

Targets consultation response

Introduction

The Government's proposals for targets under Sections 1-3 of the Environment Act 2021 are not ambitious enough, comprehensive enough, or reliable enough to contribute significantly to halting environmental decline.

A strong, comprehensive and clear set of targets could drive accountability and action for environmental improvement. It could also set an important benchmark for translating international commitments into domestic legal requirements, particularly for biodiversity.

The first iteration of the targets is likely to be particularly significant in establishing their credibility and the strength of the signal they establish across Whitehall and across the private sector. Setting a bold set of initial targets will be important to demonstrate the Government's commitment, particularly in setting strong outcome goals in each priority area.

A taxonomy of targets

Different kinds of targets serve different purposes. We suggest a simple taxonomy of targets for the legally binding framework under the Environment Act:

- Apex or "outcome" targets – succinct, but able to describe the real world state of each priority area, driving action and accountability. More than one may be needed in each area to describe the state of the environment.
- Attribution targets – setting goals for particular polluters or sectors responsible for delivering environmental improvement.
- Action targets – setting measurable goals for specific steps needed to deliver the overall targets.

Accountability for real world improvements

The main aim of the targets framework should be to ensure that adequate measures are in place to achieve environmental recovery by setting a clear and legally enforceable structure for accountability in each of the priority areas. To achieve this, there should be a very clear set of "outcome" targets that can accurately describe the state of the fundamental features of the natural environment in each priority area relating to a feature of nature: air, water and biodiversity.

In some cases this may be a single "apex" target, if it is capable of describing the state of the environment. For example, a combined target for water quality such as the current Good Status target under the *Water Environment (Water Framework Directive) (England and Wales) Regulations 2017* is an effective way to describe the water environment.

In other cases, a small number of apex targets might be needed to describe the environmental outcomes required. For example, to describe biodiversity outcomes effectively it will be necessary to have apex outcome targets for species (abundance and extinction risk) and for habitats (extent and quality, in and outside protected areas) for the terrestrial, freshwater and marine environment.

For waste and resources, the “outcome” target should describe the basic features of a sustainable economy: the amount of resources used and the amount of residual waste arising.

At the moment, the Government’s targets proposals would not effectively describe the state of the environment in each priority area. Major gaps include:

- 1) On biodiversity: no outcome target for the condition of protected habitats [on land?]; no outcome target for the extent and quality of priority habitats outside the protected area network; and insufficient representation of the marine environment within targets.
- 2) On water: no outcome target for the quality of the freshwater environment after the 2027 deadline of the Water Framework Directive.
- 3) On waste and resources: no outcome target to describe the overall resource use of the economy.

Further, there is a gap in acknowledging our impacts on biodiversity and nature in other countries with the absence of a target relating to our global footprint or specific overseas impact areas. We cannot export our environmental conscience. Government and others hold the means to adopt such a target.¹

Without clear outcome targets, there is a major risk that the Government cannot be held to account for improvements in the actual state of the environment. A series of targets could notionally be met without representing real environmental gains, while the actual state of nature continues to decline.

The Government should ensure that a set of apex or outcome targets is in place that can accurately describe the state of the natural environment for each priority area.

Describing the real world

Wherever possible, especially for outcome targets, achievement must be based on real world data describing the state of the relevant features, not assumed results based on modelling.

We are concerned that some proposed targets rely on modelling expected outcomes. For example, the water targets do not give an adequate view of the state of the environment, with the results of efforts to reduce diffuse pollution from agriculture relying on modelled results.

Any modelled results should be verified by an increase in real-world testing to ensure that the actual quality of the environment is improved.

¹ For example [Environmental impact of UK supply chains \(jncc.gov.uk\)](https://www.jncc.gov.uk/publications/Environmental-impact-of-UK-supply-chains)
[Thriving within our planetary means full report.pdf \(wwf.org.uk\)](https://www.wwf.org.uk/publications/thriving-within-our-planetary-means)

Existing targets under other frameworks

The Government should publish a full schematic of relevant legally-binding targets to show which are still in play.

The targets landscape is complicated by layers of statutory and non-statutory targets. We support the retention of existing targets, especially where they are embedded in a stronger framework than the Environment Act, such as air quality targets which require a plan to be in place capable of meeting them.

In some areas, however, the Government appears to justify a decision not to include a long-term outcome target because of existing statutory frameworks linked to targets, even where those targets deadlines have passed or are close to passing.

For example, the Marine Regulations set in place a cycle of planning dedicated to the achievement of Good Environmental Status in the marine environment. However, the target deadline to achieve GES in UK waters has now passed, expiring in 2020. There is a similar situation close at hand with The Water Environment (Water Framework Directive) (England and Wales) Regulations 2017, where the deadline for the target has passed. This is clearly not a long-term target.

The existence of legacy planning cycles for environmental improvement should not be taken as a satisfactory alternative to a long-term outcome target for important features of the natural environment. They do not offer measurable moments of accountability, and their relevance will quickly diminish after the targets dates pass. New long-term outcome targets should be set in these areas.

Driving action and investment

The second structural weakness in the package of targets is its level of ambition. Alongside accountability, an effective set of statutory targets would drive action and investment, setting a high bar for public policy and private sector action, moving significantly beyond business as usual where necessary. The benefits of long-term environmental action and the costs of inaction are well-established, including by the Dasgupta review; short-term economic considerations should not be given disproportionate weighting in decisions on the level of ambition.

Targets should be set at a level that is a combination of achievability and environmental need. Part of the point of setting long term targets is to drive innovation and systemic change, so a considerable degree of potential should be assumed for reaching stretching targets that are needed.

Again, in each priority area there are shortfalls in ambition. For biodiversity, for example, it is unsatisfactory that the long-term target for species abundance could mean that the state of the natural environment in twenty years' time is worse than it is today. We recommend that a more certain baseline is set (for example, 2022) and that a more stretching target is put in place that really meets the Government's commitment to pass on nature in better condition.

In other areas there are gaps in coverage. In each priority area, outcome targets should be sufficient to describe the state of the environment; attribution targets should be sufficient to drive action among the main responsible sectors (polluters and those with responsibility for improvements); and action

targets should give additional certainty that the first major steps will be taken to improve the environment.

For example, it is helpful to have attribution targets to drive action to improve the water environment. However, there are important gaps in coverage, such as the decision to exclude nitrogen from the wastewater target. In some areas, wastewater from sewage works is the main source of damaging nitrogen pollution. By undertaking a combination of engineered solutions at treatment works with nature-based solutions in the wider catchment, water companies could make a significant contribution to the reduction of nitrogen pollution.²

Conclusions

The targets framework under the Environment Act has tremendous potential to drive accountability and action for environmental improvement and achieving the goals of the 25 Year Environment Plan. Unfortunately, the initial round of targets does not meet the level of ambition required to halt environmental decline in England. In fact, they may not meet the significantly lower legal bar of making a significant contribution to the natural environment in England if they were met, under Section 7 of the Environment Act.

² An effective set of statutory targets will unlock private sector action – as will up-front investment in statutory agencies. The bodies responsible for much of target delivery, including Natural England and the Environment Agency, require sustained funding and safeguarded environmental purposes in order to do the job entrusted to them and to monitor progress, alongside e-ngos. A well-resourced set of statutory organisations is a prerequisite for the success of statutory targets.

6. Do you agree or disagree that the proposed combination of biodiversity targets will be a good measure of changes in the health of our 'biodiversity'?

We disagree

7. [If disagree] What additional indicators do you think may be necessary?

Terrestrial Protected Sites (SSSI) condition:

A coherent set of targets for biodiversity should measure the key components of nature: species abundance, species extinction risk and habitat quality and extent.³ Ignoring any element of these will create an incomplete picture of the overall state of biodiversity, and risks driving conservation action that fails to tackle declines in nature holistically. It is therefore of serious concern that the proposed biodiversity targets are missing a metric for the condition of the most threatened habitats on land: those that have been designated as protected sites.⁴

The wider habitats target is not an adequate alternative as it is an action based target that only addresses habitat restoration and creation outside of these sites, and does not attempt to measure the outcome in terms of quality of habitat delivered. A terrestrial protected sites condition target would complement the wider habitats target as a means of ensuring more complete coverage of important habitats.

SSSIs have enormous potential to support nature's recovery and underpin the attainment of the species abundance and extinction risk targets, and there is strong evidence that they work.^{5 6 7} [The Making Space for Nature Report](#) found that SSSIs support the majority of the species found in England. For example, 88% of the UK's vascular plants, 70% of threatened bryophytes and 100% of BAP butterfly species are represented in the SSSI network.

Protected areas should be at the heart of a resilient ecological network but need to be more than lines on a map if they are to support nature's recovery - the important species and habitats features for which they are designated should be in good or actively recovering condition.⁸ But despite non-binding targets in various policy documents over many years, and most recently in the 25 Year Environment Plan (25YEP), these have failed to provide the impetus to prioritise improvements to these sites. The 2021 update to the 25YEP Outcome Indicator Framework points to a net decrease in the area of SSSIs

³ [A Global Goal for Nature and People](#)

⁴ We understand the rationale behind an initial focus on developing a small number of targets relating to topics afforded priority status in accordance with provisions in the Environment Act 2021. However, in the absence of any clarification over the targets that will be developed in future, we are concerned that the proposals may perpetuate the longstanding separation between environmental policy and the steps needed to support better access to nature when, in fact, the two are strongly interdependent. We would welcome a clear commitment from Defra that it will make the most of the powers in the Environment Act to set targets in relation to people's access to and enjoyment of the natural environment in ways that complement the recovery of nature. That this is an area that is challenging to measure shouldn't in itself be a reason for inaction - as the Defra targets policy paper from 2020 states, "We want to develop targets that are driven by taking action in areas that matter the most, rather than limiting our targets to areas that are easy to measure and improve".

⁵ [International Conservation Policy Delivers Benefits for Birds in Europe](#)

⁶ [Assessing the Performance of EU Nature Legislation in Protecting Target Bird Species in an Era of Climate Change](#)

⁷ [A global analysis of management capacity and ecological outcomes in terrestrial protected areas](#)

⁸ https://www.britishecologicalsociety.org/wp-content/uploads/2022/04/BES_Protected_Areas_Report.pdf

in favourable condition; down from 44% in 2003 to 38.9% in 2020⁹. This is a missed opportunity to give the ambition legal teeth.

The UK has made a global commitment to 30x30, championing the forthcoming Convention on Biological Diversity (CBD) target to protect and effectively manage 30% of land for biodiversity, and restoring protected sites will be essential for meeting this commitment. The IUCN's definition of effective management requires the protected area to be meeting its conservation objectives, which we expect for SSSIs means that monitoring shows that the site is either in favourable condition or is on track with its recovery to favourable condition.¹⁰ A legal target is therefore needed to ensure that a large proportion of SSSIs will be able to count towards the UK Government's 30x30 reporting under the CBD.

The explanation for excluding a target for SSSI condition based on the need to await the outcome of the consultation on reforms in the Nature Recovery Green Paper is inconsistent with the approach being taken for marine sites. The government is proposing a target for MPA condition despite both marine and terrestrial sites being considered in the Green Paper. However if the protected sites network is to be rebranded, it will still require better protection and better management, underpinned by a legal target to drive progress.

By 2042, at least 75% of SSSIs should be in favourable condition, in line with the 25 YEP goal, and the remaining 25% showing evidence, based on monitoring, that SSSI features are making progress towards ecological recovery.

8. Do you agree or disagree with the level of ambition of a 10% increase proposed for the long-term species abundance target?

We disagree

9. [If disagree] What reasons can you provide for why the government should consider a different level of ambition?

This target should live up to the government's promise to deliver an environment in a better condition than it inherited. On the face of it, the target seems to signal positive and welcome intent, but a formulation that uses 2030 as its baseline adds considerable ambiguity to the desired outcome and potential confusion. It is also out of step with the other proposed Environment Act targets whose reference points are generally 2022 or earlier and it is not clear how the government can report on progress towards the target during the remainder of this decade, before it has a baseline in place.

A future baseline makes it impossible to provide a meaningful analysis of the level of ambition being proposed, but given the trajectory of recent declines and the slow progress with the roll out of Environmental Land Management schemes and other measures to recover nature foreseen by the Environment Act it is reasonable to expect this trend to continue before a halt is achieved by 2030.

⁹ [Outcome Indicator Framework for the 25 Year Environment Plan: 2021 Update](#)

¹⁰ [Evaluating Effectiveness](#)

As a result, the species abundance target for 2042 could be set at 2022's already depleted levels, or potentially even lower. This would be unambitious, out of step with the government's pronouncements and lacking the vision to drive a genuine step change in policy to halt and reverse declines. If nature is to be on a trajectory to recover by 2050 – in line with ambitions being set by the CBD – then a figure of at least 20% uplift on a 2022 baseline is the order of stretching target needed.¹¹

In order to reach this stretching, but not unachievable target there needs to be a swift rollout of the new Environmental Land Management schemes. These must be well funded and focus resources on well-evidenced, targeted measures with high confidence of successful delivery for species outcomes, and they should be implemented at scale from field to farm to landscape. A species focus should be included in all wider climate change objectives of ELM schemes so that nature-based solutions deliver for nature as well as climate - these should be helping to deliver critical species outcomes wherever possible.

Achieving high uptake of wildlife friendly farm management is critical to achieving the recovery of a variety of species across the farmed landscape. Recent modelling by Burns et al 2021 (pers com) suggest that approximately **41%** of farms would need to manage 10% of their land under wildlife friendly options to halt the decline of the Farmland Bird Index by 2030, increasing to **65%** to reverse the decline by 10% by 2030. The Sustainable Farming Incentive (SFI) could provide a critical role in achieving this level of uptake if the Farmland Biodiversity standards are designed to hit this level of provision and rolled out rapidly (ideally 2023).

In relation to the transition towards wildlife friendly farm management, we question whether adequate weight has been attributed to the potential contribution of dietary shifts in setting the target's level of ambition. The Climate Change Committee's 'balanced pathway' assumes a 35% reduction in meat and 20% reduction in dairy consumption by 2050 (50% in other scenarios). In relation to the proposed biodiversity targets, however, the potential contribution of dietary shifts is only identified in Scenario 5, which is considered speculative with insufficient data available for modelling. We suggest a further look at the potential offered by dietary shifts could enable a greater level of ambition to be targeted.

Resources should also be directed to management of the protected area network (see our answer to question 7 and footnotes for evidence of its effectiveness), and in particular targeting the laggardly National Parks, to ensure they attain their potential for nature and help deliver outcomes for species.

Also key to meeting the target is the provision of adequate funding for targeted species recovery programmes, which can drive the conservation of species needing a more tailored approach than that provided by ELM, are proven to be effective and offer good value for money. Recovery of rarer iconic species will often involve habitat restoration that benefits a range of other species, while providing hope and inspiration that it is possible to reverse declines.

