (rather than one of dogma or definition), and the application of the precautionary principle therein, is necessary;
- individual species should be dealt with on a case-by-case basis and managed at national, regional and local levels as appropriate;
- the effects on ecosystem function are significant and need investigation;

- there remains debate on whether we should aim to conserve ‘functioning ecosystems’ and/or ‘existing biodiversity’;
- Natural England should lead in this area both operationally and intellectually, where the evidence supports it;
- nonetheless, Natural England should be alert to the proliferation of initiatives concerned with invasives and the risks of their arrival, and should develop its own independent thought and policy in this arena;
- climate change is likely to open up the debate both to different paradigms and to a much wider general audience. It is a priority that Natural England has a public attitude to the arrival of species attributable to anthropogenic climate change, and considers logical distinctions between these and other species transported more directly by people.

3.3. These recommendations are being incorporated into the draft policy on non-native species that is currently being prepared.

4. NESAC April meeting – climate change adaptation indicators

4.1. Climate Change Adaptation Indicators will be required to assess the performance of the response strategies established to deliver climate change adaptation.

There are essentially two types of CCAI:

- process – measuring the level of adaptation activity at different levels, for example: the number of sectoral adaptation strategies produced (e.g. England Biodiversity Strategy's objective for all BAP sectoral groups to develop adaptation strategies); the number of adaptation plans produced (e.g. each BAP sectoral group to develop adaptation plans for priority - vulnerable/at risk - habitats and species); or the number of adaptation projects implemented (e.g. adaptation projects to deliver plans for priority habitats and species);
- outcome – measuring and monitoring the success of adaptation activities (for example number of homes protected from expected increases in flooding, number of lives saved due to a heatwave plan being in place).

4.2 The NESAC discussed the issue of indicators for adaptation and advised, inter alia, that:

- the development and construction of indicators was necessary and an important component of NE's science and evidence work; subsequent discussion focussed upon what a good indicator would look like and whether a single indicator is meaningful and worthwhile;
- a strong evidence-based indicator would help deliver more resources for adaptation of the natural environment to climate change but that it was essential that to ensure that indicators from others did not conflict with Natural England's strategic objectives (for example, where flood defence indicators could result in permanent negative impacts on the natural environment);

- a single specific indicator was desirable but may not be robust enough for Natural England's purposes;
- Natural England should focus instead on the evidence base for the construction of an indicator that reflected an index approach (by analogy to the Retail Price Index) that comprised a range of components (e.g., single species, habitat), each of which could also be geographically specific.

5. NESAC September meeting – social science

5.1. The meeting in September included additional invited guests with specific interest in the relationship between people and the environment. They discussed the paper which had been presented to (and endorsed by) Natural England's Evidence Steering Group the previous day, and which will shape Natural England's future science agenda. In plenary discussion the following points were made:

- the paper was a good summary of analysis and gaps in relation to evidence about the relationship between people and the natural environment. However we should be cautious, particularly when presenting this work externally, about calling the paper a 'Social Evidence Review', as it had not gone into a full systematic review;
- the series of questions around which the paper had focussed were helpful and covered an appropriate breadth of issues. There was considerable discussion about the term 'engagement' and the need for clarification of definition. In particular there was discussion about the use of the term in relation to the natural environment when other areas of social research and policy recognise the value of the natural environment in terms of the opportunities for individuals to 'disengage' from the pressures of life;
- one area that had not been covered by the paper was that which related to a better understanding of the attitudes and motivations of farmers and land managers, particularly in relation to their response to agri-environment measures. This was felt to be an area that Natural England could take a lead in developing the evidence base;
- there was endorsement for Natural England to play a lead co-ordinating role to systematise and improve the evidence base around the areas identified. There was also recognition that Natural England has a unique opportunity to drive forward and monitor specific small scale experimental interventions which will add to this growing body of evidence;
- it was agreed that further work to identify the 'key questions' in this area of research and evidence, such as had been done by the ecological community recently, might well prove to be an effective driver of the science and Natural England should consider leading such a piece of work;
- there was extensive reference to the somewhat patchy nature of the evidence base that seeks to quantify the beneficial effects of a healthy natural environment to human health and well-being; some parallel initiatives were discussed and, once again, the meeting felt that Natural

England could very usefully catalyse and drive research in this area to ensure policy relevance.

6. Future meetings

- 6.1. The next meeting of the Natural England Science Advisory Committee in December 2008 will, as requested by the Board, consider the issue of genetically modified organisms, and will once again include invited guests.