

Natural Capital Committee

The Natural Capital Committee's Response to the 25 Year
Environment Plan Progress Report

September 2019

Contents

Chair’s message.....2

Executive summary3

 Key points.....3

Background5

1. Assessment of progress towards the ten 25 YEP goals5

2. Recommendations for improving the reporting framework.....9

Annex11

Chair's message

Eight years ago the government published the White Paper, *The Natural Choice*, committing to the objective “to be the first generation to leave the natural environment of England in a better state than it inherited”. It established the Natural Capital Committee (NCC) to advise on how best to achieve this objective. The NCC recommended that the government develop a 25 Year Environment Plan (25 YEP) and in 2018, it was finally published, following further advice from the NCC.

The 25 YEP is a huge achievement, setting out the government's ambitions to improve the environment. The 25 YEP proposes and, the draft Environment Bill mandates, a requirement for an annual Progress Report to report on how well the government is performing against the 25 YEP's ten goals. The previous Secretary of State, Michael Gove, specially requested that the NCC provide scrutiny of the 25 YEP annual reports, paving the way for the Office for Environmental Protection (OEP) to undertake this function in the future.

Unfortunately, the Progress Report does not in fact tell us very much about whether and to what extent there has been progress. On the contrary, the Progress Report provides a long list of actions, and presents very little evidence of improvements in the state of our natural capital. This is especially disappointing since 8 years have now passed since the White Paper set its objective.

This failure is due to the lack of a natural capital assets baseline against which to measure progress. From the *ad hoc* evidence presented in the Progress Report, not only is there little evidence of progress, but some worrying evidence of declines in environmental quality.

To turn this around, the NCC has already recommended that the 25 YEP should be put on a meaningful statutory footing, including statutory targets and five year milestones to ensure the objectives are met. As a matter of urgency, the government should commit to establishing an environmental baseline against which progress can be measured. The NCC has set out to the Secretary of State how this should be conducted, and subsequently repeated on a five year cycle. These steps are essential if the objectives in the 25 YEP are to be met and if the OEP is to inherit a workable framework to hold government to account. In willing the ends, the government should also will the means.

Professor Dieter Helm, Chairman

Executive summary

The Progress Report fails to provide an assessment of whether the natural environment in England has improved. Eight years have passed since the government made the commitment in the 2011 Natural Environment White Paper, *The Natural Choice*, “to be the first generation to leave the natural environment of England in a better state than it inherited.”¹ It is therefore extremely concerning that the Progress Report fails to provide an assessment of progress. Not only is there little evidence of progress, but some worrying evidence of declines in our environment. The existing metrics and indicator framework do not provide a baseline against which progress can be measured.

There is now an urgent need to establish a robust, comprehensive baseline of our natural capital assets through an environmental baseline census. Progress cannot be measured until such a baseline is established. The Office for Environmental Protection (OEP), which is scheduled to operate from 2021, will be unable to carry out its scrutiny function without such a baseline.

The NCC has provided separate, detailed advice to the government on the critical need for a comprehensive environmental baseline census.²

Key points

1. **The Progress Report fails to draw on consistent robust data on all elements of the environment and fails to assess if the environment has improved.** This is inevitable due to the absence of a baseline against which progress can be measured. As laid out in the NCC’s *How to do it* workbook, the starting point, or baseline position, must be set before making decisions about how to proceed.³ The NCC reiterated this in its sixth Annual Report⁴ making it clear that: “Defra should be tasked with delivering an environmental census to establish a robust baseline against which to measure progress towards the 25 YEP goals.” The environmental baseline census should be conducted across England in 2020. The process should be repeated every five years thus enabling a clear periodic understanding of trends in England’s natural capital assets

¹HM Government, *The natural choice: securing the value of nature* (2011): <https://www.gov.uk/government/publications/the-natural-choice-securing-the-value-of-nature>

² <https://www.gov.uk/government/publications/natural-capital-committee-advice-on-developing-an-environmental-baseline-census>

³ Natural Capital Committee, *How to do it: natural capital workbook, version 1*. (2017): <https://www.gov.uk/government/groups/natural-capital-committee#publications>

⁴Natural Capital Committee. *Annual Report 2019 Sixth Report to the Economic Affairs Committee of the Cabinet* (2019): <https://www.gov.uk/government/publications/natural-capital-committees-sixth-annual-report>

in space and time. Citizen science has a role to play within the census, but only as one component to completing the baseline.