Below we provide some examples showing evidence of species recovery:

¹¹ IUCN, [Post-2020 global biodiversity framework](#)

- A recent RSPB study assessed the medium-term effects of woodland management on 13 specialist woodland bird species and showed a positive effect on target species abundance, compared to a decrease on control sites¹².
- The eradication of introduced brown (*Rattus norvegicus*) and black (*Rattus rattus*) rats from Lundy Island has led to dramatic increases in seabird populations. Lundy is an internationally important site for Manx shearwater and puffins, yet nest predation by rats meant populations of these burrow-nesting seabirds had massively declined. The 15-year Seabird Recovery Project enabled seabird population recovery and control measures mean that Lundy is now declared rat-free, and the seabird population has tripled to over 21,000¹³.
- Targeted interventions can be effective at protecting water vole populations. Where local populations are at a high risk of extinction due to predation from American mink, effective trapping and control of mink can result in sustainable, recovering populations¹⁴.
- Further landscape level habitat creation (extensive reed beds and grazing marsh) can provide a large protected core population of water vole with long-term viability that supports a wider metapopulation¹⁵.
- Pond restoration and creation, in areas where historic habitat has been lost, can benefit amphibian species. Five native amphibian species colonised newly created ponds at a study site in England resulting in increased occupancy¹⁶.
- More than a decade of targeted research, reintroduction and conservation management has brought the Fen Orchid back from the brink of extinction, from only three known sites and a few hundred plants in the Norfolk Broads to more than 12,000 plants at six sites in Norfolk and Suffolk.¹⁷
- Recovery of iconic hazel dormouse populations previously lost from their northern range has been accomplished through strategic releases of captive-bred populations.¹⁸
- Alongside other factors, essential landscape elements and characteristics associated with the implementation of the agri-environment schemes, contributed to population increases of

¹² Bellamy et al. (2022) [Impact of woodland agri-environment management on woodland structure and target bird species](https://community.rspb.org.uk/ourwork/b/science/posts/managing-woodland-for-birds-does-it-work) and <https://community.rspb.org.uk/ourwork/b/science/posts/managing-woodland-for-birds-does-it-work>.

¹³ [Lock J. \(2006\) Eradication of brown rats *Rattus norvegicus* and black rats *Rattus rattus* to restore seabird populations on Lundy Island, Devon, England. *Conservation Evidence*, 3, 111-113.](#)

¹⁴ Harrington, L.A., Harrington, A.L., Moorhouse, T., Gelling, M., Bonesi, L. and Macdonald, D.W., 2009. [American mink control on inland rivers in southern England: an experimental test of a model strategy](#). *Biological Conservation*, 142(4), pp.839-849.

¹⁵ MacPherson, J.L. and Bright, P.W., 2011. [Metapopulation dynamics and a landscape approach to conservation of lowland water voles \(*Arvicola amphibius*\)](#). *Landscape Ecology*, 26(10), pp.1395-1404.

¹⁶ Beebee, T.J., 1997. Changes in dewpond numbers and amphibian diversity over 20 years on chalk downland in Sussex, England. *Biological Conservation*, 81(3), pp.215-219

¹⁷ Plantlife :: Could Fen Orchid finally be Back From the Brink?

¹⁸ Bright, P. and Morris, P., 2002. [Putting dormice back on the map](#). *British Wildlife*, 14(2), pp.91-100.

greater horseshoe bats in the long-term, as confirmed by a study spanning an 18 year period from 1997 to 2014.¹⁹

- Addressing habitat fragmentation is key to increasing availability of habitat for terrestrial species with limited climbing abilities. 1226 (53.7%) survey respondents who created holes or ‘hedgehog highways’ in garden boundaries, reported that they had subsequently observed an increase in hedgehog activity in their garden.²⁰
- Black-veined Moth is critically endangered and restricted to chalk downland in South east England. Since the 1990s, when only three remaining colonies were known, intensive conservation efforts have maintained the required long-turf conditions at the moth’s existing sites. On top of this, 250ha of arable reversion has been instigated under Agri-environment Scheme agreements, spread across 60 sites on 18 farms. Two reversion sites have been colonised by Black-veined Moth, which now occupies 10 discrete sites, the greatest number of known colonies for at least three decades.²¹
- Always a restricted species, the Heath Fritillary butterfly suffered a severe decline from the 1970s due to a general reduction in woodland management, with a particularly rapid loss of colonies during the 1990s. Numbers have now recovered to pre-1980 levels in the Blean Woods, Kent. This has been achieved through targeted, regular woodland management at a landscape-scale, the number of colonies have increased from 14 in 1989 to 28 in 2021; more than doubling the area of suitable habitat and recording the highest total abundance to date in 2021.^{22,23}

We welcome the development and specification of this target and the work being done to finalise a robust species abundance indicator that would be used to measure progress. The proposed index offers great potential to measure genuine biodiversity trends in a timely fashion with good precision and incorporating a good range of taxa. We can have confidence in this index for many of the familiar taxa (birds, butterflies, bats & moths) thanks to a body of accumulated and peer reviewed research on the taxa and indicator development.

We favour the addition of species to the indicator over time to make it more representative of England’s biodiversity, including freshwater invertebrates and plants. We remain concerned at the poor representation of some important taxa in the indicator, such as the limited number of marine species, the absence of freshwater and migratory fish, and the absence of pollinators and other

¹⁹ Froidevaux, J.S.P., Boughey, K.L., Barlow, K.E. *et al.* [Factors driving population recovery of the greater horseshoe bat \(*Rhinolophus ferrumequinum*\) in the UK: implications for conservation](#). *Biodivers Conserv* **26**, 1601–1621 (2017).

²⁰ Gazzard, A., Boushall, A., Brand, E. and Baker, P.J., 2021. [An assessment of a conservation strategy to increase garden connectivity for hedgehogs that requires cooperation between immediate neighbours: A barrier too far?](#). *PloS one*, *16*(11), p.e0259537.

²¹ Fox R, Dennis E B, Harrower C A, Blumgart D, Bell J R, Cook P, Davis A M, Evans-Hill L J, Haynes F, Hill D, Isaac H J B, Parsons M S, Pocock M J O, Prescott T, Randle Z, Shortall C R, Tordoff G M, Tuson D, & Bourn N A D. (2021). The state of Britain’s Larger Moths 2021. Butterfly Conservation, Rothamsted Research and UK Centre for Ecology & Hydrology, Wareham, Dorset, UK.

²² Wheatley S (2021). Heath fritillary in the Kent Woodlands, 2021 Status report, S21-11. Butterfly Conservation, Wareham, UK. RSPB (2022)

²³ Wildlife on RSPB nature reserves in 2021. RSPB, Sandy.

invertebrates (excluding lepidoptera), and would like efforts to be made to broaden species coverage further. Of course, the incorporation of new abundance trends for any new taxa needs careful consideration and a full scientific evaluation to ensure the scientific rigour of the species abundance indicator is maintained and that bias and imprecision are not introduced. With this in mind, any new species abundance indicator for England to be used by the government will need to undergo a transparent process of independent scientific evaluation and peer review.

To fully inform and support the ambitions laid out in the Nature Recovery Green Paper, focus delivery within Local Nature Recovery Strategies and embed Favourable Conservation Status metrics within wider nature recovery aims, the number of species and taxa represented and the type of data needed to do so within the targets must be as broad as possible. Furthermore, monitoring programmes need to be implemented to generate metrics required to support these objectives, and these data should be used to contribute to national targets. To achieve this the current proposal should be extended to include a greater range of datasets. It should do this in two ways. Firstly, it should look to expand the number of species included in abundance index through including data from existing programmes that can contribute high quality abundance data and, over a longer time scale, encouraging the further development of additional surveillance programmes that will be able to do the same. Secondly, it should develop an indicator that uses both opportunistic and systematically collected data that provide information about quantitative changes but where either the sampling methods undertaken or the species being studied do not provide a direct measure of changes of the number numbers of individuals within species populations.

These records offer a chance to assess the overarching target using two complementary datasets: robust population abundance data and a broader set data, which can be analysed with occupancy modelling techniques, to calculate trends which represent changes in distribution (occupancy) as a proxy for abundance trends. These can then be presented as two distinct but parallel indexes, covering a wider group of important taxa which will enable new habitat targets to be more effectively monitored and measured. This proposal offers the chance to address the poor representation of some important taxa in the indicator, such as the limited number of marine species, the absence of pollinators apart from Lepidoptera, and key indicators of ecosystem health such as amphibians.

Broadening the scope of the index is an opportunity to engage the general public more widely whilst providing support and guidance in the design of Citizen Science programmes.

In the case of marine species we recommend the development of a separate marine abundance/occupancy indicator, as is the case in Scotland.²⁴

We further ask that the reporting of the index is accompanied by a full breakdown by taxa, species, habitat and different spatial scales, supported by local case studies. This would allow to the data to be analysed and interrogated in greater depth. This should be backed by a government commitment to a proper R&D programme to understand the index and its sensitivities. With COP15 on the horizon,

²⁴ <https://www.gov.scot/publications/development-combined-marine-terrestrial-biodiversity-indicator-scotland/pages/5/>

this is an opportunity for the UK government to establish unparalleled standards that will provide leadership to the international community as new and ambitious CBD targets are agreed.

10. Do you agree or disagree with the ambition proposed for the long-term species extinction risk target to improve the England-level GB Red List Index?

We disagree

11. [If disagree] What reasons can you provide for why the government should consider a different level of ambition?

Overview

- While we welcome a target to reduce species extinction risk by 2042, we oppose the proposed target in the consultation ‘to improve the England-level GB Red List Index (RLI) for by 2042, compared to 2022 levels.’ This target is flawed because it is unquantified, that is it fails to define what level of improvement in the Red List Index of extinction risk is required by 2042. On that basis, it is inoperable as a target and could not be meaningfully assessed.
- We recommend a target ‘to reduce the threat of species extinction by 30% by 2042,’ where extinction risk is assessed using the England-level GB Red List Index [and ‘threat score’ is the numerator of the index]. If achieved, this target would see the Red List Index increase by at least 2.5% by 2042, compared to the 2022 level, indicating an improvement in species status.

A target to reduce species extinction risk should work hand-in-hand with a target to increase species abundance.

We welcome the inclusion of a target to reduce species extinction risk in England, as a means of ensuring that conservation efforts are also directed at the recovery of the most threatened species as these may not be well represented by the species abundance index. However, the proposed England-level GB Red List Index has not been peer-reviewed or published. As such, it is undeveloped and untested. It is therefore of concern that detail about the Red List index will not be available until September, which leaves insufficient time to assess the validity of the metric before the laying of the target's statutory instrument by the end of October.

Whilst we agree that the Red List gives a good indication of species threat and we applaud the ambition of the authors to attempt to develop a GB Red List Index for England, the sensitivity of the proposed England-level GB Red List Index to measure possible change in extinction risk is unknown and so it is unclear if this metric would be able to measure any improvement in extinction risk between 2022 and 2042. Similarly, we do not know how many Red List assessments would need to be performed across which taxa, and how often, to be able to compute a meaningful Red List Index with sufficient power to detect trends.²⁵

²⁵ An ambitious additional target would be that “The human-induced national extinction of all known threatened species in England is halted from 2022”. The primary rationale for this is that we could, in principle, achieve a reduction / improvement in extinction risk, even while some species go extinct. The inclusion of such a target would bring the targets in line with evolving aspirations for the global biodiversity framework, which may include

We would like to see estimates of the human and financial resources that the use of this indicator would entail. It is probable that the measurement of shorter-term trends in the status of highly threatened species could not be assessed using this index, nor could milestones be set.

Detailed comments:

1. The details of the assessment update schedule and proposed method of assessing whether the target has been met are not presented in the Detailed Evidence report. For instance, how is uncertainty around the index values going to be assessed (e.g., Butchart et al 2010²⁶; Juslén et al 2016²⁷)? And how clustered will the assessments be around the target year²⁸?
2. The scenarios presented in the Detailed Evidence Report are useful, but don't take into consideration lags between a species improving its status and it being possible, given monitoring programs and the assessment criteria, to detect this change. Simulation modelling to investigate these lags is strongly recommended.
3. The cost and feasibility, including expert assessor support, of conducting decadal Red List assessments is not detailed in the Impact Assessment. Ways to increase the efficiency of the assessment process should be considered, for example developing an analytic pipeline to partially automate the evidence collation process.
4. The majority of threatened species in England are also found in other parts of Great Britain (Hayhow et al. 2019²⁹) and an Extinction Risk target as measured by the proposed indicator is unlikely to be met without considerable cross-country co-operation on conservation initiatives.
5. We note that there is no detail given in the consultation on how it would be demonstrated that any proposed target level had been achieved in terms of statistical confidence limits given that all measures, however good, would come with a degree of statistical uncertainty. For example, if the confidence limits around a target measurement were sufficiently large, we would be unable to say if that target was genuinely any different from its baseline level and thus whether that target had been met.

Suggestions for a quantitative target

The Detailed Evidence Report suggests a perceived issue that setting a quantitative target to reduce Extinction Risk based on the RLI will seem unambitious as improving the status of hundreds of species would result in only a small change in the RLI.

- Depending on the method used to generate confidence intervals around the change in the RLI, it should be possible to assess whether even a small change is meaningful (e.g., Juslén et al 2016).

three angles: halting extinctions > reducing extinction risk > increasing abundance. The emphasis here is on "human-induced" extinctions, on "known" threatened species (hard to avert extinctions of things we don't know about), the word "halting" (as opposed to minimising), and "from 2022".

²⁶ [Butchart, et al. *Science* 328.5982 \(2010\): 1164-1168](#)

²⁷ [Juslén, et al. *Biodiversity and conservation* 25.3 \(2016\): 569-585.](#)

²⁸ For example, if status improvements accumulate linearly across the decade prior to the target and species assessments are equally spaced across the decade only 55% of status improvements will be detected by the assessment process, compared to 80% if the assessments are done in the five years prior to the target.

