

Response from the Royal Society of Biology to the [Defra Consultation](#) on the [Draft Policy Statement](#) on Environmental Principles

June 2021

The Royal Society of Biology (RSB) is a single unified voice, representing a diverse membership of individuals, learned societies and other organisations. Our world-leading biosciences sector contributes strongly to the economy, and to society. We are committed to ensuring that we provide Government and other policymakers, including funders of biological education and research, with a distinct point of access to authoritative, independent, and evidence-based opinion, representative of the widest range of bioscience disciplines.

The RSB welcomes Defra's consultation on the Draft Policy Statement on Environmental Principles. We strongly support the creation of a policy statement to embed protection and enhancement of the environment into policy-making across government. We are pleased to provide comments informed by our membership of individuals and organisations with expert interests across the biosciences. Our Member Organisations are listed in Appendix 1.

Summary of key recommendations across RSB's response:

- We warmly welcome the development of the policy statement on environmental principles, and offer several suggestions to enhance it.
- The statement should be **clearer** - particularly on the mechanisms for Ministers to engage with to monitor and hold their decisions to account, including the role of the Office for Environmental Protection (OEP).
- The statement should be **stronger**, with a clear route and structure for access to environmental expertise for consultation, and the expectation that Ministers will use this in all aspects of their policy and decision making. Exemptions for particular policy areas should be granted only where absolutely necessary, and where a Department proactively applies for such an exemption. Ministers making decisions on exempted policy areas, or those making decisions at the individual level, should still be encouraged and advised to consider, discuss and seek advice on this statement and the principles, and should undergo training in their application. We would strongly encourage expanding the scope of the policy statement to include individual decisions.

- While we are very pleased to see the range of environmental principles incorporated in the draft statement, to be an effective tool in enhancing the environment, the statement should be **more ambitious**. It currently focuses on principles to reduce harm rather than to restore damage or remove sources of damage and decline. Adding a principle of environmental net gain would address this imbalance.
- Despite and alongside the above issues, we are very pleased to see explicit mention for protection and enhancement of biodiversity.

Environmental Principles - An overview

Question 5. Do you think the overview section provides an adequate foundation for policy makers to apply the environmental principles in policy-making? (Yes/No/Other – Please provide any additional information in support of your answer)

Response: No

Clarity is needed overall

5.1 The creation of the policy statement is a positive step and a useful addition to the environmental policymaking toolkit, with laudable aims. However, to be effective in helping to achieve these aims it must be clearer on when and where it is relevant and important for a Minister to have ‘due regard’ to consider the principles listed (see also points 5.10 and 5.12). As it is written, the statement leaves too much room for interpretation by Ministers, which risks compromising its effectiveness, especially where active consideration may be needed to reveal the environmental relevance. We advise that the statement should use language that is much clearer (preferably linking to examples) to actively and productively encourage and advise Ministers to **apply the principles at all levels of their decision and policy making**, and describe how these decisions and their ramifications will be monitored and held to account. The **Office for Environmental Protection (OEP) should play a role in the latter, and one which should be clearly defined and actively enforced**.

The statement should be stronger overall

5.2 As above, clarity should be provided to Ministers, using clear and unambiguous wording within the statement, to advise them of the related mechanisms in place to hold them to account for the decisions they make, and the ramifications of

those decisions. The OEP should play a role here, which should be clearly defined and actively enforced. At the least, the statement should direct Ministers clearly to efficient **routes to access expert advice for consultation**. The statement should **actively and clearly encourage and raise the expectation** that Ministers will as a default seek and follow this expertise habitually in all normal circumstances (though preferably in other emergency scenarios beyond that of our changing climate), including when making decisions on areas of policy where the links to environment may be important but less direct, or unclear to the lay person (appropriate training as advised in point 5.11, in application of the principles should help Ministers to identify these less obvious links). Decisions made without a clear understanding of the environmental ramifications can be among the most damaging. Due regard to the environmental principles in decision making should include a mechanism whereby Ministers and other individuals making decisions should be held to account for any resultant damage to the environment. [See also our answer to question 6].

- 5.3 Of particular concern is the requirement to have ‘due regard’ to the policy statement. **This is weaker than a ‘duty of care’**, which would require the government to undertake specified actions, for example if the population of a species was reaching a level which experts felt raised the risk of local or general population failure.
- 5.4 The present wording suggests, for example, that a Minister could be informed that a policy would cause environmental loss that would meaningfully change an extinction risk, give this assessment ‘due regard’, then proceed with the policy. While apparently in line with the wording of the statement, such a course of action would be completely at odds with sustainable management of ecosystems and wild species. In some situations, such as the irreversible loss of rare habitats or species, ‘due regard’ can only be said to have been carried out if action is undertaken that protects the environment.
- 5.5 Related to points 5.2, and regarding Ministerial policymaking across government which is exempted from the legal duty of due regard to the policy statement as per the Environment Bill, further clarity and consideration should be provided as part of the statement and surrounding policies and practice.
- 5.6 The statement as currently worded provides certain exemptions related to the armed forces, defence, national security and taxation and spending. We consider that the statement should not be worded in such a way that it can be ignored by certain parts of government. Rather, in all normal circumstances – by which we mean anything outside times of national emergency or where specific exclusions apply (e.g. for essential training) – all government departments should be expected to comply with the statement by default. Where exemptions are absolutely necessary, the relevant departments should be required to proactively

apply for them. Further, we consider that there are cases, such as destruction of habitat for highly endangered species, where no exemption can be allowed.