2. The Progress Report **fails to provide an assessment of outcomes, and instead focuses on a long list of actions**. The 25 YEP states that: *“We will report on progress annually and refresh the plan periodically to make sure our actions continue to target the right improvements and make a real difference.”*⁵ Reporting on progress must go beyond a summary of what actions or administrative processes have been taken over a particular time period. The status ratings issued for around 80% of the priority actions in the Progress Report are not fit for purpose. Very limited evidence has been provided to justify these ratings, and it is unclear whether a consistent criteria has been applied.
3. The NCC is concerned that there **are serious limitations with the indicator framework and how it has been used in the Progress Report**. Very few of the indicators focus on natural capital assets while many are proxies for natural capital pressures or for the flow of ecosystem services. Less than 10% of the proposed indicators have been used in the Progress Report. The framework takes a linear approach where progress towards each goal is measured independently, often across different timescales with only a partial assessment of assets. Tracking progress is made even more difficult by the ambiguity in the definition of the ten goals. The indicator framework has been designed independently of setting targets and milestones. It is therefore difficult, if not impossible, to use the framework to measure outcomes - as evidenced by the small number of indicators considered suitable for use in the Progress Report by Defra.
4. **Statutory targets and milestones need to be established to enable the OEP to carry out its scrutiny function effectively**. Urgent action and commitment from the government is needed to develop targets and metrics for assessing progress. The targets must be placed on a meaningful statutory basis in the Environment Bill and are essential if the OEP is to inherit a workable framework for assessing progress against the 25 YEP objectives. Targets cannot be designed effectively without a comprehensive understanding of the state of natural capital assets. The previous Defra SoS, Michael Gove, outlined his ambition for the Environment Bill in his final speech, stating that *“...the Bill must create a robust, legally sound, framework for a comprehensive and integrated set of environmental targets which taken together can ‘bend the curve’ on environmental decline.”* And for the OEP recommending *“a truly independent governance structure for the OEP”*.⁶ The NCC supports the recommendation for the OEP to be truly independent, which will be essential in providing an impartial assessment of progress against the targets.

⁵Defra, *A Green Future: Our 25 Year Plan to Improve the Environment* (2018): <https://www.gov.uk/government/publications/25-year-environment-plan>

⁶ <https://www.wcl.org.uk/michael-gove-asks-if-not-now-when.asp>

Background

This paper sets out the Natural Capital Committee's (NCC) view on the government's first 25 Year Environment Plan (25 YEP) Progress Report, published in May 2019.⁷ It follows a letter from the previous Defra Secretary of State, Michael Gove, to the NCC setting out priority areas for advice, including independent scrutiny of the Progress Report. The NCC Terms of Reference⁸ also requires it to report on the implementation of the 25 YEP, including the development of suitable metrics to track progress against the Plan's objectives.

The Progress Report is the government's first annual update on the 25 YEP.⁹ The requirement for annual reporting of progress has been laid out in the draft Environment Bill. The draft Environment Bill also promises the creation of a new statutory and independent environmental body, the Office for Environmental Protection (OEP), which will be responsible for scrutinising the government's progress. An outcome Indicator Framework¹⁰ for the 25 YEP was published alongside the Progress Report. The NCC's objective in this advice is not to provide a detailed assessment of the Indicator Framework, but focus only on those indicators used by Defra in the Progress Report.

The NCC's assessment of the Progress Report is presented in two sections. The first section provides an assessment of progress towards the ten 25 YEP goals (with underpinning evidence set out in the Annex). The second section lists the NCC's main recommendations for improving the reporting framework.

1. Assessment of progress towards the ten 25 YEP goals

The Progress Report sets out the government's assessment of progress towards each of the ten 25 YEP goals.¹¹ Overall, the Committee concludes that the Progress Report fails to make a rigorous, evidence based assessment of progress on the overall objective of the 25 YEP. This is due to: i) the

⁷ Defra, *25 Year Environment Plan Progress Report: January 2018 to March 2019* (2019): <https://www.gov.uk/government/publications/25-year-environment-plan-progress-reports>

⁸ HM Government, *Natural Capital Committee Terms of Reference* (2016): <https://www.gov.uk/government/groups/natural-capital-committee#terms-of-reference>

⁹ Defra, *A Green Future: Our 25 Year Plan to Improve the Environment* (2018): <https://www.gov.uk/government/publications/25-year-environment-plan>

¹⁰ Defra, *Measuring environmental change: outcome indicator framework for the 25 Year Environment Plan* (2019): <https://www.gov.uk/government/publications/25-year-environment-plan>

¹¹ The ten goals are as follows: Clean air, clean and plentiful water, thriving plants and wildlife, reduced risk of harm from environmental hazards such as flooding and drought, using resources from nature more sustainably and efficiently, enhanced beauty, heritage and engagement with the natural environment, mitigating and adapting to climate change, minimising waste, managing exposure to chemicals, enhancing biosecurity.

lack of a baseline against which to assess trends in environmental change/poorly designed Indicator Framework, as highlighted in our 2019 report¹²; ii) an over emphasis on actions rather than real, measurable outcomes; iii) ambiguity and lack of precision in defining the ten goals; and iv) the lack of robust targets and milestones against each goal. Further detail for each of these four drivers is provided below. The NCC's assessment of the use of evidence to measure progress against the ten goals is summarised in Table 1 in the Annex.