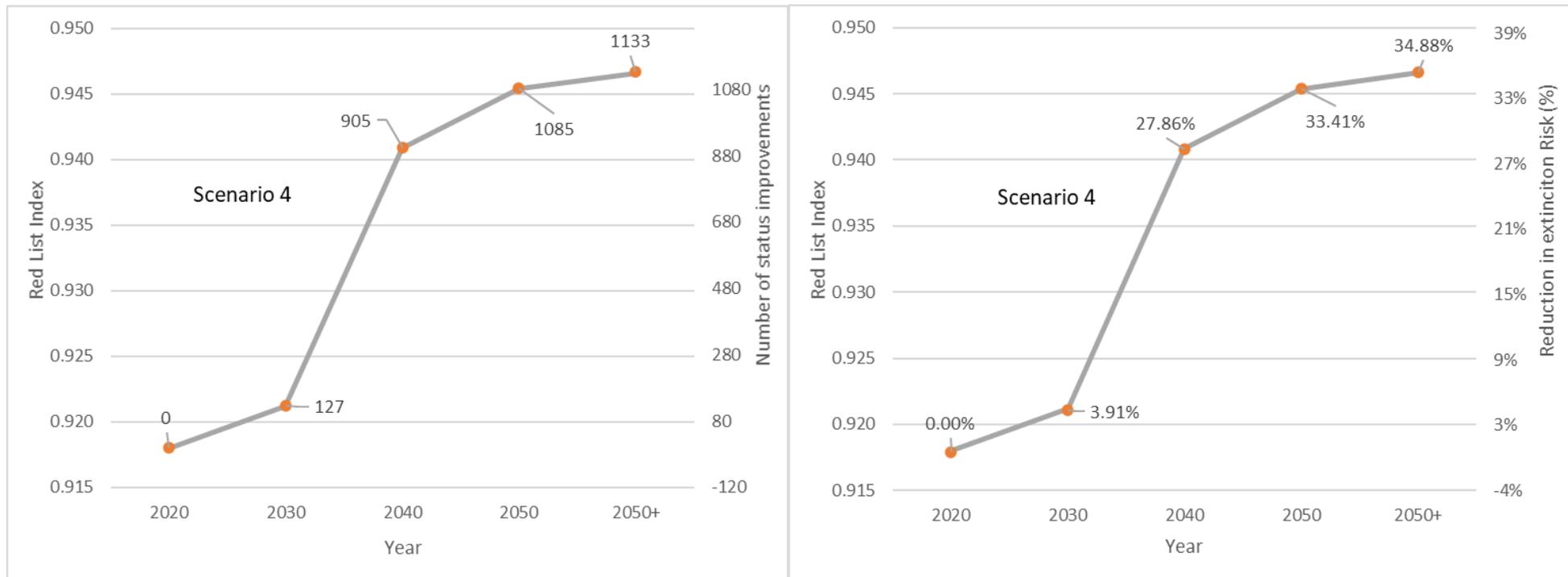
²⁹ [Hayhow, D. B., et al. *State of nature 2019*. \(2019\). *State of Nature Partnership*](#)

- The numerator or 'threat score' of a RLI value is the number of status improvements (a move of one Red List category) that would be needed to take all species to Least Concern³⁰. For communications purposes a target could be set in terms of an absolute or proportional decline in the initial number of status improvements needed; a reduction in 'threat score'. Figure 1 illustrates this approach for 'Scenario 4' described in the Detailed Evidence Report using the estimated increases in the Red List Index given in Figure 32 (p.135 of the Report) and extrapolating to cover all species assessed.

Scenario 4 explored, for a sample of 253 species, how many would see a status improvement in each decade if wide-ranging and ambitious conservation interventions were put in place. We suggest that the results of this scenario form the basis of the 2042 target, which could be described as: **'a target 'to reduce the threat of species extinction by 30% by 2042,' where extinction risk is assessed using the England-level GB Red List Index [and 'threat score' is the numerator of the index]. If achieved, this target would see the Red List Index increase by at least 2.5% by 2042, compared to the 2022 level, indicating an improvement in species status'**

³⁰ [Butchart, et al. \(2007\). *PloS one*, 2\(1\), e140.](#)

Figure 1: Shows the estimated Red List Index per decade based on 'Scenario 4' described in the Evidence pack (Figure 32), taking the increases in RLI predicted for the sample of 253 species assessed and extrapolated to all species with GB Red List assessments. It also expresses the resultant RLI values either as: a) a number of net Red List status improvements needed or b) a percentage reduction in Extinction Risk, taken as the number of status improvements expressed as a percentage of the total number of improvements needed to move all species to the LC category. The total number of status improvements needed to take all species to LC was estimated using the RLI equation, the draft RLI value of 0.918 and the total number of assessed species (excluding DD, EX and RE) 7922.



12. Do you agree or disagree with the level of ambition of 'in excess of 500,000 hectares' proposed for the long-term wider habitats target?

We disagree

13. [If disagree] What reasons can you provide for why the government should consider a different level of ambition?

Our starting point is that this should be an outcome focused target, one that gives us confidence that habitat extent and condition is being improved. A target based on actions to create or restore habitats with no ground truthing of delivery does not provide this certainty. We would like to see government commit to rolling out the Indicator D1 - Quantity, quality and connectivity of habitats in the 25YEP Outcome Indicator Framework as a matter of urgency so that it can form the basis of a robust target in the near future.

A serious weakness of the proposed target is that the target will be based on actions to create or restore habitat but not take account of habitat loss or degradation.

If the goal is to recover nature, a gross target is inadequate - given the severe and ongoing loss and degradation of habitats we need a genuinely ambitious target that takes account of any damage being done. We urge the government to look at means of assessing habitat losses over the period to ensure these are netted out from habitat notionally created or restored via the proposed actions. For example, it could incorporate predictions in shoreline management plans of coastal habitat losses due to rising sea levels. It could also use a similar approach to that proposed for the Woodland target by using established and emerging remote sensing data - for example the Natural England Living England Habitat Map - to assess changes in land use and habitat cover.

The detailed evidence report sets out the benefits that habitat creation and restoration should provide, such as buffering protected sites, supporting the achievement of the species abundance target, underpinning the Nature Recovery Network and contributing to net zero. However, for the wider habitats target to deliver these benefits the habitat delivered will need to be in good condition, targeted in a way to maximise ecological resilience, and its permanence guaranteed. One solution is to require that the habitat delivered must have been identified as a priority for recovery or enhancement in published local strategies, such as Local Nature Recovery Strategies (LNRS). This would follow the approach taken in defining strategic significance in Biodiversity Metric 3.1 and would help to ensure that a diversity of habitats will be delivered and that the Lawton principles are incorporated³¹. This is predicated on LNRS reflecting national as well as local priorities, so that the patchwork of local strategies together amounts to the delivery of a coherent national Nature Recovery Network.

³¹ <http://publications.naturalengland.org.uk/publication/6049804846366720> The User Guide lists the following examples: Local Nature Recovery Strategies, local biodiversity plans, National Character Areas objectives, Local Planning Authority Local Ecological Networks, Shoreline Management Plans, estuary strategies and green infrastructure strategies.

Habitat delivered under the target needs to be maintained at target condition for the long term, through land management agreements such as the proposed ELM Local Nature Recovery schemes and conservation covenants to ensure their permanence over a longer timeframe.

We propose an increase in the target to at least 750,000ha, as it should be going beyond the ambition of the 25 YEP, in line with the increasingly urgent need to turnaround declines in biodiversity and the Government's aspiration of providing 30% of land for nature by 2030. It is worth noting that expert views cited in the detailed evidence report put increased large-scale creation and restoration of habitat as critical to delivering the species abundance target, alongside improvement in the condition of protected sites. As currently proposed the target represents less than 4% of England's land area and we believe the ambition should be at no less than the highest level option described in the detailed evidence report (ie 750,000ha), a level that was supported by almost 70% of participants in the workshop.

We are also of the view that the target should be increased in order to take into account the wildlife rich proportion of the 300,000ha of newly created woodland habitat that is expected to be driven by the tree canopy cover target by 2042. If around 150,000ha of woodland is created this would represent a sizeable proportion of the currently proposed 500,000ha ambition, and risks crowding out the creation and restoration of other valuable habitats.

14. Do you agree or disagree that all wildlife-rich habitat types should count towards the target?

Disagree

15. [If disagree/Don't know] Are there any habitat types that you think should not count towards the target?

Arable field margins

Coastal water habitats

Other woodland: broadleaved

16. What reasons can you provide for why these habitats should not count towards the target?

Arable Field Margins

We recognise that arable field margins created by sowing annual seed mixes can be of value to birds, invertebrates and other species in supplying flower, seed and nesting provision. As a habitat and wild plant community in their own right they are often of poor quality and short lived; on the other hand, well-maintained species-rich arable habitats can support important biodiversity. The benefits to wildlife of arable field margins are strongly influenced by the assemblage of species present, the underlying condition of the soil (for example any residual pesticides), their management including that in the adjacent field, and the provision of different types of margins at the farm level. There is insufficient detail in the description of this habitat type to determine the likelihood of their providing a wildlife rich habitat.³²

³² [Arable field margins managed for biodiversity conservation: A review of food resource provision for farmland birds - ScienceDirect](#)

There are also uncertainties about how their loss will be computed, should they be ploughed. The detailed evidence report explains that efforts will be made to ensure that a figure net of losses will be calculated for each “reporting cycle” by taking the total extent of the habitat at the start as a baseline and only treating increases above the baseline as contributing towards the target. It is not clear whether decreases below this baseline - a possibility if land managers decide that cropping these areas would be more profitable - would be subtracted from the total.³³ By their nature arable margins tend to be temporary and even if an overall gain in extent is delivered, if the habitat is not in the same location, then those species that rely on them and that do not respond well to disturbance will fail to thrive.

However, we recognise that arable plants are the fastest-declining group of wild plants and that arable habitats are critical to many other farmland species. Rather than exclude these habitats entirely from the target, we propose instead strengthening and tightening the definition to prevent poor-quality, temporary field margins from contributing towards the wider habitat target when they are not delivering long-term gains for biodiversity. We propose redefining ‘arable field margins’ as ‘species-rich arable’. When properly established, this habitat will promote diverse communities of native annual plant species across the seasons and support a wide range of other farmland species throughout the year. Conservation covenants, ELM LNR and LR agreements and Biodiversity Net Gain delivery could all present viable options for securing long-term gains in high-quality habitat to contribute towards the target and safeguard the persistence of associated species, contributing to the other biodiversity targets.

Coastal Water Habitats

The detailed evidence pack suggests that restoration of these habitats for the purposes of the target could be determined by the actions taken upstream to reduce sources of diffuse and wastewater pollution, including those taken to achieve the water targets. Our concern is not with the inclusion of these habitats per se, but with the use of modelling actions to determine their restoration without on the ground monitoring to assess whether the threshold for “wildlife rich” has been reached.

Other woodland: broadleaved

This habitat is included due to its inclusion in the list of medium distinctiveness habitats in the Biodiversity Metric but there is no specification that this woodland should be native. We do not think that the creation of non-native woodland of uncertain value to wildlife should form part of the metric.

We do not agree that Other woodland: broadleaved should count toward the target in all circumstances. Rather, only ‘other woodland’ defined as in favourable condition (detailed here for example <https://neenp.org.uk/natural-environment/other-broadleaf-woodland-habitat-definition/>) should be included.

³³ Biodiversity Terrestrial and Freshwater Targets, Detailed Evidence Report, Annex 1

Beyond woodland held in favourable condition, this category is very broad including, for example, plantation forestry which is up to 70% non-native broadleaf species such as eucalyptus or paulownia. This habitat can lack the necessary benefit to native flora and fauna.

17 & 18 Do you agree or disagree with the level of ambition proposed for the Marine Protected Area target?

Increased ambition is needed

The current target for 70% of our MPAs in favourable conditions by 2042 is defined in the evidence target as below what is readily achievable (71%) simply by removing pressures on protected features in MPAs. This should already be what MPAs are achieving and demonstrates a low level of ambition, as highlighted in the associated impact assessment which states: *'there is already a legal requirement on regulators to achieve favourable condition and the specification of an additional target does not change this but may increase pressure on these regulators'*. The role of this target should not be to reinstate what already exists in an attempt to increase pressure; pressure which should not be needed when achieving GES of our seas is already a legal obligation. It should aim to set a new ambition for our seas, in line with the nature crisis we are facing. Furthermore, we would want assurances that an MPA could only be considered to be in a recovering condition where monitoring shows evidence that MPA features are making progress towards ecological recovery.

The consideration of features only

The feature-based approach in this target, though consistent with the current application of MPAs in the UK, is limiting for a number of reasons.

Firstly, it limits the consideration of functional linkages, crucial for some of the designated features to reach Favourable Conditions. For example, to protect seabird or seal colonies in the breeding season, it is important not only to consider their land-based breeding colonies but to extend protective measures into the marine feeding areas they depend on during both the breeding and non-breeding seasons.

Further, as highlighted in the consultation document, considering features only would exclude Highly Protected Marine Areas from consideration. However, for our seas to be truly benefiting from adequate protection, we have been urging Governments to ramp up designations in our seas and for 30% of them to be fully or highly protected by 2030, following the Scottish lead with government there committing to designate 10% of its seas as highly protected by 2026. Adopting a similar level of ambition would mean that at least a quarter of our MPAs would be excluded from the target.

Remaining gaps in the network need to be addressed

Alongside the need to ensure that the currently designated sites are free of pressures and able to recover to favourable conditions, the MPA network must also be completed so it is fully ecologically coherent.

A review of Special Protection Areas (SPA) and Special Areas of Conservation (SACs) provision and management in the marine environment remains needed and must be undertaken as a matter of

urgency. Such a review could highlight remaining gaps, including species such as the Balearic Shearwater, critically endangered and relying heavily on British waters for survival during wintering and migration, but not benefitting from bespoke site protection. It is also notable that the Scottish Government has specifically designated Nature Conservation MPAs for species such as sandeel, which is food for many species including seabirds and cetaceans, and marine SPAs and SACs for foraging areas at sea. Similar sites are needed to protect forage fish and foraging areas and to identify and fill gaps across England and strengthen protection beyond current reliance on functionally linked sea as mentioned above.

The need for greater ecological coherence extends to the various protected areas including SPAs, SACs, MCZs and SSSIs. Indeed, in 2014 Natural England undertook a review of all SSSIs to address issues such as aligning boundaries and features of SSSIs underpinning SPAs and SACs to ensure any feature not adequately represented in the existing SSSI network could be included. This work has yet to be published or implemented. As such, not including SSSIs in the MPA target could mean the omission of some SSSI features critically underpinning and supporting features in SPAs or SACs considered.

Management, monitoring and enforcement

MPAs are a key delivery tool to achieving GES and therefore need to be effective in protecting and restoring species and habitats. As such we welcome the identification of this MPA target. However, taking a feature-based approach to their management complicates the assessment of MPAs. Indeed, these sites as a whole should be effectively managed, with the opportunity to use key features as measures of success of management. We support a whole site approach, where management of the full site also benefits non feature habitats and species. Only sites benefitting from appropriate management can count towards the targets of 30x30 set by Government³⁴.

Beyond management, monitoring these sites will be key to understanding when favourable conditions are achieved. As such, we note the proposals to develop a *'bespoke monitoring programme to review progress towards achieving the proposed MPA target'*. Adaptive monitoring is crucial in recognising both how effective the MPA network is at protecting and recovering designated features, alongside supporting achievement of GES across a number of descriptors under the UK Marine Strategy, within timebound targets. There again however, a whole site approach will also be required and could inform a targeted management/risk-based approach to management.