- 5.7 We note here that it is our strongly held view that government spending should be fully aligned with environmental principles across all areas, and that only in doing so can the UK as a whole progress efficiently and effectively towards fully meeting the cross-cutting, important and ambitious climate, biodiversity and sustainable development targets we have set on the world stage.
- 5.8 As an example, according to the Ministry of Defence Land Holdings 2020 report¹, the MOD owns 225,800 hectares of land and foreshore in the UK, making up approximately 0.9% of UK land mass. The MOD holds the rights over a further 206,700 hectares, totalling 1.8% of the UK's land mass. Clearly, with close to 3% of the UK area, environmental principles should be given some form of regard when being applied to this extensive expanse of land and foreshore. While certain tasks undertaken by defence or national security may not always have positive outcomes for the environment, such as explosives detonation training, it is perfectly within the realms of possibility and common sense for consideration to be given to the environmental principles when making decisions about the use of this land. For example, when choosing suitable training grounds, ecological surveys could be used to avoid shooting drills taking place near nesting birds.
- 5.9 At the least, we believe that **Ministers making decisions across exempted areas of policy should be clearly advised to consider, seek expertise and discuss (even if not legally required to give due regard to) the principles within the statement.** Clear guidance on the use of the statement and the available consultant expertise in this endeavour should be provided to Ministers, and they should be encouraged to use it.
- 5.10 Regarding policy vs individual decisions, both are intrinsically linked and cannot be separated at outcome. Individual planning decisions can be highly contentious with regard to environmental issues; the principles should apply in such cases. Thus, we would strongly caution against exempting decision-making at the individual level from the need for regard of the principles of environmental protection. Decision-making by local authorities should also attend to the principles set out in the policy statement. Excluding individual decisions may result in a lack of environmental protection played out in human activity on the ground, even if decision making at the Ministerial and framework policy level is thorough and well intentioned in paying due regard to these principles. A lack of activity in the right direction on the ground will not bring us any closer to achieving our environmental targets, and could of course be further detrimental to the environmental systems we depend on to live.

¹ Ministry of Defence, 2020. [UK Land Holdings 2020](#).

5.11 We propose a similar approach to this problem as that described in point 5.9, whereby Ministers **should be clearly advised to at least consider, seek expertise and discuss the principles within the statement at all levels of their decision-making.** Guidance on the use of the statement and consultant expertise in this endeavour should be provided to Ministers, and they should be encouraged to utilise it. Additionally, **all decision-making personnel across government policy areas should at least be made aware of the environmental principles and statement and how to consider them in decision-making, perhaps through training and professional development courses.** However, a report by the Natural Capital Committee suggests that more is needed than just making those tasked with formulating policy aware of environmental principles.² The report shows that placing principles in guidance documents (even the HM Treasury Green Book) was not strong enough to ensure they were observed. Instead the report notes the success of the Regulatory Policy Committee (RPC) requirement that Government investment appraisal pro-forma include a requirement to show assessments of climate change impacts have taken place. The same report argues that this approach needs to be extended to other environmental impacts – most obviously those relating to biodiversity.

The statement should be more ambitious: the principle of environmental net gain should be considered for incorporation

5.12 We are very pleased to see the principles listed in the draft statement, which are all of such key importance in this context. However, we do believe that one additional principle in particular should be considered for incorporation, before this statement is finalised: **the principle of environmental net gain.** Our reasoning for this is laid out in steps thus:

- a. The aim of the draft statement (as per the instruction of the Environment Bill and noted on page 6 of the draft statement) is a worthy one - as a tool to contribute to the **improvement of environmental protection and sustainable development**
- b. The definition of environmental protection within this context (as defined in the Environment Bill) is also well encompassed, including - alongside important actions to protect and monitor, assess and report - an equally important action to maintain, **restore or enhance the natural environment.**

² Natural Capital Committee, 2020. [The Green Book guidance: embedding natural capital into public policy appraisal, Second edition.](#)

- c. While the current principles laid out in the draft statement can be said in most cases to partly relate to this action to restore or enhance, no one principle has a focus on this action. Decisions made with regard to these principles will most likely (and importantly) act to protect and maintain the current state of our natural environment, and perhaps somewhat allow it to recover under its own natural processes once pressures (such as pollution at source) are released. However, the current principles laid out in the draft statement are much less likely to directly result in the direction (or moving of people's decisions and actions) *to actively restore or enhance* the natural environment.