1. **Absence of an environmental baseline and limited use of the relevant indicators to assess progress towards the 25 YEP goals.** The indicator framework does not have an associated baseline, and appears to have been designed independently of policy actions, making it difficult if not impossible to use the indicators to provide empirical evidence of progress. This is reflected in the Progress Report, which fails to consistently or adequately draw on the indicator framework to deliver the assessment. In most cases, only vague references to the areas covered by the indicators are made. Very few of the planned 66 indicators are ready - only 27 are currently published, and only 6 have been used in the Progress Report. The NCC's view is that this once again highlights the significant limitations of the indicator framework. The Progress Report fails to recognise and acknowledge that a consistent and comprehensive set of indicators and an environmental baseline are integral to measuring progress.

The Progress Report asks the NCC to provide advice on an environmental citizen science project. In principle this is an excellent way to engage the public in the protection of the environment. However, a citizen science project alone is insufficient to gather the baseline dataset needed. The NCC is concerned that this further demonstrates a failure to take the need to measure progress seriously. Natural capital is at the heart of the 25 YEP, but not a single indicator used in the Progress Report is a measure of a natural capital asset. Measuring the baseline position of assets is an essential first step in the natural capital approach, as set out in the NCC's *How to do it* workbook.¹³ It is unlikely that all of the indicators will be ready before the creation of the OEP in 2021, undermining its ability to effectively perform its scrutiny function.

2. In the majority of cases, **progress is framed in the context of a long list of actions with very little empirical evidence of impact.** It is not clear if the actions represent part of a strategic coordinated plan to deliver the aims of the 25 YEP, or if they are a list of activities which would have happened anyway. The lack of a strategic delivery plan means that these short lived initiatives may or may not have an impact. Some examples of the actions and

¹² Natural Capital Committee. *Annual Report 2019 Sixth Report to the Economic Affairs Committee of the Cabinet* (2019): <https://www.gov.uk/government/publications/natural-capital-committees-sixth-annual-report>

¹³ Natural Capital Committee, *How to do it: natural capital workbook, version 1.* (2017): <https://www.gov.uk/government/groups/natural-capital-committee#publications>

lack of supporting evidence listed across the four Progress Report sections¹⁴ are provided below.

- Under the goal *'Mitigating and adapting to climate change'* more than ten actions are listed as evidence of progress. However, no evidence is provided on the impact that these actions are having;
- The goal *'Clean air'* has one main priority action, to publish the Clean Air Strategy¹⁵, but it is not clear if any or all of the goals or aims from this strategy have been pulled through into the Progress Report. Six actions are listed in the chapter as progress with a further three as future actions: it is ambiguous which of these actions have been aggregated into the main priority action. The publication of the strategy and the other actions within the *'Clean air'* chapter are unsupported by empirical evidence of impact;
- The goal *'Thriving plants and wildlife'* has around ten actions listed as progress, many of which are repeated throughout the report. The only empirical evidence of progress provided is the expansion of Marine Protected Areas : no evidence has been presented on the impact of the increase in designated areas¹⁶ and;
- Under section 2 *'Cross cutting themes'* various actions, including local natural capital plans, publishing the Green Finance Strategy and mandating biodiversity net gain are listed and repeated, but no substantial evidence has been provided on the impact that these initiatives may have.

Table 1 in the Progress Report¹⁷ uses three categories to assign a status rating to the priority actions: i) *"complete 18/19"*; ii) *"In progress, on time"*, and iii) *"In progress, minor delay."* Due to the lack of deliverables and clear targets and milestones, the NCC can only find evidence in the Progress Report (and 25 YEP) to robustly support a status rating for 7 of the 40 listed priority actions, namely:

- Developing the Environment Agency's forecasting and warning system by May 2020;
- Consulting and delivering on a third tranche of Marine Conservation Zones by June 2019;

¹⁴ The four sections in the 25 YEP Progress Report are as follows : 1) *'Progress made towards goals in the 25 YEP'*, 2) *'Table 1 - Status for Priority Actions'*, 3) *'Part 1 – Goals'* within each goal chapter and 4) within *'Part 2 – Cross-cutting theme.'*

¹⁵ Defra, *Clean Air Strategy 2019* (2019) <https://www.gov.uk/government/publications/clean-air-strategy-2019>

¹⁶ Evidence could be presented to assess if each Marine Protected Area is achieving its objectives.