Finally, MPAs will also need to benefit from effective enforcement. To do so, public authorities must be given the appropriate resources to ensure compliance with their provisions. The current safeguards in place are overly burdening and do not allow for the undertaking of necessary actions by the competent authorities. It is critical that if a new approach to protected sites enforcement and monitoring is pursued, it levels up the provisions under the Marine and Coastal Access Act, 2009 to the level of European sites. Furthermore, appropriate resourcing of local authorities will need to be deployed to ensure they can act swiftly in the event of an activity hindering the achievement of the conservation objectives stated for protected sites.

³⁴ https://jncc.gov.uk/media/1970/chaniotis_et_al_2018_jncc_mpas.pdf

Beyond MPAs

60% of our seas still fall outside of protected areas, with species which are features of protected sites relying on waters outside of these boundaries all year round. As such Marine Spatial Planning (MSP) will need to play a vital role in addressing the state of our seas to ensure the integrity of protected sites and promote nature recovery beyond their boundaries. For our seas to reach GES, considerations of features outside of designation will be crucial. Yet, MSP requires a complete and urgent transformation – a need recognised by both NGOs and many sea users including across the offshore renewables sector. It is vital that the new Marine Spatial Prioritisation programme establishes a meaningful framework and sets the foundation for a new generation of ambitious, fit for purpose marine plans. Beyond the need to address cumulative impacts, one of the key roles of the new programme will be to address displacement issues. Indeed, with government committing to remove pressures within MPAs, it is crucial that activities such as fisheries and sensitive species bycatch are effectively managed outside of these sites to ensure the rest of our seas are not squeezed further. Achieving GES will require the whole of the marine environment to be healthy.

We therefore caution that action to protect MPAs cannot simply displace harm to areas outside of the network.

Where individual anthropogenic activities are known to be causing declines, such as fisheries bycatch of sensitive species and PCB pollution burdens of marine mammals, ambitious elimination targets are needed.

Consideration of a further target for blue carbon

Many of our current policy and delivery mechanisms reference the need to protect and restore blue carbon (The Joint Fisheries Statement, Marine Spatial Prioritisation Programme etc) but have no key deliverables for achieving change. We cannot continue acknowledging the need to manage for climate change whilst failing to put into action plans to deliver against this. The MPA network could and should contribute toward building resilience against climate change and delivering ocean recovery. Ocean recovery will only be achieved if GES is delivered with the addition of blue carbon restoration and protections in order to support both climate mitigation and resilience.

19. Do you agree or disagree with the level of ambition proposed for an abandoned metal mines target?

We disagree.

20. [If disagree] What reasons can you provide for why the government should consider a different level of ambition?

Abandoned metal mines are a significant issue where they occur, however at a national scale mine pollution makes up [less than 3% of recorded 'Reasons for Not Achieving Good Status' \(RfNAGS\)](#) against River Basin Management Plan (RBMP) objectives. As such the target represents a small proportion of the chemical pollution issues that need to be tackled to bring our waters to good health.

A target that is so limited in scope, yet still aims to reduce a pressure only by half, seems inadequate. Where to do so is cost-beneficial, the RBMPs will require action against metal mine failures by 2027; the target should therefore build on this work in the decade that follows by seeking to deliver improvements across further waterbodies affected by this issue; i.e. a target of greater than 50%.

The evidence pack shows that a range of levels of ambition were considered, with a 60% reduction considered potentially achievable, and a 75% reduction considered 'unachievable in practice at present'. Although moving to a target of higher ambition will require action at more difficult-to-tackle sites, delivering the already-required pre-2027 actions at primarily 'point source' locations will offer the opportunity to test approaches including the use of nature-based solutions, and to learn from these such that they may be more widely implemented to tackle the more challenging 'diffuse' metal mine pollution in the decade that follows.

The evidence pack also suggests that funding and delivery capacity are the main constraints to adopting a more ambitious target. However, delivery under RBMPs and as proposed under a less-challenging 50% target will yield a growing body of transferable knowledge, will decrease the overall cost of schemes as we become more proficient at delivery, and will increase the pool of potential funders as we become better able to quantify the wider benefits that schemes deliver. As such we believe that a target of 50% is insufficiently ambitious and a more challenging yet achievable target should be adopted. With the financial, technical and capacity innovations that will stem from the more-easily-achievable components of the target laying the groundwork for further delivery, we believe that a target of 75% should be adopted.

21. In addition to the proposed national target, we would like to set out ambitions for reducing nutrient pollution from agriculture in individual catchments. Do you agree or disagree that this approach would strengthen the national target?

We agree.

22. [If disagree] Why don't you think ambitions for reducing nutrient pollution from agriculture in individual catchments will strengthen the national target?

23. [If agree] Why do you think ambitions for reducing nutrient pollution from agriculture in individual catchments will strengthen the national target? What factors should the government consider when setting these ambitions?

We welcome setting ambitions for individual catchments as this will ensure that investment and farmer effort is focussed on delivering the best outcomes, and will avoid unnecessary burdens on the sector such that could result from a 'blanket' approach. However, targeting by catchment will only strengthen the target if the targeting is need-driven - i.e. responding to environmental limits. Targeting based on other factors, such as by significance of loadings or ease of achievement, will not necessarily deliver the greatest environmental benefits. In addition, catchment ambitions could be used to secure significant co-benefits, such as improving the nutrient status of designated sites, and reducing loadings to marine and coastal habitats downstream; the achievement of such additional benefits would be valuable to consider when setting ambitions, but the ecological needs of impacted waterbodies should be the driving factor.

This dovetails with WEAG advice cited in the evidence report that "national budgeting of nutrient fluxes to air and water linked to environmental and human health impacts is needed, finer scale monitoring and modelling is also needed to inform design of mitigation on the ground on individual farms and within catchments."

In this context, we question the ambition of the target; the evidence pack identifies that a 50% target would bring us 'closer to achieving good ecological outcomes in many waterways' and this is particularly the case for phosphorus; the agriculture and wastewater targets must therefore work in tandem to ensure that delivery collectively secures meaningful ecological improvements. For nitrogen and sediment (which unlike phosphate come primarily from agriculture), a higher target should be considered if prioritising by catchment within an overall average target of 40% proves insufficient to meet ecological need. It is unclear whether the intention is to prioritise pollution reductions 'as a piece' or individually; for example, for a given waterbody, rather than 40% reductions in each pollutant, targeting by need could see a target of 20% reduction in agricultural phosphate and a 60% reduction in sediment, allowing the overall target to be delivered in a way which is most ecologically meaningful. It is a concern that 'blanket' reductions everywhere may burden farmers unnecessarily in some locations, and see reductions fall short of ecological needs in others.

In designing catchment-specific ambitions for nutrient reduction, a factor for government to consider is a principle of non-deterioration. Aquatic plant assemblages and associated fauna change if water becomes more eutrophic. While we support variation in the level of nutrient load reductions between catchments, for example to restore water-dependent protected areas rapidly, which implies other catchments may have less stringent ambitions than the national target, we would be concerned if variation in catchment ambition led to a "dilution as the solution" approach. The government should ensure nutrient loads are reduced in all catchments and sub-catchments, just with variation in their reduction ambition.

24. The target needs to allow flexibility for water companies to use best available strategies to reduce phosphorus pollution, including the use of nature-based and catchment-based solutions. Do you agree or disagree that the proposed target provides this flexibility?

We disagree.

25. [If disagree] What reasons can you provide for why the target doesn't give this flexibility?

Whilst the target as worded may technically allow the flexibility for catchment- and nature-based solutions (C&NbS) to be used, it does nothing to explicitly encourage their use. Furthermore, as the target focuses on treated wastewater from wastewater treatment works it is more difficult to envisage the role that C&NbS could play beyond those employed in relation to the works themselves, e.g. integrated constructed wetlands. Wider catchment solutions are likely to play a more limited role as a result.

26. Do you agree or disagree with the level of ambition proposed for the nutrient targets?

We disagree.

27. [If disagree] What reason can you provide for why government should consider a different level of ambition?

We welcome a target which will see action to reduce phosphorus loadings to water from treated wastewater, which is currently responsible for up to 80% of phosphorus entering rivers nationally.

Although the target misses the opportunity to also tackle other key components of wastewater pollution including nitrogen, emerging chemical pollutants, and anti-microbial resistance, it is possible that the methods that will be utilised to tackle phosphate pollution may deliver improvements on some of these pressures at the same time; C&NbS which have the scope to do this, should be favoured. The target also excludes untreated wastewater entering watercourses from Storm Overflows (SOs); the target must work alongside that being set for SOs under the Storm Overflows Reduction Plan, particularly since catchment and nature-based solutions which work to keep water out of the sewerage system can contribute to the delivery of both sets of targets in tandem.

We understand that the wastewater target will exceed requirements to bring waters to good ecological status and therefore builds on the foundations of RBMPs; however it is unclear whether the greater ambition set for phosphate from wastewater is offset by the lesser ambition set for agriculture; this is particularly a concern given the wider co-benefits that we may fail to secure by opting to reduce wastewater pressures rather than agricultural pressures.

We want to see an agricultural target which is informed by environmental need and is aimed at achieving, and in some locations going beyond, Water Environment Regulation requirements. We welcome in particular the inclusion of sediment, as to deliver against this target will necessitate land management measures which deliver a range of wider benefits, including for the farm business. However the proposed target of 40% across all three pollutants appears to fall short against

environmental need as discussed above. The nutrient pollution targets for agriculture and wastewater therefore need to be set at such a level that they collectively make the required contributions towards achieving and exceeding ecological standards in affected waterbodies, and delivering co-benefits for biodiversity and other societal challenges.

The evidence pack also notes that achieving the agricultural target will require very high uptake of regulatory measures, and around 20% of agricultural land to be converted to semi-natural habitat. Whilst not unreasonable in the context of poor regulatory compliance and the biodiversity and climate crises, achieving this will require a significant uplift in advice, incentives (in particular the funding offer within ELMS needs to be sufficiently attractive, and land use change needs to be *targeted* to offer the greatest additional benefits, particularly to biodiversity), inspection and where necessary, enforcement.

Part of the difficulty Defra appears to have encountered in delivering ‘achievability’ with the proposed 40% target reflects restricted assumptions about human dietary shift and production levels. The most ambitious scenarios modelled in the WT1594 evidence report include 10% of land on farms being converted to woodland (not necessarily from pasture) and a 10% reduction in stocking rates on remaining land, suggesting a maximum reduction of 19% of the outdoor livestock herd. WEAG experts suggested “that significant reductions in nutrient pressures from agriculture would require wider changes within the food chain”.

A welcome aspect of the evidence pack is the reflection of cross-team working in Defra and the recognition of wider co-benefits or potential trade-offs with other environmental issues such as air pollution, biodiversity and greenhouse gas emissions. The Climate Change Committee’s “balanced pathway” assumes a 35% reduction in meat and 20% reduction in dairy consumption by 2050 (50% in other pathways)³⁵. It is estimated that halving the meat and dairy intake in the EU could reduce total N loss by 42%, NH₃ and N₂O emissions by 43% and 31% respectively, and, N leaching and runoff by 35%. These figures do not take reduced food waste into account, which (separately) could reduce N losses to the environment by 17%.³⁶

This report also advocates a target of reducing nitrogen waste across the UK economy by 50% (by 2030), which we believe would be an achievable Environment Act Water Target. Taking a more ambitious and integrated approach to shifts in livestock production and consumption, and to food waste, would contribute significantly to Environment Act water quality, biodiversity (freshwater, marine and terrestrial) and air quality targets, as well as, to the Net Zero target. Additional air quality targets for NH₃ and other pollutants (as proposed under question 46) would help to drive cross-team delivery of this integrated approach in policy and on farms.

³⁵ Climate Change Committee (2020) The Sixth Carbon Budget. Agriculture and land use, land use change and forestry. <https://www.theccc.org.uk/wp-content/uploads/2020/12/Sector-summary-Agriculture-land-use-land-use-change-forestry.pdf>

³⁶ Hicks, McKendree, Sutton, Cowan, German, Dore, Jones, Hawley & Eldridge (2022) A Comprehensive Approach to Nitrogen in the UK. https://www.wwf.org.uk/sites/default/files/2022-02/WWF_Comprehensive_Approach_to_N_Final.pdf

Alone, the four water targets currently proposed will not be sufficient to drive the recovery of the water environment. They will see (necessary) action on specific pressures, but without an overall driver we risk siloed action which fails to deliver wider benefits for environment and society, and could yet see wider declines in the state of the water environment despite improvements against specific pressures.

The requirement under RBMPs to achieve all cost-beneficial actions to improve status by 2027 means that beyond that date there will be no overall target governing the health of rivers, lakes, estuaries and coastal waters, let alone other parts of the water environment. It is difficult to see how the water targets as proposed will ensure that healthy aquatic habitats support the delivery of the 2030 apex target on halting species decline.

As such, we recommend that Government considers an apex target for water, key to which should be restoring the natural function of catchments, underpinned by metrics such as the area of clean water habitat (defined by high status chemistry & biochemistry), the length of watercourse with a functional floodplain, and the length of watercourse with high status biology. The target could draw on elements of indicator B6, currently under development as part of the indicator framework for the 25 Year Environment Plan.

An apex target would complement and utilise the targets proposed under the Environment Act, but would also ensure a more holistic, outcome-focussed view of the health of our water environment, giving certainty to business, regulators and deliverers, and building on the foundations already laid by RBMPs. Such a target would better reflect society's expectations regarding the water environment.

28. Do you agree or disagree with the level of ambition proposed for a water demand target?

We disagree.

29. [If disagree] What reasons can you provide for why the government should consider a different level of ambition?

We strongly welcome the inclusion of a water demand target, and are pleased to see a target on Distribution Input (DI) as opposed to one which would focus only on a single component of water demand, such as leakage or *Per Capita* Consumption (PCC). The target will allow companies to utilise whichever means of reducing water demand is the most effective for their circumstances and their customers.

The evidence pack sets out that a 20% reduction is in line with delivering the environmental protections and improvements set out in the National Framework for Water Resources - this is welcome, although significant scrutiny by EA will be required to ensure that Regional Water Resources Plans and company Water Resources Management Plans then incorporate these requirements.

Further, it should be noted that the target will place obligations upon Government and not just upon water companies; Government will need to bring forward new policy action on areas such as building

standards, retrofit and implementing the proposed mandatory water label in order to enable this target to be achieved.

