Department for Environment, Food and Rural Affairs

Biodiversity 2020: Developing indicators for measuring success

Response Form

August 2011

Please use this form to comment on the Technical Discussion Paper 'Biodiversity 2020: Developing indicators for measuring success.'

Responses can be sent by email (preferred) or post by November 11th 2011.

Email address: biodiversity@defra.gsi.gov.uk (please mark subject line: 'Response: indicators')

Postal address: Biodiversity Programme (Response:indicators), Zone 1/17, Department for Environment, Food and Rural Affairs, Temple Quay House, 2 The Square, Temple Quay, Bristol. BS1 6EB

Before you start

Your response will be used to develop an indicator set that makes best use of available data and is: relevant to the strategy, scientifically robust, compact, easily communicated and affordable. Please ensure that if you are commenting on particular indicator topics that you specify the indicator topic by number.

Defra and Natural England will publish a summary of the issues raised by respondents to this discussion document. This summary will include a list of names of organisations that responded but not people's personal names, addresses or other contact details. We will also store individual responses on a secure hard drive as members of the public may ask for a copy of responses under freedom of information legislation.

If you do not want your response - including your name, contact details and any other personal information – to be publicly available, please say so clearly in writing when you send your response to the consultation. Please note, if your computer automatically includes a confidentiality disclaimer, that won't count as a confidentiality request.

Please explain why you need to keep details confidential. We will take your reasons into account if someone asks for this information under freedom of information legislation. But, because of the law, we cannot promise that we will always be able to keep those details confidential.

Please provide your name, organisation (if applicable) and contact details below. Please include an email address if you have one.

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Does your organisation provide data for the existing England Biodiversity Indicators?	☐ Yes	☒ No

Questions for respondents

Table 1 in the technical discussion document sets out 17 indicator topics intended to cover the range of Strategy priorities and outcomes. Within each topic, the intention is to develop an indicator using best available data. Each indicator may have more than one measure where it is not sensible to combine them (for example, the existing indicator on wild birds has four measures for wetland, woodland, farmland and sea birds and each is assessed separately).

Table 2 sets out, for each of the indicator topic areas, the existing indicators available, the data sets that might underpin any indicator refinements or development and a set of options for that refinement or development.

Questions are set out below. Please leave the response box blank for any question that you do not wish to answer. Boxes may be expanded as required.

Q1. *Ensuring development options have been adequately identified*. For those indicator topics assessed as amber or red in Table 2, are there any:

   a.   Existing indicators (under development or used elsewhere); or

   b.   Existing data sources,

   that are not listed in the discussion document but which could be used to develop indicators for the Strategy ?

Enter your comments here. Please state which indicator topic(s) you are addressing.

1. Extent and condition of selected habitats.

A potential further source of reliable data to support this indicator might include Environment Agency data on aquatic habitats.   It is also considered that at least some local habitat assessment data derived from local records centre data on local wildlife sites (not just SSSIs) would be able furnish ongoing, reliable data ro develop a more robust indicator. Discussions on the availability of this need to be held with the Association of Local Environmental Records Centres.

An indicator under this heading needs to be developed that would show the robustness of habitats to absorb or robustly adapt to changes brought about by climate change. One such measure that might be developed would be a measure of habitat connectivity within landscapes: proportion of land parcels of any one priority habitat that are within a maximum proximity to similar habitat within the same landscape character area. This could include areas of habitat that are undergoing habitat re-creation or enhancement, so that improvements can be measured.

For the use of species as a proxy indicator of habitat quality it would be imperative that technical discussions on these involve key representatives of the relevant expert organisation concerned

2. Extent and condition of protected sites.

Restriction of this indicator to Sites of Special Scientific Interest or other statutorily protected sites is not adequate to fulfil the requirements of the Aichi Targets or the EU Biodiversity Strategy, let alone the England Strategy (Outcome 1C).   For this reason, we would question the identification of this indicator as GREEN.   Local wildlife sites, while not statutorily protected, are given some protection through their inclusion in local authority planning frameworks, and, despite the proposed changes to these frameworks, it is likely that local authorities would want to retain these as protected areas where at all possible. Potential data sources for sites other than SSSIs etc. include local wildlife site monitoring programmes. Data for these are usually available from most, if not all local records centres. Work may be needed to standardise reporting.