¹⁷ Defra, *25 Year Environment Plan Progress Report: January 2018 to March 2019* (2019) Page 11: <https://www.gov.uk/government/publications/25-year-environment-plan-progress-reports>

- Supporting an industry-owned voluntary code of practice to reduce the impact of flooding on buildings by end 2018;
- Planting more trees in and around our towns and cities (a target of 1 million, which is extremely modest and inadequate) by 2022;
- Phase down 85% of hydrofluorocarbons by 2036;
- Achieving zero avoidable plastic waste by 2042 and;
- Publish the Resource and Waste strategy by 2018.

As welcome as these actions are, **they will not in and of themselves reverse the decline in natural capital assets.**

3. Tracking progress and holding government to account is made more difficult by **the ambiguity and lack of precision in defining the ten 25 YEP goals.** In particular:

- The goal of *'Thriving plants and wildlife'* is open to a wide variety of interpretations;
- In the Progress Report, the 25 YEP goal *'Managing exposure to chemicals'* fails to define which chemicals are included and whether these chemicals are harmful or not. It is also unclear whether the goal refers to human or environmental exposure.
- Although the wording for the goal *'Using resources from nature more sustainably'* has been amended in the Progress Report to remove *'efficiently'*, no explanation is provided and;
- Limited evidence has been provided on potential trade-offs between the goals, particularly in terms of using resources from nature and the damage this might cause. For example, using the indicator *'Marine fish stocks of UK interest harvested sustainably, 1990 to 2015'* prevents the consideration of the trade-offs between harvesting fish and shellfish stocks for food, and the stocks required to sustain other flows of services.

4. **The 25 YEP goals are not supported by quantified targets.** The NCC recognises the challenges associated with developing a set of targets, metrics and indicators for the 25 YEP, and recognises the progress that has been made. The Progress Report contains various aspirations and occasionally a vague target - but very few of these are specific or measurable. For example:

- Under the goal 'Clean air' it is stated that the government will: 'Reduce nitrogen oxide (NOx) emissions in the areas where concentrations exceed EU limit values'¹⁸,

¹⁸ Defra, *25 Year Environment Plan Progress Report: January 2018 to March 2019* (2019) Page 22:
<https://www.gov.uk/government/publications/25-year-environment-plan-progress-reports>

but with no detail on a timeframe, what the EU limit value is or what the current levels are and;

- Under the goal ‘Thriving plants and wildlife’ the government will: ‘Restore 75% of our one million hectares of terrestrial and freshwater protected sites to favourable condition’¹⁹ but with no timeframe or information on how many protected sites are currently in favourable condition.

In addition, the Progress Report fails to provide sufficient evidence regarding how changes in the environment are affecting human wellbeing.

2. Recommendations for improving the reporting framework

The NCC’s recommendations for improving the reporting framework, based on the review of the Progress Report, are set out below.

1. To improve the reporting **framework there is an urgent need to establish a comprehensive baseline on the state of the environmental assets against which progress in achieving the overall objectives and the goals within the 25 YEP can be assessed.** As part of this there is a need for the government to commit to an **environmental baseline census.** The government must coordinate and lead the way in establishing a baseline or the environment will continue to deteriorate. Given this urgency, the environmental baseline census should be conducted across England in 2020 and all necessary data collected within one calendar year. Following the initial census in 2020, the process should be repeated every five years thus enabling a clear periodic understanding of trends in England’s natural capital assets in space and time. The census should incorporate those aspects of extensive monitoring already carried out by government agencies, local authorities, research centres, academia and NGOs that are relevant, but also recognise that there are significant data gaps. The census should be targeted on these highlighted data gaps, for example, the need for a comprehensive soil survey and investment in marine data gathering. It should not duplicate existing work programmes. Citizen science has a role to play within the census, but only as one component in completing the baseline. Further NCC advice on an environmental baseline census is provided in a separate paper.²⁰

¹⁹ Defra, *25 Year Environment Plan Progress Report: January 2018 to March 2019* (2019) Page 31: <https://www.gov.uk/government/publications/25-year-environment-plan-progress-reports>

²⁰ <https://www.gov.uk/government/publications/natural-capital-committee-advice-on-developing-an-environmental-baseline-census>