The evidence pack notes that a more ambitious target was rejected since compulsory metering, which would be required to deliver it, could be a financial burden on some families - yet this is a risk that can be well managed by water companies via advice, tariffs and financial support, and should be revisited as a means of embedding sustainable water use in the long term. In addition the leakage component of the target proposes lower reductions than existing sector commitments, and so should also be revisited. Incorporating such considerations would enable a higher level of ambition to be set; for example, a target of 22%, building in an ambition of reducing PCC to below 100l/person/day by 2050. This approach would be particularly important if no action is taken to resolve our other key concern, which is that a target over population sees the environment bear the risk of population increase, since savings from reductions-per-head can be cancelled out by increases in the number of people using water; an absolute target is required to eliminate this risk. Whilst DI over population should indeed be tracked as a useful measure to understand water efficiency trends, it is not in itself a sufficiently robust environmental target because the faster population grows, the smaller the benefit of a certain level of abstraction reduction – the environment bears the risk of uncertainty.

30. Do you agree or disagree with the proposed metric for a tree and woodland cover target?

- We support the adoption of a long-term legal target to increase tree cover in England.
- To maximise its benefit, the new target must measure both quantity and quality of canopy cover expansion. A target that does this would stimulate expansion that delivers for climate, habitats, biodiversity and other environmental objectives together
- By including only a quantity measure, the draft target does not guarantee that the quality elements essential to delivering the intended range of benefits will be realised.
- To address this the trees and woodland cover target should be amended to include a quality measure, for example a differentiation between native and non-native trees

We agree with the broad principles behind the proposed metric, whilst highlighting some points that require further consideration.

Overall, the decision to proceed with a percentage target for canopy and woodland cover is welcome. The alternative, aiming towards a set number of trees, could have created an incentive for high density planting to the detriment of biodiversity and landscape character. The clarity of the target is also welcome, as a net target it acknowledges the need to maintain the trees and woodland we already have. Other Environment Act biodiversity targets, such as the proposal for 500,000 new hectares of wildlife rich habitats by 2042, could have benefited from this percentage and net figure approach.

Points that require further clarification and/or work

The 14.5% figure for existing tree canopy and woodland cover

The metrics underpinning the target would benefit from further assessment. The criteria most often used by conservationists suggest that woodland cover in England currently stands around 10%, rather than the 14.5% tree canopy and woodland cover suggested in the consultation document.³⁷ The delayed evidence pack for the woodland target states that the 14.5% total has been reached by adding an estimate of tree canopy cover for trees and small woods not covered by the National Forest Inventory woodland onto the 10.1% figure.³⁸ The estimate appears to have been published in 2017.³⁹ It would benefit from a full and urgent review, to ensure that this figure is robust and to double check that it is appropriate to combine it with more widely used woodland cover figures. Assurance is also required that, should later assessment find that current tree canopy and woodland cover is lower than 14.5%, the target for 2050 will remain at 17.5%.

³⁷ <https://www.forestresearch.gov.uk/tools-and-resources/statistics/statistics-by-topic/woodland-statistics/>

³⁸ https://consult.defra.gov.uk/natural-environment-policy/consultation-on-environmental-targets/supporting_documents/Woodland%20cover%20targets%20%20Detailed%20evidence%20report.pdf

³⁹ <https://www.gov.uk/government/statistics/national-forest-inventory-tree-cover-outside-woodland-in-gb>

Defra should also consider whether this unusual approach of combining separate woodland cover and tree canopy datasets aligns with international forestry accounting conventions.⁴⁰

The relationship with the wildlife rich habitats target

As stated in the consultation document, the tree canopy and woodland cover target will create 420,000 hectares of new woodland and trees by 2050. It is important to achieve a constructive relationship between this delivery of woodland habitat and the separate target to deliver 500,000 hectares of wildlife rich habitat by 2042.

At UK level, woodland cover has nearly tripled since the beginning of the last century. However, the large majority of this has been low diversity forestry plantations with the result that:

- Despite the increase in tree cover, over half of the woodland species are in decline and species dependent on woodland (e.g. birds, butterflies and flowering plants) have shown sharp declines in recent decades.
- Many ancient and long-established woodlands have been lost and now represent only a quarter of all woodland cover in the UK.
- In some parts of the country over half of trees outside woods present in the mid-1800's have been lost.
- Although 70% of the UK land area is farmed, only 3.3% is in agroforestry.
- Average urban tree cover is estimated at around 16% but is as low as 2% in some areas.⁴¹

The consultation document suggests (page 13) that only native woodland may be counted towards the wildlife rich habitats target. Given that current planting rates in England are (rightly) heavily skewed towards native broadleaf trees, this may still result in a marked predominance towards woodland within habitats delivered by the wildlife rich target, possibly at the expense of valuable open habitats, which urgently need restoration and expansion in many places and are often particularly vulnerable to inappropriate tree planting.⁴² The evidence pack for the woodland cover target goes on to state that 142,000 hectares of native woodland could be delivered by 2042, comprising 28% of the overall habitats target

We recommend a different approach to balancing the wildlife rich habitats and woodland targets, to ensure that habitats delivered through the former always meet local nature needs. Elsewhere in our consultation response we suggest that the wildlife rich habitats target be increased to 750,000 hectares by 2042, with the habitats delivered locally by Local Nature Recovery Strategies (LNRSs) to meet localised nature recovery priorities, with each new habitat delivered being underpinned by clear evidence of high biodiversity value. In line with this, we propose that only new native woodland identified and delivered as a local nature priority habitat by a LNRS should be counted towards the wildlife rich habitats target. This would allow both the tree canopy and woodland cover target and the

⁴⁰ Such as the WAVES global partnership Forest accounting sourcebook:

<https://unstats.un.org/unsd/envaccounting/londongroup/meeting21/Forest%20sourcebook%20-%20LG%20version%203.3.pdf>

⁴¹ <https://www.woodlandtrust.org.uk/media/49731/state-of-the-uks-woods-and-trees-2021-the-woodland-trust.pdf>

⁴² https://www.forestresearch.gov.uk/documents/8205/Complete_FS2021_JvYjBWA.pdf

wildlife rich habitats target to deliver discrete nature recovery outcomes, the former increasing overall tree canopy and woodland cover across England, the latter ensuring that local priority nature habitats are delivered. Allowing new native woodland identified by LNRs as a local nature recovery priority to count towards both targets would be an effective mechanism to allow overlap, without undermining the wildlife rich habitats target.

It will be necessary to support a degree of coordination between tree strategies and LNRs to manage this overlap, especially in the next few years when LNRs will be finding their feet.

Remote sensing

Remote sensing does have the potential to accurately measure trees and woods not covered by the National Forest Inventory, as proposed by the consultation document. An in-depth review of remote sensing technology, undertaken by the European Union in 2020, concluded that “*reliable and cost efficient*” remote sensing solutions are now deployable on a significant scale.⁴³ However further details are required to clarify exactly how this technology will be used to assess progress towards the tree and woodland cover target, and how it will integrate with National Forest Inventory data. It is unclear whether the remote sensing will be carried out by a public body or by a private company, as is currently the case with some environmental remote sensing work already underway in the UK. Clarification on how this work will feed into the National Habitat Map established by the Environment Act is also required. There is also concern that remote sensing would show the presence of trees and woodland, but can’t yet be reliably used to assess the quality and condition of them.

Management of existing woodland

The need to maintain and enhance existing woodland and trees cannot be overstated. Just 7% of our native woods are in good condition for nature.⁴⁴ Creating new woodland will count for little, if we allow the woodland we already have to degrade further. The net nature of the tree canopy and woodland cover target does acknowledge this but there also needs to be recognition of the need for, and delivery of, specific measures to improve woodland management. Defra should seek to achieve increasing rates of sustainable woodland management for biodiversity, with a commensurate increase in monitoring of ecological condition of woodlands. Recent RSPB research has demonstrated the significant beneficial impact sustainable woodland management can have on species abundance.⁴⁵

Support for sustainable woodland management should include acknowledgement that not all woodland needs to be commercially productive. Although woodland can be managed for both timber and nature, in some circumstances (for example in buffer woodland surrounding and protecting ancient woodland), management for the primary purpose of nature recovery is a sufficient and necessary purpose, especially in the context of the Environment Act apex target to halt the decline in species abundance by 2030.

⁴³ https://ec.europa.eu/environment/forests/pdf/report_monitoring_forests_through_remote_sensing.pdf

⁴⁴ <https://www.woodlandtrust.org.uk/media/49731/state-of-the-uks-woods-and-trees-2021-the-woodland-trust.pdf>

⁴⁵ <https://community.rspb.org.uk/ourwork/b/science/posts/managing-woodland-for-birds-does-it-work>

Modelling

It appears that the target proposals have been modelled on an assumption that the current woodland regulatory framework based on the UK Forestry Standard is retained, and that Environmental Impact Assessment regulations remain and continue to protect wildlife rich non-woodland and open habitats from afforestation. Given that the UK Forestry Standard Review is ongoing, and that the Nature Green Paper and Levelling Up and Regeneration Bill propose significant changes to environmental assessment, these assumptions may need to be revisited.

31. Do you agree or disagree that short rotation coppice and short rotation forestry plantations should be initially excluded from a woodland cover target?

We agree with the exclusion of short rotation coppice and short rotation forestry plantations, typically used for bioenergy, from the tree canopy and woodland cover target.

The target has been proposed so that the carbon sequestration capacity of woodland can contribute to net zero and to increase woodland habitat to help achieve the apex target of halting the decline in species abundance by 2030. Short rotation coppice and short rotation forestry plantations do not deliver towards these goals. The older a tree is allowed to get, the more it stores carbon. This is why ancient and long-established woodlands hold 36% of carbon stored by UK woodland, even though they make up only 25% of all woodland.⁴⁶ Similarly, woodland requires time to develop the complex woodland ecosystem that woodland species need to thrive. By their very nature short rotation coppice and forestry plantations do not permit trees to stay in the ground very long, resulting in greatly reduced climate and nature recovery benefits.

As short rotation coppice and short rotation forestry plantations do not further the aims of the tree canopy and woodland cover target, it is correct to exclude woodland created by these practices from the target. We would suggest that rather being 'initial', this exclusion is permanent given the clear evidence that plantations used for bioenergy have negative climate and nature impacts compared to other forms of woodland.⁴⁷ The evidence pack suggests that new regulations arising through the Biomass Strategy could allow for short rotation forestry for bioenergy to be considered for inclusion in the tree canopy and woodland cover target in the future. We do not support this suggestion. Short rotation forestry for bioenergy should not become normalised within English woodland, alternative woodland practices can deliver much more for climate and nature.

Native woodland subject to limited coppicing could be permitted to contribute to the target when that coppicing is undertaken for the purposes of nature recovery.⁴⁸

⁴⁶ <https://www.woodlandtrust.org.uk/media/49731/state-of-the-uks-woods-and-trees-2021-the-woodland-trust.pdf>

⁴⁷ See summary of that evidence here: <https://www.rspb.org.uk/globalassets/downloads/pa-documents/biomass/rspb-mp-biomass-briefing-11.21.pdf>

⁴⁸ See examples of this practice here: <https://ptes.org/why-do-we-coppice/>

32. Do you agree or disagree with the proposed inclusion of trees in woodlands, as well as trees in hedgerows, orchards, in fields, and in towns and cities?

We agree with the inclusion of trees in woodlands, and trees in hedgerows, orchards, fields, towns and cities within the target.

Trees outside of woods (TOWSs) deliver a range of benefits for nature and people.⁴⁹ These benefits include cleaner air in urban areas, as the foliage of trees in streets, parks and gardens filter airborne particles, improving air quality. A 2021 Cambridge Economics report suggested that the value of these air pollution benefits could be estimated at £13,442 per hectare of woodland.⁵⁰ Further research from the National Trust suggests that a £5.5 billion Government investment in urban green infrastructure could bring £200bn in health benefits, due in part to the mental health and wellbeing boost urban trees provide to communities.⁵¹ Urban trees also help to provide shade and urban cooling, helping to manage climate-change driven increases in temperatures in cities.⁵² Trees in hedges and on farmland improve soil health, manage water flow and attract pollinators to the benefit of the existing cereal crop, as well as providing shelter to wildlife.⁵³

The inclusion of trees in hedgerows, orchards, fields, towns and cities in the target will help unlock this array of benefits, by delivering more TOWS. This increase is required; in the last decades of the 20th century England lost over half of its individual trees, due to land use changes and disease.⁵⁴

The proposals in this area could be enhanced by further detail on how healthy hedgerow habitats can buttress and support the tree canopy and woodland cover target, given the very close relationships between trees and hedgerows on farmland. CPRE research has shown the multiple benefits of hedgerows for carbon capture, wildlife, landscape character, cleaner air and reduced flooding.⁵⁵ A target to increase the extent of hedgerows in the UK by 40% by 2050 was recommended by the Climate Change Committee. Whilst the evidence pack for the target clarifies that hedgerows were excluded as they do not meet the National Forest Inventory definition of trees or woodlands, this does not explain why a standalone hedgerow sub-target could have been advanced, to support the woodland cover target and to offer wider biodiversity benefits.

Similarly, the proposals would benefit from further detail on how trees (both TOWS and trees in woodland) can be made more accessible to both urban and rural communities, to maximize opportunities for recreation and exercise. The healthcare benefits of greater access to woodlands are

⁴⁹ See a full breakdown of these benefits here: <https://www.woodlandtrust.org.uk/media/1702/benefits-of-trees-outside-woods.pdf>

⁵⁰ https://www.camecon.com/wp-content/uploads/2021/03/The-economic-costs-benefits-of-nature-based-solutions_final-report_FINAL_V3.pdf

⁵¹ <https://www.nationaltrust.org.uk/press-release/new-research-shows-55bn-fund-needed-to-level-up-access-to-urban-green-space-as-part-of-uks-green-recovery>

⁵² <https://www.forestresearch.gov.uk/research/role-urban-trees-and-greenspaces-reducing-urban-air-temperatures/>

⁵³ <https://forestrycommission.blog.gov.uk/2021/12/03/theres-more-to-trees-than-meets-the-eye/>

⁵⁴ <https://www.woodlandtrust.org.uk/media/1821/trees-outside-woods-ecological-value.pdf>

⁵⁵ [Hedge fund: investing in hedgerows for climate, nature and the economy - CPRE](#)

particularly relevant, as we emerge from the Covid-19 pandemic with a new appreciation of the relationship between access to nature and public health. Access to trees and woodland boosts mental health and encourages physical activity, making it a doubly powerful preventative healthcare tool.⁵⁶

33. Do you agree or disagree with our proposed level of ambition for a tree and woodland cover target?

- The proposed target to increase tree canopy cover to a minimum of 17.5% by 2050 represents an acceptable quantity target, being in line with objectives set out in the Government's Net Zero Strategy and the CCC's 6th Carbon Budget.
- The target is not, however, intended purely as a contributor to climate change policy objectives, but nature recovery, too.
- To achieve this, the ambition of the new target must include safeguards that measure both quantity and quality of canopy cover expansion.