In addition, condition monitoring of SSSIs needs to be reviewed to take account of the robustness of habitats to adapt to species-communmity shifts in the light of climate change. At present, the rigid criteria for the definition of SSSIs is not able to take account of anything other than the site characteristics for which it was originally designated. This is a straight-jacket that needs to be amended.

3. Habitat connectivity

Comments made under 1), above, relating to measures of habitat connectivity, are also relevant here.   Data sources should include local records centre habitat datasets.

As regards use of data from the NBN Gateway, it is suggested that more work is needed to assist voluntary sector NBN data suppliers to implement effective and sustainable sampling and monitoring programmes, both through national recording schems and through local records centre surveys.

4. Status of priority species.

We would agree with the identification of this indicator status as being RED. A primary problem is the lack of apparent support for both the UKBAP process, and also (especially) the withdrawal of JNCC from support of the Red Data List review process, other than for "quality control". This means that the inclusion or retention/deletion of species in the UK Priority Lists

is effectively no longer being adequately supported by robust data.

There is also a need under this indicator to include measures of potential success. The 'selection of species' giving a 'representative sample' of priority species therefore needs to focus on species that are especially capable of indicating change (either positive or negative).

5. Trends in abundance and distribution of selected species.

We would question the designation of this indicator as GREEN. In particular, we would question why this indicator continues to be restricted to these particular species groups, although this is evidently because there are robust, long-term datasets involved. Some of these, notably birds, are in fact rather unspecific indicators of environmental change. Other potential indicators might now include Lichens (highly precise indicators of specific environmental factors), Odonata (dragonflies etc.) (high quality indicators of water quality and changes to the water environment), Moths (for which high quality data now exists as both a base-line and indicating long-term population trends of great importance within food-webs), Ephemeroptera (Mayflies) (important freshwater indicators) and potentially some Coleoptera groups (although these would need some development). It is suggested that discussions on development of these additional indicators be sought with the relevant expert groups and the NBN Trust.

In relation to the above comments, it needs to be emphasised that reported planned cuts to the Rothamsted Insect Survey through BBSRC are likely to jeopardise the availability of at least some of the data that underpin especially the long-term Moth dataset.

6. Status of habitats and species providing essential services.

The identification of this indicator as AMBER needs to be questioned. The two existing indicators are far too narrow to provide an effective indicator. There needs to be development of effective indicators for e.g. pollination services (not just for crops), food-chain robustness, and the robustness of the nutrient-recycling capabilities of the environment, such as fungal mycorrhizal communities and dung decomposers (affected severely by the over-use of antibiotics against parasites).

In relation to public enjoyment - we question that these two areas are lumped together under one indicator, given the very different data requirements for each indicator, and their relative focus. For this part of the indicator, we would also suggest an independent source of information be sought for public engagement, rather than relying entirely on government-produced datasets.

8. Awareness, understanding and support for biodiversity.

We would suggest that the existing indicator needs some extension particularly to measure a) the public's genuine understanding of the natural environment (e.g. ability to recognise and understand the siginficance of key common indicator species); b) the potential for future generations to have a greater understanding of the environment (e.g. no. of children that understand sources of foods).

11. Integrating biodiversity into local decision-making

We feel strongly that this indicator must be considered to be at least AMBER. While the measure of local wildlife sites in positive management may be a reasonable indicator of habitat sustainability, it does not give a reliable indication of the effectiveness of local decision-making in relation to the environment.

We would propose that an alternative indicator ought to be the proportion of all planning applications to local authorities that are effectively screened for their impact on biodiversity.

Local records centres, where these are properly supported, usually carry out this function for local authorities in their area, and it would be a simple metric to develop.   In addition, a further measure also needs to be developed - the proportion of planning decisions, where miitigation for biodiversity conservation has been agreed, that are subsequently followed up to ensure compliance. Again, this could be a straightfoward metric to be developed by local planning authorities, and would strongly enhance local authority compliance with their duties under wildlife and planning legislation, which has been shown to be inadequate (report by the Greater London Records Centre, GiGL, to Defra).

Under your listed Development options, you suggest the number of data downloads by local authorities from the NBN Gateway might be a useful metric. We would suggest this in itself is a simplistic measurement, and does not provide a useful metric for real engagement by local authorities with biodiversity.   A better metric would be the number of local authorities that have a properly funded data access and use agreement with their local records centre, which is their local 'window' on the NBN, being able to provide their local authority clients with effective interpretation of biodiversity data.