2. **The NCC recommends that each of the ten 25 YEP goals are clearly defined. All of the goals must be supported by a number of statutory, quantitative targets addressing particular aspects of the high-level goal.** The goals in the 25YEP and the Progress Report are high level descriptive statements. They are not quantitative. The NCC's view is that each goal must be defined and *"to drive progress, quantified targets should be established for the various aspects of the 25 YEP goals."*²¹ Targets are required to enable progress in achieving the goals to be assessed. . The framework for setting legally binding targets **across all areas of our natural environment**, including targets that relate to the marine environment, should be set out in the forthcoming Environment Bill. Data gathering must be designed to evaluate the success of interventions and actions against the set targets. This is essential if the OEP is to function effectively as an independent scrutiny body. The targets must be based on environmental improvement rather than available data. Each goal may require a number of individual targets relating to the different aspects of the high-level goal. Targets cannot be designed effectively without a comprehensive understanding of natural capital assets, hence an environmental baseline census is integral to setting the appropriate targets.
3. **The indicator framework must be further developed so it is not based on what is currently measured/existing monitoring programmes, but based on what *should be measured*.** The indicator framework has barely been used to illustrate progress, demonstrating that it is not fit for purpose. All of the indicators used in the Progress Report draw on existing monitoring data, resulting in a strong sense of 'business as usual' – and not a single indicator measures the extent or condition of natural capital assets.
4. All of the above should be **supplemented with assessments of how changes are impacting upon wellbeing** across the population. Each goal should include a measure of the impact of the environment upon wellbeing. It is not enough to only include wellbeing against the enhanced beauty goal.²² These assessments should also reveal the distribution of improvements (or losses) across different socio-economic groups.

The government should **act on these recommendations as soon as possible to ensure that the next Progress Report provides a more rigorous, evidence based assessment of progress.**

²¹ Natural Capital Committee. *Annual Report 2019 Sixth Report to the Economic Affairs Committee of the Cabinet* (2019): <https://www.gov.uk/government/publications/natural-capital-committees-sixth-annual-report>

²² 25 YEP Goal 6 - *'Enhanced beauty, heritage and engagement with the natural environment.'*

Annex

Table: The NCC’s assessment of evidence used in the 25 YEP Progress Report to measure progress against the ten goals.

Evidence presented in the Progress Report, including indicator used, commitments made and actions reported.	NCC comments on the indicators, commitments and actions.
1. Clean air	
<p>Indicator used:</p> <ul style="list-style-type: none"> Emissions for five key air pollutants in England, 1998 to 2016. <p>The five key air pollutants presented are sulphur dioxide, nitrogen oxides, non-methane volatile organic compounds, fine particulate matter and ammonia.</p> <p>There are no specific commitments mentioned in the Progress Report only that Defra committed to reducing pollution and improving air quality for people and the environment.</p> <p>Part one reports on six actions being completed as progress against the goal ‘clean air’. Of these, three are well defined measurable targets with associated time limits.</p>	<p>General comments: the focus is on the Clean Air Strategy and aspirations to reduce particulate matter and pollution (NO₂, and ammonia) from agriculture and domestic burning. All five air pollutants have fallen over the last 18 years, however ammonia emissions have increased in recent years. The report fails to mention or explain this trend.</p> <p>The report details that the Clean Air Strategy has ambitious goals and targets but these are not pulled into the Progress Report. There is no reference to a measurable target for cutting key air pollutants, only a commitment to reducing pollution. Without a target the presented indicator cannot be used to measure success towards the ‘clean air’ goal. One of the actions states Defra will ‘reduce fine particulate matter concentrations so that the number of people living in UK locations above the World Health Organisation (WHO) guideline is reduced by 50% by 2025’. The indicator used does include a measure of fine particulate matter, but the WHO target and people impacted are not included so the indicator is not a suitable measure of success. There is no indicator on air quality itself, so besides the register of emissions it is very hard to know whether there has been an improvement.</p>

	<p>In addition to the environmental baseline census, potential overarching annual measures for air quality could be:</p> <ul style="list-style-type: none"> • The area of England in which all of the air quality objectives are met; • The percentage of the population living in areas in which all of the air quality objectives are met; • Impacts on human wellbeing; and • The amount of air pollution from agriculture.
2. Clean and plentiful water	
<p>Indicator used:</p> <ul style="list-style-type: none"> • None included. <p>Statistics used:</p> <ul style="list-style-type: none"> • Standard of bathing waters achieving high or good status (92%) for three years. • 16% of English surface water bodies assessed under the Water Framework Directive (WFD) in high or good status. <p>Commitments:</p> <p>Improve at least 75% of waterbodies to be as close to their natural state as soon as practicable, mirroring the legal requirement in the WFD to achieve this by 2027.</p> <p>The chapter mentions four key actions which are needed to achieve the goal of ‘clean and plentiful water’ namely; reducing abstraction, reaching or exceeding environmental objectives for rivers, lakes, coastal and groundwater, minimising</p>	<p>General comments: Focus is on actions taken with no evidence that the condition and extent of all water types has actually improved.</p> <p>The commitment made is not measurable because it is unclear what ‘as close to their natural state’ means. Of the reported progress only two of the eight statements are specific and measurable and therefore could be considered targets, namely; reducing water leakage by 15% by 2025 and by 50% in 2050, and reducing personal consumption to 123 litres per person per day by 2045. From the statistics presented it could be argued that minimising harmful bacteria in bathing waters is already being achieved with 92% reporting high or excellent standards. The other statistics mentioned suggest we are partially failing to achieve the goal of ‘clean and plentiful water’ with only 16% of English surface water bodies achieving high or good status. As the statistics are not related to specific targets it is impossible to actually say whether this goal is being achieved.</p> <p>As well as the environmental baseline census potential annual measures could include:</p>