We agree with the target to increase tree canopy and woodland cover to 17.5% by 2050.

The ambition behind this target is welcome and puts England on track to meeting the Committee on Climate Change 6th Carbon Budget recommendation for 18% woodland cover across the UK by 2050.⁵⁷ This level of ambition addresses the historic shortfall in English woodland creation compared to Scotland, facilitating a more balanced delivery of woodland across UK nations.

Whilst welcoming the ambition of the target, it is important to highlight that it comes from a low base. Woodland creation rates in England have been very low for years. As a result the uplift to the proportion of woodland recommended by the Climate Change Committee is a large step – it should not however be a final one. If the early experience of improving delivery toward the target is realised, then we suggest the government should elevate the target so that it is based on what is possible, rather than being tied to a backdrop of historic disappointing rates of delivery. This welcome target should be seen as a floor, not a ceiling.

Our support for the level of ambition in the target is tempered by the absence from it of measures to ensure that the new woodland delivered is of sufficient quality to help wildlife species recover from their ongoing decline.

41% of native species have declined in abundance since 1971, with the decline in woodland species being particularly steep.⁵⁸ These declines can only be reversed, and the Environment Act apex target to halt the decline in species abundance only met if new woodland meets the needs of woodland species.

⁵⁶

https://www.wcl.org.uk/assets/uploads/img/files/Briefing_Nature_for_Everyone_campaign_Spring_2022_002.pdf

⁵⁷ <https://www.theccc.org.uk/publication/sixth-carbon-budget/>

⁵⁸ <https://nbn.org.uk/wp-content/uploads/2019/09/State-of-Nature-2019-UK-full-report.pdf>

Native woodland is best way to deliver this. Biodiversity tends to be higher in woodland habitats comprised of mainly native trees that are in good condition, perpetuating the complex and developed ecosystem that woodland species have evolved with. As the data from the Woodland Trust's 'State of Trees 2021' report makes clear: "high species richness clearly corresponds with regions that have expansive ancient woodland cover and landscapes with high broadleaved cover more generally, which will be predominantly native tree species".⁵⁹ In the words of Natural England Chair Tony Juniper "all types of woodland have value, but I believe that those dominated by native broadleaved species generally provide the most benefit for wildlife and people. Native woodlands support a quarter of the UK's priority species and those with a diversity of tree species are more resilient to disease".⁶⁰

The greater resilience of native trees mean that they deliver for climate, as well as for nature. The majority of native tree species hold a high proportion of genetic diversity.⁶¹ If native trees are supported to self-seed and spread through natural colonisation this can allow genetic mixing and the natural selection of the fittest, so each successive generation of tree can become better adapted to changing climate conditions.⁶² Natural colonisation of native trees also offers biosecurity benefits, as it reduces the need for imported trees.

The evidence pack for the woodland cover target cites analysis that 'assumes that up to 80%' of woodland delivered through the target will be native. This would represent a decline on recent planting rates in England, which have been around 90% native broadleaf.⁶³

Further development of the tree canopy and woodland cover target will need to include safeguards to ensure that a higher proportion of new woodlands and trees are from native species, in order to maximise nature and climate resilience benefits. A strong preference for native woodland, designed to at least maintain current planting rates and to encourage natural colonisation, should be integrated into financial support for new woodland, as has been the case with the Woodland Creation Offer.⁶⁴

In their own responses to the consultation, RSPB and Woodland Trust propose other possible safeguards, in the form of differentiated sub-targets, to sit underneath the woodland and tree canopy target. For example:

Creation sub targets that breakdown woodland delivery into:

1. native woodlands established primarily for conservation,
2. commercial (non-native and native) forests established primarily for timber production
3. trees outside of woods
4. silvo-pastoral agroforestry systems.

⁵⁹ <https://www.woodlandtrust.org.uk/media/49731/state-of-the-uks-woods-and-trees-2021-the-woodland-trust.pdf>

⁶⁰ <https://naturalengland.blog.gov.uk/2020/12/03/tony-juniper-a-tree-pronged-approach-to-restoring-nature/>

⁶¹ <https://www.forestresearch.gov.uk/documents/7110/FCRP030.pdf>

⁶² https://s3.eu-west-2.amazonaws.com/assets.rewildingbritain.org.uk/documents/RB_RegenerationReport_FINAL.pdf?mtime=20210310105639&focal=none

⁶³ <https://www.forestresearch.gov.uk/tools-and-resources/statistics/statistics-by-topic/woodland-statistics/>

⁶⁴ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1047096/FC_EWCO_1_eaflet_A5_-_Jan_2022.pdf

This would allow the primary purposes of woodland be accounted for (data which will be particularly useful when calculating wider woodland benefits to society) as well as enabling a maintained focus on native woodland delivery rates.

Alternatively, sub targets could be set that differentiate between native and non-native expansion.

We would challenge the case given in the evidence pack for rejecting such sub-targets ("A differentiated target was rejected because it would be challenging to both monitor and implement in practice and would also require a strict legal definition of each woodland type and the ability to monitor changes in the composition of existing woodland.")

- Government already uses definitions of native woodland which have been in place since it committed to the importance of native woodland in 1980s.
- Monitoring of the extent of broadleaf woodland cover is already carried out annual as part of Forestry Commission England's Key Performance Indicators
- For existing woodland, Forestry Commission England's permission is required for major changes in forest type with this information being captured via felling licences.
- There is a UK precedent for native woodland expansion targets. Scotland continues to set targets for and report on the expansion of native woodland (for example, the Scottish Forestry Strategy 2019-29 which sets a target for 3-5,000 hectares per annum)

34. [If disagree] What reasons can you provide for why the government should consider a different level of ambition?

35. Do you agree or disagree with the proposed scope of the residual waste target being ‘all residual waste excluding major mineral wastes’?

Disagree

36. [If disagree] What reasons can you provide for why the government should consider a different target scope?

The exclusion of mineral waste means there is no target to drive reductions of this form of waste which is linked to widespread global habitat loss and carbon emissions. While it may be less environmentally damaging at the disposal stage, during production this form of waste carries high environmental costs.⁶⁵

Removal of mineral waste also reduces the pressure which ambitious targets would exert on efforts to tackle waste crime. As noted in the consultation documents, waste crime improvements haven't been modelled because “a large proportion of identified waste crime involves construction, demolition and excavation waste, which is largely outside of our proposed target scope.”

However, we do welcome that incineration is included as residual waste. This is positive as it recognises the environmental harms caused by incineration. The Government must maintain this position, rejecting arguments that energy from waste represents a sustainable form of waste management. With the associated carbon emissions, the failure to support circular economy goals, and concerns over air quality,⁶⁶ incineration should be disincentivised in England.

37. Do you agree or disagree that our proposed method of measuring the target metric is appropriate?

Neither agree nor disagree

38. [If disagree] What reasons or potential unintended consequences can you provide or foresee for why the government should consider a different method?

We agree with some aspects of the proposed method of measuring the target:

- **Target set against a baseline year**

It is welcome that the target is set in reference to a baseline year, rather than targeting a percentage of residual waste in any given year. This will help achieve absolute, rather than relative, falls in residual waste.

- **Waste measured in kgs rather than percentages**

⁶⁵ <https://www.sciencedirect.com/science/article/pii/S2589234718300290>

⁶⁶ See <https://ukwin.org.uk/facts/#incinerationcapacity>

It is welcome that the target is in kgs of residual waste per person per year, instead of a percentage of overall waste. This also helps promote the minimisation of residual waste in absolute terms, rather than as a percentage of a growing waste total.

However, while there are benefits to a kg-based target, there is the potential for undesirable outcomes:

The consultation documents note that the Government is aware that “as a weight-based target, it could be perceived that we are prioritising the reduction/improved recycling of heavier waste materials over lighter ones.” Though adding that “We will seek to avoid that and any other unintended consequences through the monitoring of waste composition and careful consideration of policy interventions according to environmental impact.” While this acknowledgement of the problem is welcome, the solution of greater monitoring may not be adequate. A focus on weight may slow action on the collection and recycling of lighter items which are currently under-collected e.g. plastic pots, tub and trays, household and bathroom packaging. Further, the Government may be slow to deliver the inclusion of flexible plastic packaging in the core set of materials collected at kerbside. The urgency of this is clear from the significant amount of lightweight film found in Turkey originating from the UK.⁶⁷

39. Do you agree or disagree that local authorities should have a legal requirement to report this waste data, similar to the previous legal requirement they had until 2020?

n/a

40. Do you agree or disagree with the level of ambition proposed for a waste reduction target?

Disagree

41. [If disagree] What reasons can you provide for why the government should consider a different level of ambition?

- **The target is not ambitious**

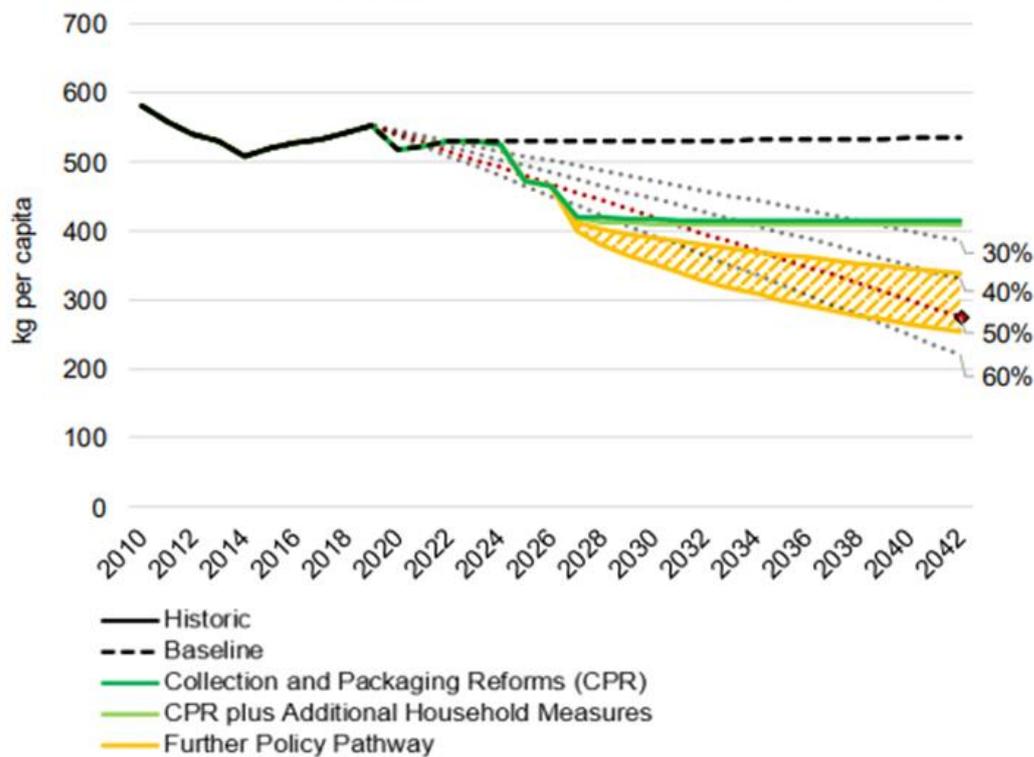
The Government’s own modelling in the consultation documents shows a higher target is possible under a ‘highest impact scenario’. It is therefore unclear why a target of 50% has been promoted as demonstrating the highest level of feasible ambition. Indeed, the documents state that:

*“In the highest impact scenario modelled, we assume that the same level of reduction of the historic landfill reduction is possible, and that introduced policies are 75% as effective in achieving this (i.e., we apply a 25% reduction to the rate of decrease). In this scenario, residual waste excluding major mineral wastes is projected to decrease to 254 kg per capita by 2042, a **54% reduction on the 2019 levels.**”*

⁶⁷ <https://www.greenpeace.org.uk/resources/trashed-plastic-report/>

Further, Government modelling shows that a much higher rate of reduction in residual waste is possible; with rapid reductions expected between 2024 and 2028 resulting from the introduction of the Collection and Packaging Reforms (CPR), thereby leading to falls in residual waste (kg per capita) by 25%; this fall is achieved entirely between 2024-28, see chart below. **This means that half of the targeted fall in residual waste is estimated to have been achieved by 2028**, with the next 14 years seeing the remaining 25% fall from 2019 levels. This means that the ‘further policy pathway’ is assumed to result in falls at less than half the speed as that achieved between 2022-28. Future Governments should not be assumed to deliver such unambitious reductions in residual waste and targets should compel future Governments to take the strongest feasible action.

Figure 4: Comparison of the proposed target of 50% reduction in residual waste excl. major mineral waste by 2042 with the impact of potential future policies



Indeed, the consultation documents outline the achievability of much greater reductions in residual waste:

*“From the above avoidability classifications and National Waste Composition study, our modelling estimates that 55.1% of municipal waste in the residual waste stream is readily recyclable, 75.7% is either readily or potentially recyclable, and **91.9% is either readily or potentially recyclable or potentially substitutable to a material that can be recycled.**”*

This demonstrates that there is great potential for increasing recycling and driving changes to product design to achieve environmental goals. With 20 years to develop policies to drive change, a 50% target is clearly unambitious in this context, with only 8.1% of municipal waste unavoidably needing to end up in residual waste.

- **The target fails to deliver the ambition of other objectives**

The consultation documents state that “an overarching residual waste target will align with government commitments to eliminate avoidable plastic waste by 2042 and reach zero avoidable waste by 2050”. The documents also note that, of municipal waste in the residual waste stream, “91.9% is either readily or potentially recyclable or potentially substitutable to a material that can be recycled”. So, for municipal waste, there is a requirement for much greater reductions in residual waste to meet the ‘zero avoidable waste’ target; a 50% reduction by 2042 is simply not compatible with reaching this 2050 target.

- **Excludes food waste justified by Anaerobic Digestion being a more efficient form of waste treatment**

- **No recognition of environmental problems of recycling and allows recycling to be exported**

We cannot recycle our way out of the current waste crisis, yet this target’s sole focus on residual waste does not reflect that. Taking plastics, of all the plastic used globally, only 2% is recycled back into like-for-like products, with 8% cascaded recycling (also known as downcycling where plastics go back into lower value plastic products).⁶⁸ Of the plastic recycled globally, only 10% has been recycled more than once because contamination and the mixing of polymer types generate secondary plastics of limited or low technical and economic value with mechanical recycling degrading the quality of the material.⁶⁹ In addition, chemical recycling has yet to deliver the promised benefits⁷⁰, and facilitates the perpetuation of poor product design resulting in non-recyclable or difficult to recycle plastics, thus highlighting the perils of relying on these new recycling techniques to solve our plastics problem.