5.13 With this in mind, we would strongly advise that the principle of **environmental net gain**, as per the published **25 Year Environment Plan**^{3,4}, should be included in the listed principles at the core of the draft statement. As one example within the broad applications and importance of this principle, progress on environmental net gain would be of relevance to consider when making policy decisions on housing and infrastructure, to ensure “projects meet current needs without detrimentally impacting the ability of future generations to meet theirs, and should make provision for restoration of degraded land into optimal habitats for wildlife [...] Environmental net gain should allow development to deliver environmental improvements and also include a commitment to reverse, or where practical, restore any loss of biodiversity.”⁵ We must have focus, clarity and action on aims to **restore** climate and habitats to an original or much improved condition at a stated and agreed start point.

5.14 While a principle of net gain would contribute the aim of the policy statement to enhance the environment (rather than merely slow its decline), we acknowledge that both Biodiversity Net Gain (BNG) and Environmental Net Gain (ENG) have been poorly defined in terms of the detail of how they should be implemented. Defining what constitutes net gain is not easy and will depend on the scale at which it is applied, while measuring or assessing enhancement of the environment is challenging and requires further work to improve. Further, we must be alert to the risk that attempts to implement net gain can be highly inefficient or even increase environmental damage, if not considered carefully and in light of broad expert advice.⁶

³ GOV.UK, 2018. [25 Year Environment Plan](#), pp 32-34.

⁴ United Nations, 2020. [Water, Food and Energy](#).

⁵ Royal Society of Biology, 2018. [Response from the Royal Society of Biology to the Defra consultation on Environmental Principles and Governance after EU Exit](#).

⁶ Bateman, IJ and Zonneveld S, 2019. [Building a better society: Net environmental gain from housing and infrastructure developments as a driver for improved social wellbeing. Report to the 2070 Commission](#).

Step 1: Understanding environmental impact

Question 6. Do you think step one allows policy-makers to correctly assess the potential environmental effects of their policy?

(Yes/No/Other - Please provide any additional information in support of your answer)

Response: No

- 6.1 Without access to sufficient research (or to competent advice) it will be difficult for policy-makers to define what the likely impact of a policy may be. To deal with this uncertainty, further and clear guidance should be given to Ministers as part of (or linked to) the statement, regarding the level of research detail required to best assess the risks and benefits which may arise from any policy.
- 6.2 One way to develop and provide this type of guidance (while it would be separate from the defined environmental principles themselves) would be to clearly set out the structures and routes through which Ministers may enlist and consult expert opinion, throughout the decision making process, and clearly encourage their doing so with expectation. We suggest that a long-term structure similar to that of SAGE (with direct routes to external science advice and on advice from expert groups) should be set up to provide this expert opinion and advice direct to Ministers. There are other similar structures, such as the Food Standards Agency (FSA) scientific advisory committees, or the recently announced Animal Sentience Committee,⁷ which provide independent feedback on different aspects of decision making. These structures ensure community-validated and up-to-date scientific evidence is used to advise policy decisions. The OEP could go some way to performing this role, preferably with enforcement capabilities, but it must be appropriately defined including its specific remit and jurisdiction. “As per the Brundtland Report⁸, the ability to scrutinise and advise on environmental issues pertinent to a range of policies and legislation (e.g. planning, agricultural or economic policies) should be a key function of any independent watchdog, allowing for the application of any environmental principles across a wider policy context.”⁹
- 6.3 Defra’s partnership with academics to design the Decision Support System for use in the Environmental Land Management scheme could also be used as a model to access expert guidance. A similar initiative developed by Defra and the

⁷ GOV.UK, 2021. [Animals to be formally recognised as sentient beings in domestic law.](#)

⁸ United Nations, 1987. [Our Common Future \(Brundtland Report\).](#)

⁹ Royal Society of Biology, 2018. [Response from the Royal Society of Biology to the Defra consultation on Environmental Principles and Governance after EU Exit.](#)

OEP, as a start, would be a major step forward over the present situation. [See also our answer to question 5 point 5.2]

Question 7. Do you think step one ensures that policy-making will address the most important environmental effects?

(Yes/No/Other - Please provide any additional information in support of your answer)

Response: Other

7.1 As stated in question 6, it may be difficult to address the most important environmental effects without sufficient knowledge of the likely impacts. Expert consultation at all stages of the decision making process will be paramount to this understanding, and to effective and efficient policy making. Training in how to apply the principles, and expert advice, is also key. Routes to access this, and the expectation that they will do so, should be made clear to Ministers in the statement. Meanwhile, it should be a priority to ensure that the broadest and most current knowledge and understanding available is used in decision-making, using the structures described in the response to question 6 (points 6.2 and 6.3) as a model.