<p>leakage and minimising the harmful bacterial in bathing waters by 2030.</p>	<ul style="list-style-type: none"> • The percentage of water bodies, by type, meeting at least good ecological status under the WFD; • The number of individual parameters meeting, at least good status under the WFD; • Bathing waters meeting at a minimum sufficient status under the Bathing Water Directive; • The percentage of water bodies where abstractions are not having an adverse impact; • Average per capita consumption; • Percentage of marine water area (of all seas not just marine protected areas) meeting at least 'Good Environment Status' under the Marine Strategy Framework Directive for Descriptor 5 Eutrophication is minimised; Descriptor 8 Concentration of contaminants give no effects; Descriptor 9 Contaminants in seafood are below safe levels; and Descriptor 10 Marine litter does not cause harm and; • Impacts on human wellbeing.
--	---

3. Thriving plants and wildlife

<p>Indicator used:</p> <ul style="list-style-type: none"> • Extent of protected sites in England, 1999 – 2018. Other indicators in the framework not ready. <p>Commitments:</p> <p>Marine ecosystems:</p> <ul style="list-style-type: none"> • Reverse the loss of marine biodiversity and, where practicable, restore it. • Increase the proportion of protected and well-managed seas, and better manage existing protected sites. 	<p>General comments: The indicator used demonstrates the extent of protected sites at sea has increased between 1999 and 2015, with protected sites on land and water remaining stable in this timeframe. This only relates to part of one of the commitments mentioned, namely 'increase the proportion of protected and well-managed seas, and better manage existing protected sites'. The extent and success of management of the seas is not addressed with this indicator, and nor is the management of existing protected sites. There is no commitment to increase terrestrial or freshwater protected sites so this indicator is only partially relevant. As the commitments are not specific or measurable</p>
---	--

<ul style="list-style-type: none"> • Ensure seafloor habitats are productive and sufficiently extensive to support healthy, sustainable ecosystems. <p>Terrestrial ecosystems:</p> <ul style="list-style-type: none"> • Restore 75% of our one million hectares of terrestrial and freshwater protected sites to favourable condition, securing their wildlife value for the long term. • Create or restore 500,000 hectares of wildlife-rich habitat outside the protected site network, focusing on priority habitats as part of a wider set of land management changes providing extensive benefits. • Recover threatened, iconic or economically important species of animals, plants and fungi, and where possible to prevent human-induced extinction or loss of known threatened species in England and the Overseas Territories. • Increase woodland in England in line with our aspiration of 12% cover by 2060: this would involve planting 180,000 hectares by end of 2042. 	<p>it is challenging to understand whether extending marine protected areas is on track or not - to be judged a success there must be a target set which includes an amount of protected areas.</p> <p>In addition to the environmental baseline census potential annual measures could include:</p> <ul style="list-style-type: none"> • Percentage of marine waters water area meeting at least 'Good Environment Status' under the Marine Strategy Framework Directive for: Descriptor 1 Biodiversity is maintained; Descriptor 2. Non-indigenous species do not adversely alter the ecosystem; Descriptor 4. Elements of food webs ensure long-term abundance and reproduction; Descriptor 6. The sea floor integrity ensures functioning of the ecosystem; Descriptor 7. Permanent alteration of hydrographical conditions does not adversely affect the ecosystem • Reverse the decline in soil carbon; content especially in arable systems • Reduction in number of erosion incidents (N.B. Needs infrastructure for monitoring); • No net increase in the area of soils sealed under infrastructure and; • Amount of vegetation cover in upper catchments.
---	--

4. Reduced risk of harm from environmental hazards such as flooding and droughts

<p>Indicator used:</p> <ul style="list-style-type: none"> • None included. <p>Commitments:</p> <ul style="list-style-type: none"> • Making sure everyone is able to access the information they need to assess any risks to their lives and livelihoods, health 	<p>General comments: None of the commitments are specific or measurable making it difficult to evaluate progress, no indicator has been selected and therefore no data is presented on the success of the actions or commitments.</p> <p>Data is available that could be used to demonstrate annual progress for example:</p>
---	---