Further, in 2020 the UK reportedly exported around 890,000 metric tonnes of plastic waste for recycling⁷¹. We are producing and consuming quantities of plastic beyond what can be dealt with at a domestic level, and the waste management sector has become structurally dependent on exporting plastic waste. For instance, in 2019, the UK achieved a plastic packaging recycling rate of 49.6%, of which 61% was exported for recycling⁷². Defra estimates that around 210,000 tonnes of plastic waste are exported each year from England to non-OECD countries. These shipments are destined for Hong Kong (36%), Malaysia (23%), Indonesia (13%), India (7%), Taiwan (7%), China (5%) and Pakistan (4%), amongst others⁷³. The Conservative Party made the welcome commitment to consult on a ban on the export of plastic waste to non-OECD countries in their 2019 Manifesto, though this will not prevent exports to OECD member Turkey, which has a recycling rate reported as 12%⁷⁴ and is currently the largest receiving country of UK exported plastic waste. This target’s focus on residual waste does nothing to address this unsustainable model of waste management.

⁶⁸ <https://emf.thirdlight.com/link/ftg1sxxb19tm-zgd49o/@/preview/1?o>

⁶⁹ <https://advances.sciencemag.org/content/3/7/e1700782>

⁷⁰ <https://www.reuters.com/investigates/special-report/environment-plastic-oil-recycling/>
<https://www.eunomia.co.uk/reports-tools/final-report-chemical-recycling-state-of-play/>

⁷¹ <https://www.bpf.co.uk/roadmap>

⁷² <https://www.recoup.org/p/380/uk-household-plastics-collection-survey-2020>

⁷³ <https://www.letsrecycle.com/news/mps-told-penalties-for-illegal-exports-are-too-low/>

⁷⁴ <https://www.theguardian.com/environment/2021/may/17/uk-plastics-sent-for-recycling-in-turkey-dumped-and-burned-greenpeace-finds>

Indeed, we would question whether the global environment had really benefited if, by 2042, a 50% fall in per capita residual waste had simply been achieved through exports for recycling; with this waste potentially littering roadsides in Turkey and elsewhere.

- **Not as ambitious as direction of travel from other Governments**

The Welsh Assembly Government has previously committed to the aspiration for the people in Wales ‘to live within their fair share of the earth’s resources’.⁷⁵

In the EU, a leaked early version of the Circular Economy Action Plan included a target to halve the bloc’s material use by 2030, although this was subsequently removed. The original draft said “‘To absolutely decouple growth from resource use, we must change the way we produce, market, consume and trade, and the way we deal with waste.’”⁷⁶ So while this was not adopted, it showed that targets on cutting resource use are being seriously discussed at the EU level.

The Netherlands has committed to “halve raw material consumption by 2030 (minerals, metals and fossil fuels)” as part of their government-wide “Circular Dutch Economy by 2050” programme⁷⁷, citing it as “ambitious, but not impossible”. This sends a clear signal to stakeholders as to the direction of travel required and provides the stimulus for innovation.

42. Do you agree or disagree with our proposed metric for considering resource productivity?

Disagree, although a target on resource productivity would have been preferable to this situation of having no resource-related target. We believe that the Government holds enough data to deliver a resource-based metric, however it appears to have been scrapped due to political considerations.

It is, perhaps, somewhat ironic that the consultation documents note that “resource productivity can build the economy’s resilience to price volatility, increase resource security, and enhance our international competitiveness”. Given the current crisis of high resource prices and insecurity of supplies, this target seems more crucial than ever before.

43. [If disagree] What reasons, or potential unintended consequences can you provide for why the government should consider a different metric and what data exists to enable reporting for this alternate metric?

Why the Government should consider a different metric:

⁷⁵

http://assets.wwf.org.uk/downloads/main_report_progress_in_embedding_the_one_planet_aspiration_in_welsh_government.pdf

⁷⁶ <https://www.euractiv.com/section/circular-economy/news/leak-eus-new-circular-economy-plan-aims-to-halve-waste-by-2030/>

⁷⁷ <https://www.government.nl/topics/circular-economy/circular-dutch-economy-by-2050>

The 'productivity' link to GDP is problematic as, if the economy grows, it means the target can be met while resource use increases. Just as targets to tackle greenhouse gas emissions aim to reduce the absolute amount entering the atmosphere (rather than emissions divided by economic growth or another denominator), resource targets should follow suit. Continually rising resource use is problematic for numerous reasons:

- Our overall resource consumption is already too high. The UN has suggested that per person overall resource consumption should be between six and eight tonnes a year. In the UK, average per person consumption is already 14.7 tonnes.⁷⁸
- Resource extraction and processing cause 90% of biodiversity loss and water stress around the world, as well as 50% of global carbon emissions.⁷⁹
- A recent report by the Environmental Audit Committee highlighted that "Consumption patterns in the UK are unsustainable. Addressing these patterns is key to the UK's contribution to the alleviation of global biodiversity loss. The first step is to recognise the need to reduce the UK's overall consumption."
- The 2021 Dasgupta Review clearly states that "...if we are to avoid exceeding the limits of what Nature can provide on a sustainable basis while meeting the needs of the human population....consumption and production patterns will need to be fundamentally restructured."⁸⁰

It is worth noting some of the global environmental and social costs resulting from the extraction and production of the products we consume in the UK:

- In 2017, it was estimated that UK supply chains were responsible for over 20,200 hectares of deforestation embodied in imports.⁸¹
- The extraction and production of many packaging materials places water stress on producer countries. Aluminium production uses the most water on a per kilogram basis of any packaging material and paper produced for the UK market uses the most water overall.⁸²
- Aluminium production requires bauxite and Guinea, which has the world's largest bauxite deposits, has seen reports of human rights abuses related to bauxite mines.⁸³
- Aluminium production creates 'red mud'; a residue left over from the refining process. Globally, it is estimated that 3 billion tons of red mud are stored in large waste ponds or dried mounds.⁸⁴ Red mud contains a cocktail of hazardous substances which are difficult to deal with; in 2010 a spill of this sludge killed seven and injured many more in an incident in Hungary.⁸⁵

⁷⁸ https://green-alliance.org.uk/resources/Targeting_success.pdf

⁷⁹ UN International Resource Panel, 2019, Global resources outlook 2019: natural resources for the future we want

⁸⁰ <https://www.gov.uk/government/publications/final-report-the-economics-of-biodiversity-the-dasgupta-review>

⁸¹ p.6 https://www.wwf.org.uk/sites/default/files/2021-06/Thriving_within_our_planetary_means_full_report.pdf

⁸² https://green-alliance.org.uk/resources/Fixing_the_system.pdf

⁸³ <https://www.hrw.org/report/2018/10/04/what-do-we-get-out-it/human-rights-impact-bauxite-mining-guinea>

⁸⁴ <https://www.sciencemag.org/news/2020/08/red-mud-piling-can-scientists-figure-out-what-do-it>

⁸⁵ <https://www.bbc.co.uk/news/world-europe-11492387#:~:text=About%2040%25%2D45%25%20of,that%20owns%20the%20Ajkai%20plant>

- Brazil is a major exporter of the iron ore used for steel⁸⁶ but two mines there have seen dam failures in recent years; the Mariana dam disaster in 2015 and the Brumadinho dam disaster in 2019. The latter incident killed 270 people and caused huge environmental damage from which it will take local water ecosystems years to recover.⁸⁷
- In general, a lack of transparency in supply chains means it is frequently difficult to fully calculate how impactful material sourcing really is. For example, the packaging sector alone imports 9.7mT of filled packaging, 44% of all packaging placed on the domestic market. However, the origins of this packaging and therefore the environmental impacts associated with raw material sourcing and production remain largely unknown.⁸⁸

Reducing the absolute size of the UK's materials footprint should not be understood as limiting the UK economy nor as meaning that citizen well-being must suffer. A better designed target would instead help ensure that we do things better: lowering waste, boosting recycling, eliminating the most egregious environmental consequences of UK production and consumption at home and abroad, increasing efficiency, and turning toward production methods which work in harmony with nature as part of an ambitious circular economy.

Alternative proposal:

- **The Government should set a target for halving resource consumption by 2030**

The concerns outlined above emphasise why a resource reduction target would be a preferable option. Indeed, a lack of focus on resources is particularly problematic given the need to cut the overall UK global footprint by 75% to align the UK to our fair share of planetary boundaries.⁸⁹

This target is ambitious but necessary as it would help drive action to address the biodiversity, climate, pollution and waste crises, starting the process of bringing English consumption down to sustainable levels. It would send a clear message across Government departments, the private sector and to the public.

It should be accompanied by Government action in key sectors, many of which have had poor results from voluntary, industry-led initiatives. High-impact sectors include packaging, food, textiles, electronics and construction, amongst other sectors identified by the Government's 2021 Waste Prevention Programme for England consultation.⁹⁰

Defra and the UK have been at the forefront of developing metrics in this area and there is adequate data to underpin a Materials Footprint measure so there is no technical reason not to utilise this work.

⁸⁶ <https://news.metal.com/newscontent/100712842/UK's-iron-ore-imports-surged-in-September%3B-YTD-exports-down-30>

⁸⁷ https://www.wwf.org.uk/sites/default/files/2021-12/UK_Global_Packaging_Materials_Footprint.pdf

⁸⁸ https://www.wwf.org.uk/sites/default/files/2021-12/UK_Global_Packaging_Materials_Footprint.pdf

⁸⁹ https://www.wwf.org.uk/sites/default/files/2021-06/Thriving_within_our_planetary_means_full_report.pdf

⁹⁰ <https://consult.defra.gov.uk/waste-and-recycling/waste-prevention-programme-for-england-2021/>

In setting this overall resource consumption target, interim goals should be introduced which are both overarching and sector specific. These interim goals should ensure that there are no unnecessary substitutions to materials other than plastics. Some alternatives to plastic such as aluminium, steel and compostables are also harmful to the environment throughout their life-cycles. Instead, targets on plastics must help step up the transition towards reuse and a circular economy. Taking this into account, interim targets should include goals for:

- **50% single use plastic reduction by 2025 (as a minimum against a 2019 baseline) with half the reduction delivered from increased reuse/refill**

It is well documented that plastic is hugely harmful to the environment and has a low recycling rate, with it only possible for items to be recycled a very few number of times. When considering plastic more generally, the latest publicly available Government data for all plastic wastes produced in the UK is from 2016 and amounts to a total of 1,528,527 tonnes⁹¹. England alone accounted for 1,187,279 tonnes of this waste. Furthermore, without a significant turnaround in industry trends, Eunomia estimates that UK plastic packaging waste alone could increase 22% between 2018 and 2030, growing to nearly 4,500,000 tonnes.⁹²

We believe that this target is achievable, as evidenced by research and surveys undertaken by the Environmental Investigation Agency and Greenpeace UK on the UK's top 10 retailers. The table below, from Greenpeace UK and EIA's Checking Out on Plastics III report,⁹³ shows that targets for 50% plastic reductions by 2025 are in line with the highest ambition supermarkets, in this case Morrisons, Sainsbury's and ASDA (in addition Iceland has set an ambitious end-of-2023 target for eliminating plastic from own label products, although this is likely to be missed⁹⁴). The Government should be supporting these targets through the Environment Act target process and developing policies to incentivise food and drink being delivered using reusable/refillable packaging or sold loose, rather than prioritising the development of recycling (and chemical recycling) infrastructure. Many supermarkets are exploring reuse/refill, with trials underway across the sector, including the higher end retailers and discounters. These include Waitrose with its Unpacked store trials, Tesco with its Loop partnership, and Asda piloting price parity on value products in its Middleton store before a potential wider roll-out.⁹⁵

⁹¹ <https://www.gov.uk/government/statistical-data-sets/env23-uk-waste-data-and-management>

⁹² Eunomia report for WWF, 2018. A Plastic Future: Plastic Consumption and Waste Management in the UK. Available online here: https://www.wwf.org.uk/sites/default/files/2018-03/WWF_Plastics_Consumption_Report_Final.pdf

⁹³ <https://eia-international.org/wp-content/uploads/Checking-Out-on-Plastics-III.pdf>

⁹⁴ <https://www.grocerygazette.co.uk/2022/05/10/iceland-plastic-free-plan/>

⁹⁵ See <https://eia-international.org/wp-content/uploads/Checking-Out-on-Plastics-III.pdf>

Table 2: Plastic reduction targets for top UK supermarkets

Retailer	Plastic reduction target	Timeframe	Type
Aldi	50% (own-brand)	2025 (2019 baseline)	Relative, by weight
	30% (brand)	2025 (2019 baseline)	Absolute, by weight
Asda	15% (own-brand)	2021 (2017 baseline)	Relative, by weight
	3 billion pieces	2021 (2017 baseline)	Absolute
Co-op	6% (own-brand)	2020 (baseline 2018)	Relative, by weight
	15% (own-brand)	2022 (baseline 2018)	Relative, by weight
Iceland	100% (own-brand)	2023 (2018 baseline)	Absolute, by weight
Lidl	20% (own-brand)	2022 (2017 baseline)	Relative, by weight
	40% (own-brand)	2025 (2017 baseline)	Relative, by weight
M&S	4% reduction (across primary packaging)	2019 (2018 baseline ongoing annual commitment to remove 25m units in 20/21)	Absolute, unit and weight measurements
Morrisons	50% (own-brand)	2025 (2017 baseline)	Relative, by weight
Sainsbury's	50% of primary and own-brand packaging	2025 (2018 baseline)	Absolute
Tesco	1 billion pieces and 'all unnecessary plastic packaging'	2020	Absolute, unit and weight based
Waitrose	20% (own-brand)	2021 (2018 baseline)	Absolute, by weight

Environmental Investigation Agency and Greenpeace

To achieve a circular economy, England, and the UK, should have targets which drive the elimination of nonessential, unnecessary materials and fundamentally moves us away from current throw-away culture - not only conserving material resources used for these products but the energy and resources required to continually and linearly source, produce, manufacture, transport and treat (including the finite recycling of) these products.

The best way to achieve these benefits is through reducing use and then reuse/refill, so goals for increasing reusable packaging should be included under a future target. A recent report by the Pew Trusts examined the benefits of reducing materials and greater reuse. It found that elimination and

reuse are more economically viable than substitution of materials for plastic, such as paper or compostables.⁹⁶

Furthermore, a recent The Institute of Grocery Distribution (IGD) report for their Sustainable Packaging Systems initiatives demonstrates that the total impact of current industry initiatives and the delivery of optimum results from the proposed Government policies on packaging will not achieve the ambition of halving the environmental impacts of UK packaging systems.⁹⁷ Indeed, the report shows that achieving this ambition requires the removal of 20% of all packaging materials.