12. Innovative financial mechanisms.

A potentially highly effective innovative financial measurement would be the introduction of a (small) levy on all planning applications that could be ring-fenced to support the process of assessing applications against biodiversity information at the local level, including the acquisition and management of relevant biodiversity data.

 A metric developed from this might also be the proportion of all planning applications that were enabled to be screened for biodiversity impacts, coupled with the number of applications that were subsequently challenged at a public inquiry on biodiversity grounds.

14. Expenditure on domestic and international biodiversity.

The metrics chosen for this are inadequate because they do not include data for expenditure at the local level. There also needs to be metrics for biodiversity-related expenditure for other Government departments than just Defra, particularly related to the integration of biodiversity considerations into other Departmental decision-making processes.

15. Trends in pressures on biodiversity.

We would support the splitting of this indicator into at least three separate indicators, so that the importance of each is clearly understood.   However, there also seems to be a potential problem that environmental pollution is being lost sight of under either 'climate change' or 'pressures on marine biodiversity'.   It is particularly important for the long-term sustainability of the natural environment that especially nitrogen and phosphate inputs to the environment are controlled, and therefore long-term metrics of these need to be maintained (and acted upon).

The climate change metric is partly met through the suggestions made above under 1) above, regarding habitat connectivity.

16. Integration of biodiversity into key production sectors

Another potential source of a metric might be the amount/proportion of mineral restoration projects that have biodiversity targets incorpoerated into them.

Although not strictly a 'production sector', a metric could be developed of the positive management for biodiversity of transport infrastructure corridors (e.g. proportion of overall length of road verges in an area with biodiversity-focused management programmes in place).

17. Availability of biodiversity data for decision-making.

We welcome this indicator, and agree that it needs to be developed.   A particularly useful metric (related to 11) above) would be the level of use of data from/support for local records centres by local authorities.

The proposal to develop an indicator based on data downloads from the NBN Gateway needs more consideration and development, as a useful metric from this needs careful consideration of who is downloading what and what for.   We would suggest this is discussed with the NBN Trust.

Q2.   *Identifying preferred options.* Indicators should be:
   a. Relevant to the Strategy
   b. Easily communicated to a non-specialist audience
   c. Based on suitable, high quality data sets (e.g. with a time series > 5 years, of known precision, with representative geographic coverage, regularly updated, and with a published methodology)

In addition, the indicator set should be compact and comprehensive and not place substantial financial burdens on the public sector.

Which of the options set out in the discussion document, or that you have identified in Q1 above, best meet these requirements?

Enter your comments here. Please state which indicator topic(s) you are addressing.

Of the indicators listed in Q1 above, we would consider the following to be the most important:

1. Extent and condition of habitats.

Existing data sources need to be augmented by data available at the local level, and in particular by data demonstrating habitat connectivity, and therefore robustness in the face of climate change.

3. Habitat connectivity

It could be suggested that 1) and 3) are two aspects of the same thing, in the light of dynamic changes in habitat.   Again, use of local data is seen to be vital.

2. Protected site condition

This is important, but less so unless it includes a broader suite of site types than just SSSIs.

5 Trends in abundance of selected species.

This is a very important indicator that needs to be augmented by other readily-available datasets. With this augmentation, it is a good proxy for the rest of the environment.

4. Status of priority species.

These remain important, but the capacity to maintain and enhance the data for the existing indicator needs to be addressed.

11. Integrating biodiversity into local decision making

This is a highly important indicator that badly needs to be improved, especially with regard to enhancing local authority uptake of biodiversity issues..

15. Trends in pressures on biodiversity.

As indicated above, the separation of elements included in this indicator need to be considered. The climate change indicator can partly be achieved through 1) above; but we also do not need to lose sight of environmental pollution measures.

12. Innovative financial measures.

We feel strongly that more should be done, with least financial burden on local authorities, to undrpin local data collection, management and use. Our proposal that a small levy be raised from local planning applications would sensibly sustain this work.

17. Availability of data for decision-making.

We would support including this as a metric, because without sound biodiversity data on a sustainable long-term basis, no sensible decisions can be made.

Q3. Do you have any other comments on the proposed set of indicator topics or development options?

Enter your comments here.

The one key potential indicator that is not really addressed is a measure of the serious uptake of biodiversity support through all other Government departments. This is a key area that is not seriously addressed, despite the good words in the England Strategy.