<p>and prosperity posed by flooding and coastal erosion.</p> <ul style="list-style-type: none"> • Bringing the public, private and third sectors together to work with communities and individuals to reduce the risk of harm. • Making sure that decisions on land use, including development, reflect the level of current and future flood risk. • Ensuring interruptions to water supplies are minimised during prolonged dry weather and drought. • Boosting the long-term resilience of our homes, businesses and infrastructure. 	<ul style="list-style-type: none"> • The number of properties at a given level of flood risk e.g. annual probabilities of flooding of 3%, 1% and 0.5% by type of flooding fluvial, pluvial, sea; • The number of people living in areas where water supply is stressed and; • The extent and composition of habitats and natural features which act as natural defences against flooding.
---	--

5. Using resources from nature more sustainably

<p>Indicator used:</p> <ul style="list-style-type: none"> • Marine fish stocks of UK interest harvested sustainably, 1990 to 2015. <p>Commitments:</p> <ul style="list-style-type: none"> • Ensuring that food is produced sustainably and profitably. • Improving our approach to soil management: by 2030 we want all of England’s soils to be managed sustainably, and we will use natural capital thinking to develop appropriate soil metrics and management approaches. • Increasing timber supplies sustainably. • Achieving good environmental status of our seas including to ensure that all fish stocks are recovered to and maintained at levels that can produce their maximum sustainable yield as part of a wider 	<p>General comments: This indicator does not allow us to assess progress towards the goal in the marine environment as it only addresses selected species that are harvested commercially, not to mention terrestrial systems. For marine resources the use of the maximum sustainable yield as a target prevents consideration of the trade-offs between harvesting fish and shellfish stocks for food versus stocks required in order to sustain other flows of services such as thriving plants and wildlife, or climate regulation. The focus instead is on actions taken with no reported metrics against these. The current commitments are not specific enough to be measured as a success or not.</p> <p>In addition to the environmental baseline census potential annual measures could include:</p> <p>Building on descriptors for Good Environment Status under the Marine Strategy Framework Directive:</p> <ul style="list-style-type: none"> • Descriptor 3. The population of commercial fish species is healthy and;
---	--

<p>approach to restore and protect the marine ecosystem.</p>	<ul style="list-style-type: none"> • Descriptor 9. Contaminants in seafood are below safe levels. <p>The indicators should be broader to include the breadth of commercial seafood species:</p> <ul style="list-style-type: none"> • Percentage of marine waters water area where populations of all commercial seafood species are healthy and at levels that could produce their maximum sustainable yield; • Contaminants in seafood are below safe levels; • Location, extent and composition of habitats; • Quantity of soil carbon and soil fauna.
--	---

6. Enhanced beauty, heritage and engagement with the natural environment

<p>Indicator used:</p> <ul style="list-style-type: none"> • Frequency of time spent outdoors by age group, 2017/18, in England. <p>Commitments</p> <ul style="list-style-type: none"> • Safeguarding and enhancing the beauty of our natural scenery and improving its environmental value while being sensitive to considerations of its heritage. • Making sure that there are high quality, accessible, natural spaces close to where people live and work, particularly in urban areas, and encouraging more people to spend time in them to benefit their health and wellbeing. • Focusing on increasing actions to improve the environment from all sectors of society. <p>The section mentions six notable actions which have been completed.</p>	<p>General comments: Focus is on actions taken with no metrics against these. The indicator presented cannot measure any of the commitments made, for example, it is only measuring the amount of time people spend outdoors and not how close nature is to people. For progress to be measured the commitments need to be converted into targets, and metrics should be designed against these. None of the actions stated include a useful target which success could be measured against.</p> <p>More annual metrics are required, for example:</p> <ul style="list-style-type: none"> • The impact of the environment on human wellbeing; • The extent, configuration and condition of green and blue space in urban and peri-urban areas and; • How many people have access to it.
--	--