- **Overall plastics reductions to prevent all types of plastic pollution from the environment as far as possible by 2042**

This would ensure major types of plastic pollution in the UK such as microplastics - which may have impacts on human health as well as the environment - are not overlooked. This goes further than government's current commitment to to "eliminate avoidable plastic waste by 2042 and reach zero avoidable waste by 2050" as it would address plastics that do not enter our waste treatment systems such as the extensive microplastics pollution that is shed, for example, by abrasion on vehicle brakes and tyres, and plastic microfibres shed from clothes.⁹⁸ Furthermore, investment in research and re-design for products that shed plastics when they're used will be important to ensure microplastics pollution is addressed.

44. Of the possible policy interventions described, which do you think will be most effective to meet a resource productivity target? Please specify whether these policies would be most effective if implemented nationally or regionally, and whether measures should be product or sector-specific.

If backed by suitable policies and incentives, greater circular use of materials by the building industry, the waste management sector, packaging producers and manufacturing, can play a substantial part in lowering our resource consumption. Material consumption is predominantly driven by the private sector, which will act based on strong regulations and the economic viability of any new initiatives to promote more circular material flows. A robust circular economy will require a coordinated effort from the government to incentivise these activities; providing supporting financial infrastructure for attracting investment and transmitting the right market signals.

We can see the impact of strong policies in France, where regulations will see plastic packaging for most fruit and vegetables in supermarkets banned and to 20% of the floor surface of shops larger than 400 square metres to be fitted with refill systems by 2030.⁹⁹

With regards to packaging reuse and refill will be essential in achieving these goals. Policies required to achieve this include:

⁹⁶ https://www.pewtrusts.org/-/media/assets/2020/07/breakingtheplasticwave_report.pdf

⁹⁷ <https://www.igd.com/social-impact/sustainability/packaging/article-viewer/t/halving-the-environmental-impacts-of-the-uk-packaging-system/i/29628>

⁹⁸ <https://commonseas.com/blood-type-plastic>

⁹⁹ <https://circulareconomy.europa.eu/platform/en/strategies/french-act-law-against-waste-and-circular-economy>

1. Fees under the new Extended Producer Responsibility scheme should be weighted to reward reusable packaging.
2. The proposed Deposit Return Scheme should enable collection of reusable containers e.g. coffee cups
3. Ban the use of single-use products in eat-in settings where these can be reasonably replaced with reusable items.
4. Cut taxes on products and packaging sold as part of reuse and refill system activities.
5. Set dissuasive monetary charges on the most polluting items to incentivise reusables, requiring proceeds to be used to support affordable reuse schemes.
6. Require public space developments and redevelopments to include water refill points.
7. Encourage comprehensive system changes to drive greater uptake of standardised reusable packaging by businesses.
8. Require large retailers to promote and incentivise reuse in store.
9. Set ambitious targets for the reuse of consumer packaging under EPR, with transparent monitoring and reporting to ensure targets are driving changes in packaging.
10. Review and strengthen eco design regulations to embed circular economy principles from the outset, before products enter the market. 80% of a product's environmental impact is determined at the design stage.¹⁰⁰

Wider measures to cut resource use are set out in the Link response to the Waste Prevention Programme.¹⁰¹

¹⁰⁰ https://ec.europa.eu/commission/presscorner/detail/en/ip_22_2013

¹⁰¹ https://www.wcl.org.uk/docs/assets/uploads/Link_WPP_Consultation_Response.pdf

45. Do you agree or disagree with the level of ambition proposed for a PM_{2.5} concentration target?

Disagree

46. [If disagree] What reasons can you provide for why the government should consider a different level of ambition?

Insufficient level of ambition

The consultation proposals include a target to reduce annual average PM_{2.5} concentrations to within 10µg/m³ by 2040. **The government's own analysis published alongside the consultation shows that reducing concentrations of PM_{2.5} to 10µg/m³ is achievable long before 2040**, with evidence to show that this could be delivered by 2030. Proposing a target deadline which is a whole decade later shows a lack of ambition to accelerate action to tackle this public health and environmental crisis.

The technical evidence published alongside the consultation asserts that the proposed target "*strike[s] an appropriate balance between being ambitious and achievable - delivering significant health benefits through utilising proportionate and viable measures*". The government based this conclusion on modelling work commissioned by Defra to assess the feasibility of achieving various PM_{2.5} concentrations in a number of different 'target scenarios', which assume varying degrees of future action.

There has been **very little transparency over the types of policies, technological improvements and behavioural changes that the government has assumed might be possible** in these modelled future scenarios. The government has decided not to publish this information. Proper public scrutiny of its conclusions on having reached an appropriate balance between ambition and feasibility is therefore impossible. The public is being asked to comment on these new targets without having been provided with any meaningful insight into what the government thinks might be necessary to achieve them. This is despite Lord Goldsmith (Minister of State for Defra) previously assuring the House of Lords during debate on the Bill that "*[b]efore setting these [PM_{2.5}] targets, it is vital to ensure that both the Government and the public understand the kinds of actions needed and the restrictions which may be required for them to be achieved*". It is disappointing that the government have failed to follow through on this assurance.

The lack of transparency aside, even from the information that has been published alongside the consultation, **it is clear that the pollution reductions necessary to reach 10µg/m³ are achievable long before 2040**.

The published results of the government's modelling² suggest that:

- **By meeting the UK's existing legal emission reduction commitments, it would be 'possible' to reduce PM_{2.5} concentrations to within 10µg/m³ by 2030.** In other words, the policies necessary to meet existing legal commitments would do most of the work to achieve this more ambitious target. But rather than treating compliance with existing law as the baseline from which to add further ambition, the government has instead chosen to aim for a future scenario that does not even include compliance with existing legal

commitments to reduce emissions. In the same breath the government is making new legal promises whilst implicitly acknowledging it is likely to break its existing ones. This is extremely concerning. These new targets should be driving *additional* ambition to clean up the air and protect people's health, rather than rowing backwards on those improvements that the government is already legally obliged to deliver.

- **Even under the *less ambitious scenario for action that the government has chosen as 'striking the right balance' between ambition and achievability, 11µg/m³ is 'likely' to be achieved by 2030.*** But the government is proposing to then kick the can down the road for another decade – giving itself ten more years to achieve an additional 1µg/m³ reduction. The government's evidence provides no clear justification for this significant delay. This approach suggests a serious lack of urgency for action to protect people's health from toxic air.
- **The government has been overly pessimistic when modelling into the future.** The Air Quality Expert Group, who helped to inform the government's process for setting these new target levels, noted that the government had generally taken a "pessimistic view" when interpreting how likely it was that different targets would be met under the different scenarios. In other words, when working out what would be possible, the government have looked to cap, rather than stretch, their ambition.

Recent [analysis](#) commissioned by the Clean Air Fund from Imperial College London has also shown that if the government implements those environmental, transport and clean air policies that it already has planned, **air pollution could fall within 10µg/m³ across the vast majority of the UK by 2030.**

With the serious impacts that air pollution is continuing to have on people's health and the economy, we simply cannot wait until 2040 for this problem to be solved. **It is essential that the government accelerates its ambition by aiming for a 2030 target date.** Pulling the target forward by ten years would see an average of 388,000 fewer days of asthma symptoms flare ups a year in children; a fall in cases of coronary heart disease of over 3,000 cases per year, and a rise in average life expectancy of 9-10 weeks across those born in 2018.

This would also **avoid the UK dragging behind other countries when it comes to PM_{2.5} legal protections.** Since 2012, the USA has already had a stronger legal target for PM_{2.5} set at 12 µg/m³ and the US EPA is currently considering recommendations from its Independent Particulate Matter Review Panel to lower this further to between 8 and 10 µg/m³. In the European Union, parallel legal air quality limits are also in the process of being revised and improved with proposals for a revised 'Ambient Air Quality Directive' expected later in 2022. This is the time for the UK to step up to become a leader on clean air, rather than risk getting left behind.

Allowing for compliance in only 3 out of every 4 years is unacceptable

Alongside the lack of ambition highlighted above, we are also extremely concerned to see that the government is proposing a major caveat to its legal duty to comply with the new PM_{2.5} concentration target.

The plans currently being consulted on include a proposal that if the $10\mu\text{g}/\text{m}^3$ target is exceeded, this will not be treated as a breach of the law if the target was met in three out of the four preceding years. The government is essentially proposing a 'get-out-of-jail-free' card when it comes to action to protect people's health from polluted air. This is not acceptable and cannot be justified.

The government's rationale for proposing this loophole is to account for the impact of bad weather-years and transient events such as Saharan dust on pollution levels. Whilst these factors can impact $\text{PM}_{2.5}$ concentrations, the government had already accounted for such uncontrollable events as part of its modelling to inform what it considered to be feasible. It did so by including a $1\mu\text{g}/\text{m}^3$ buffer in its modelling of future target scenarios. In other words, the government has already 'baked in' an assumption that such events will occur in the future when assessing the level of ambition that it considered to be achievable. It should not be able to also give itself a major future compliance loophole to account for such risks.

Further air pollution targets needed for nature's recovery

The government is already bound by emission reduction commitments for five harmful pollutants and their precursors – including nitrogen oxides (NO_x), ammonia (NH_3), non-methane volatile organic compounds (NMVOCs), sulphur dioxide (SO_2), and $\text{PM}_{2.5}$ – set out within the National Emission Ceilings Regulations 2018 (Regulation 6 and Schedule 3). However, these targets only extend to 2030. Beyond this date, there is no indication of whether or how targets for ambition to further reduce emissions of these harmful pollutants will be set. The government's consultation proposals do not explain how this looming gap in regulation will be filled.

NO_x and NH_3 pollution impact human health through their contribution to NO_2 and $\text{PM}_{2.5}$ concentrations, respectively. It is important to stress that these air pollutants also form part of a wider nitrogen pollution crisis which is causing significant harm to water, air, the climate, biodiversity, ecosystems and soil health.

Across the UK, nitrogen pollution is a significant contributor to the poor state of our water, with only 16% of water bodies in England reaching 'good' ecological status in 2019. Nitrous oxide gas (N_2O) is a greenhouse gas representing 5% of the UK's net territorial GHG emissions in 2019, as well as a contributor to depletion of the stratospheric ozone layer, leading to increased UV radiation and associated harms to human health. Nitrogen pollution also leads to acidification of soils, forests and natural terrestrial ecosystems, as well as eutrophication of soils, leading to loss of species that become less competitive under conditions with greater nitrogen availability. As of 2017, 58% of sensitive habitats in the UK exceeded their critical loads for eutrophication, while 39% exceeded critical loads for acidification.¹⁰² Atmospheric nitrogen deposition is also increasing carbon emissions from peat bogs and about 15% of woodland soil in England and Wales is nitrogen saturated, which can lead to nitrate leaching into waterways and toxicity to plant roots.¹⁰³ The Government's own

¹⁰² E.C. Rowe, Z. Mitchell, S. Tomlinson, P. Levy, L.F. Banin, K. Sawicka, C. Martín Hernandez, A. Dore Trends Report 2020: Trends in Critical Load and Critical Level Exceedances in the UK (2020) Report to Defra under Contract AQ0843, CEH Project NEC05708

https://uk-air.defra.gov.uk/library/reports?report_id=1001

¹⁰³ Environment Agency, 2019, State of the environment: soil. [The state of the environment soil \(publishing.service.gov.uk\)](https://www.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/814247/state-of-the-environment-soil-2019.pdf)

Clean Air Strategy 2019 states “We will set a target for reduction of damaging deposition of reactive forms of nitrogen by 17% over England’s protected priority sensitive habitats by 2030 and review what longer term targets should be” (section 3.7). The 2021 assessment of progress towards this target showed that total nitrogen deposition increased by 2.5% from 2016-2018.¹⁰⁴

Recent modelling has shown that ammonia and NOx emissions reductions of 50% are required to restore 75% of UK sensitive habitats to favourable condition.¹⁰⁵ Yet air pollutant emissions statistics published in February 2022 showed that the 2020 target for ammonia emissions had not been reached.

With this in mind, we urge the government to set:

1. A new target to halve nitrogen losses to the environment by 2030; and
2. New long-term legally binding targets beyond 2035 to reduce annual NOx, NH₃, NMVOC, SO₂ and PM_{2.5} emissions.

These reduction targets should work alongside concentration and exposure reduction targets as an additional tool to secure national-level reductions from key pollution sources. They would also provide a means to drive action to reduce the UK's impact on neighbouring countries’ air quality via transboundary pollution. Furthermore, action to meet these targets would contribute to delivering important progress against the government’s targets in other priority areas under the Act – including most notably the species abundance targets and water quality targets.

Plans to meet these reduction targets should form part of an integrated and full-cycle approach to tackling all forms of nitrogen pollution to air, water and soil. This new integrated approach should be supported by economy-wide nitrogen budgets informed by nitrogen balance sheets and delivered through a national nitrogen strategy that appropriately balances effective and properly enforced regulation alongside well-designed incentives, advice and support.

47. Do you agree or disagree with the level of ambition proposed for a population exposure reduction target?

We disagree

¹⁰⁴ [Trends Report 2021.docx \(defra.gov.uk\)](#)

¹⁰⁵ H. Woodward, T. Oxley, E.C. Rowe, A.J. Dore, H. ApSimon. (2022). An exceedance score for the assessment of the impact of nitrogen deposition on habitats in the UK. <https://doi.org/10.1016/j.envsoft.2022.105355>

48. [If disagree] What reasons can you provide for why the government should consider a different level of ambition?

If the government's proposed target for population exposure reduction was successfully achieved, it would result in average population exposure in almost two decades time still being significantly above the latest WHO guideline level of 5µg/m³. In addition, the proposed target appears to be less ambitious than what is necessary to meet the government's existing air quality legal commitments. In light of these concerns, we recommend that the government increases the ambition of the population exposure reduction target, to more closely align it with the latest WHO guideline for PM_{2.5}. At a minimum, the population exposure reduction target should be re-calibrated to align with a scenario that assumes compliance with all of the legally binding NECR ceilings and should better align with the WHO guideline.

This consultation response is submitted on behalf of Wildlife & Countryside Link and the following member organisations:

- Amphibian & Reptile Conservation Trust
- A-Rocha UK
- Bat Conservation Trust
- Butterfly Conservation
- Bumblebee Conservation Trust
- CIEEM (Chartered Institution of Ecology and Environmental Management)
- ClientEarth UK
- Environmental Investigation Agency
- Froglife
- The Institute of Fisheries Management
- Keep Britain Tidy
- Marine Conservation Society
- The National Trust
- People's Trust for Endangered Species
- Plantlife
- Rewilding Britain
- The River Restoration Centre
- The Rivers Trust
- RSPB
- Salmon and Trout Conservation
- The Soil Association
- Whale and Dolphin Conservation
- The Wildlife Trusts
- The Woodland Trust
- WWF UK
- WWT
- ZSL