



Indicators of species abundance in England

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This briefing is on behalf of nature coalition Wildlife and Countryside Link ([Link](#)).

Introduction

The Government has legally-binding targets in England to halt the decline of nature by 2030 and reverse the decline of nature by 2042, as measured by the abundance of species in England.

The Government has recently published a draft species abundance indicator – or ‘official statistic in development’ – and is seeking feedback on some aspects of the indicator before it is finalised as an official statistic in 2025.

Currently, the draft species abundance indicator is not robust or transparent enough to provide confidence that it is accurately assessing species abundance in England and that it could be used to demonstrate compliance with the Environment Act targets. Currently the draft species abundance indicator does not cover a sufficient range of taxa,¹ but new datasets have been added into the draft indicator without publishing or consulting on their methodologies or the impact of their inclusion on the overall indicator. To date, there has also been a lack of transparency and expert consultation on the method of developing the indicator itself and how the indicator will be used to assess compliance with the species targets.

In this briefing, we set out our concerns with the official statistic in development for species abundance and how the Government should engage with experts to ensure the official statistic is robust, transparent and gives expert and public confidence in the assessment of the state of nature in England.

¹ For example, no reptile or amphibian species are included in the index. The species assemblage included in the abundance indicator and target are limited and do not represent all taxa groups and are not sufficiently representative to reflect whether ecosystems are healthy and fully functioning.



Understanding the impact of the inclusion of new datasets

The recently published draft species abundance indicator included new datasets, added since an indicative species abundance metric was consulted on during the passage of the Environment Act regulations. These new datasets include plants and freshwater invertebrates.

However, the methods of these additional datasets have not all been published. In addition, no analysis has been published, and it is not clear if any analysis has been undertaken, about how the inclusion of these new datasets will affect the overall indicator.²

We welcome the expansion of the species abundance indicator to represent a wider set of species, however, **the inclusion of new datasets must be done in a transparent and robust way to ensure the precision and responsiveness of the indicator to assess species abundance.**

This lack of understanding and analysis of the impact of the inclusion of the new datasets on the species abundance indicator should be addressed by the Government by:

1. Publishing a full, accessible description of the datasets and analysis methods, which are subject to standard journal peer review in addition to expert panel review.
2. Developing more robust minimum criteria that datasets need to meet, in collaboration with experts, including on the time extent and the sample size of the dataset. The Government should also be transparent about why certain datasets are excluded and against which criteria they were assessed against and found lacking.
3. Supporting all data providers to ensure data collection and analysis can be updated annually.

Exploring in more detail the impact on the responsiveness and precision of the indicator as a result of broadening the types of species and data included in the species abundance indicator, for example including genera rather than species and percent cover rather than counts.

² Including, for example, if overall species trends or trends for some species mask trends for other species.



Transparency of methodological development and assessment of targets

Currently, it is not clear how the species abundance targets will be assessed. There are different methodological options to develop the indicator, assess trends, and evaluate compliance with a target, depending on choices about trends and confidence.

For example, the draft species abundance indicator sets out two versions of the indicator which are smoothed differently. Smoothing is intended to reduce the variation between years, such as variation due to weather, to reveal underlying trends. As [the Defra release](#) explains, ‘a greater degree of smoothing may provide a clearer view of the underlying long-term trends while a lesser degree of smoothing preserves the shorter-term patterns in data.’ The decision about smoothing will impact the final indicator and therefore whether the targets are met.

We welcome the Government seeking input from stakeholders on the level of smoothing, but **we urge further transparency and expert consultation around the wider development of the indicator and methods to assess the target.**

Before the official statistic is published in 2025, the Government should:

1. Develop, agree, and make publicly available the methods and development reports to test the targets sufficiently in advance of assessing the target.

The agreed methods will then inform the most appropriate level of smoothing and the likely confidence with which the Government could conclude whether or not the target had been met under different possible future scenarios (e.g., a stable trend, a slightly increasing, or a slightly decreasing trend). This should also consider how the confidence of meeting the target will change as there are more years of downstream data to inform the value of indicator in 2030 (e.g., in 2032 when the Government assesses the target, there will be data to 2030, but the following year there will be data running to 2031, which will make the 2030 estimate more accurate and precise).

The Government will have an opportunity to review the Environment Act targets, as set out in regulation, in 2027. We urge the Government to consider widen the target assessment window from comparing 2030 levels to 2029 levels, to comparing 2030 levels to an earlier year’s levels.

2. The cross-validation work should be published and subject to peer review.



Conclusion

Ahead of the species abundance indicator being finalised as an official statistic in 2025, we urge the Government to address the lack of transparency about both the datasets included in the indicator and the methods for the development of the indicator and methods for assessment of the species targets, including clarifying the process for broadening the taxonomic representation.

Improved transparency and expert consultation on this official statistic in development will ensure the species abundance indicator is an accurate, precise and trusted metric to measure the state of nature in England and assess progress against the Government's legally-binding targets.

Wildlife and Countryside Link (Link) is the largest nature coalition in England, bringing together 83 organisations to use their joint voice for the protection of the natural world and animals. Wildlife and Countryside Link is a registered charity number 1107460 and a company limited by guarantee registered in England and Wales number 3889519.

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