7. Mitigating and adapting to climate change

<p>Indicator used:</p> <ul style="list-style-type: none"> • None included. <p>Statistics included:</p> <ul style="list-style-type: none"> • Since 1990, greenhouse gas emissions have decreased by over 40%; agricultural greenhouse gases have reduced by 16% and natural resource sectors by 50%. • Hydrofluorocarbon usage has reduced by 37% since 2018, against a baseline period of 2015-2017. <p>Commitments</p> <ul style="list-style-type: none"> • Continuing to cut greenhouse gas emissions including from land use, land use change, the agriculture and waste sectors and the use of fluorinated gases. • Making sure that all policies, programmes and investment decisions take into account the possible extent of climate change this century. • Implementing a sustainable and effective second National Adaptation Programme. 	<p>General comments: focus is on actions taken with no metrics against these. The only target mentioned is that of the Montreal Protocol which will phase down the use of hydrofluorocarbons by 85% by 2036. The statistics presented do not show whether this is on track because no baseline is presented. A more appropriate metric would include a target of what an 85% reduction looks like with key milestones.</p> <p>In addition to a baseline other appropriate metrics could include:</p> <ul style="list-style-type: none"> • Extent and species composition of habitat types involved in carbon sequestration and storage such as forests, woodlands, trees, peatlands, wetlands, coastal saltmarshes and seagrass beds, phytoplankton production, seabed carbon, and carbon flows into the seabed or offshore into deep water and; • Quantity and rate of turnover of stored carbon in soil, peatlands, and other land cover classes and marine storage areas.
<p>8. Minimising waste</p>	
<p>Indicator used:</p> <ul style="list-style-type: none"> • Raw material consumption in the UK, 2000 to 2013. <p>Vision</p> <ul style="list-style-type: none"> • Double resource productivity by 2050, • Eliminate avoidable plastic waste, • Eliminate avoidable waste of all kinds by 2050. 	<p>General comments: The goal needs to be defined properly, in this Progress Report it seems to have evolved from ‘Minimising waste’ to ‘Minimising waste and taking action on plastic pollution’. Without a clear definition it will be very difficult to judge the progress made.</p> <p>In the report there is a very incomplete picture given, metrics must be designed to measure the outcomes of actions taken. For example, impact of the ban on microbeads and other policies relating to reducing plastic waste on water quality with respect to micro plastics and marine litter.</p>

<p>The section mentions ten actions which have been carried out in support of this goal.</p>	<p>There also needs to be a baseline set on what ‘resource productivity’ means, it cannot be doubled without a starting point. The metric used is not relevant to any of the actions mentioned or the vision statements. None of the actions mentioned include specific or measurable targets.</p> <p>Minimising waste metrics could include:</p> <ul style="list-style-type: none"> • The average amount of waste produced per person; • Recycling rates per person; • The percentage of waste that can be reused or recycled; • The amount of waste by disposal route; • Percentage of area of beaches contaminated by marine litter including plastics and microplastics; • Percentage of marine waters, sediments and species contaminated by presence of microplastics and; • Reduction in packaging across consumer and industrial supply chains.
--	--

9. Managing exposure to chemicals

<p>Indicator used:</p> <ul style="list-style-type: none"> • None included. <p>No commitments mentioned, the report only refers to the 25YEP.</p> <p>Statistics used:</p> <ul style="list-style-type: none"> • Since 1990, the emissions from Persistent Organic Pollutants have declined. Namely, polychlorinated biphenyls by ~92%, hexachlorobenzene by 99% and dioxins by just under 87%. 	<p>General comments: This goal is particularly poorly defined with limited information on which chemicals would need to be measured, it is not clear if these chemicals would be harmful or not.</p> <p>Focus is on actions taken with no proposed indicators to measure the success of this. None of the actions are specific or measurable. Metrics must be designed to measure the exposure to chemicals.</p> <p>Appropriate metrics are difficult to define because the goal is ambiguous but could include:</p>
--	--

<p>The section mentions very few actions, mainly around Persistent Organic Pollutants, international chemicals management and pesticides.</p>	<ul style="list-style-type: none"> • Human exposure to toxic chemical groups and; • Presence of harmful chemicals in the environment (oceans, soil, air).
<p>10. Enhancing biosecurity</p>	
<p>Indicator used:</p> <ul style="list-style-type: none"> • Number of additional tree pests and diseases becoming established in England within a rolling ten year period, 2000-09 to 2008-17. <p>Commitments</p> <ul style="list-style-type: none"> • Managing and reducing the impact of existing plant and animal pest and diseases; lowering the risk of new ones and tackling invasive non-native species. • Reaching the detailed goals to be set out in the Tree Health Resilience Strategy of 2018. • Ensuring strong biosecurity protection at our borders. • Working with industry to reduce the impact of endemic disease. <p>The section reports a long list of actions, most of which relate to trees with one on non-native species and one on animal health.</p>	<p>General comments: Incomplete picture given, with no data presented for animal pests and diseases, plant pests or invasive species. None of the actions mentioned are specific or measurable, no evidence is presented on the impact of these. The indicator used seems unrelated to any of the commitments made so it is difficult to assess whether progress has been made.</p> <p>In addition to the baseline, appropriate metrics might include:</p> <ul style="list-style-type: none"> • The impact of plant and animal disease outbreaks and invasive species establishment; • The extent of plant and animal pest and diseases and invasive species; • The number of new outbreaks; • The number of interceptions; • Condition of habitat and; • The Percentage of marine waters meeting at least 'Good Environment Status' under the Marine Strategy Framework Directive for: Descriptor 2. Non-indigenous species do not adversely alter the ecosystem.