Step 2: Understanding which principles are relevant

Question 8. Will step two assist policy-makers in selecting the appropriate environmental principles?

(Yes/No/Other - Please provide any additional information in support of your answer)

Response: Other

8.1 The RSB welcomes the acknowledgement of the need to avoid biodiversity loss alongside climate change when describing the prevention principle; the two are equally important, interlinked, and the foremost global challenges for our society¹⁰. Implications for biodiversity offsetting should, however, be considered: it is important to ensure that any damage is not simply relocated to

¹⁰ Royal Society of Biology, 2019. [Response from the Royal Society of Biology to the Dasgupta Review on the economics of biodiversity](#).

geographically differing locations or solely provisioned through distant 'environmental currencies' (e.g. replanting trees).¹¹

Step 3: Applying the principles

Question 9. Do you think step three provide a robust and sufficient framework for the application of each individual environmental principle?

- a. Integration (Other)
- b. Prevention (Other)
- c. Rectification (Other)
- d. Polluter pays (Other)
- e. Precautionary (Other)

Response:

- 9.1 We offer comments on several of the principles below:
- 9.2 Regarding the **prevention principle**, where prevention is possible, national government and local authorities should be compelled to apply this principle. This would prevent the current situation in which negative environmental impacts are mitigated unsatisfactorily, which in practice does not protect the environment or people from the pollution and damage being caused.
- 9.3 The **rectification at source principle** is described so as to require that damage to the environment – if it cannot be prevented – should be tackled at its origin. When considering net gain compensation, the greatest gains can be delivered by focusing on areas that would be most responsive to change. The common presumption that net gain compensation should occur as near as possible to the site at which damage occurs is at very best highly inefficient and at worst may actually make the situation worse. This is partly because it may negate or radically limit the ability for net gain compensation to be directed to deliver the greatest gains by focussing on those areas which would be most responsive to change, even if they are not as near as possible to the site in question.¹²
- 9.4 The **polluter pays principle** is framed only in monetary terms, yet the damage that is done cannot be rectified through money (e.g. polluting water courses from

¹¹ Royal Society of Biology, 2018. [Response from the Royal Society of Biology to the Defra consultation on Environmental Principles and Governance after EU Exit.](#)

¹² Bateman, IJ and Zonneveld S, 2019. [Building a better society: Net environmental gain from housing and infrastructure developments as a driver for improved social wellbeing. Report to the 2070 Commission.](#)

industrial run off, or air pollution associated with aviation). The costs to the natural environment in terms of poisoning wildlife, or the cost to people of shortened life expectancy as a result of air pollution cannot be 'bought'. In circumstances of accidental pollution, it is only right that the polluter pays the full cost of clean-up and restoration, but this principle should not be applied to enable future pollution.

- 9.5 The **precautionary principle** enables protection of environments from actions that are not fully understood but may cause significant damage. It can also be used to guide further investment in environmental research to enhance understanding and lead to a better, evidence based decision in future. However, as it has been implemented in European law, this principle has in some cases limited innovation with the potential to tackle societal challenges such as food security, for example in relation to the use of genetic technologies in plant and animal breeding. This serves to illustrate the potential danger that these principles might be swayed by special interests, and the need for appropriate due process to protect against this - to enable balanced, consistent application in every case.

Question 10. Do you think the process for applying the policy statement (the three steps) provides a robust and sufficient framework for the application of the environmental principles as a whole?

(Yes/No/Other - Please provide any additional information in support of your answer)

Response: Other

- 10.1 The RSB believes that the general application options are well described; however, the idea of weighting of the principles differently against each other is contentious. Although environmental variation means that some factors may be more important in one place than in others, all principles should be considered in formulating decisions for most sustainable, equitable and efficient practice. The process of formulating these decisions, based on the principles, should also be as transparent as possible to enable scrutiny to improve the process of their application over time.
- 10.2 Selective use of the environmental principles, based on a balance of interests, is inappropriate. The idea of principles is that they should run through absolutely every aspect of public administration and not be used selectively, this is therefore how the environmental principles in the policy statement should be applied.

10.3 As per our answers to questions 5 (point 5.2) and 6, the statement should direct Ministers clearly and efficiently to **expert advice for consultation**. The statement should **actively and clearly encourage and raise the expectation** that Ministers will seek this expertise habitually - including in emergency scenarios – and especially when making decisions on areas of policy where the links to environment may be important but indirect, or unclear to the lay person. Decisions made without a clear understanding of the environmental ramifications can be the most damaging.

Question 11. Do you have any other comments on the draft policy statement which are not covered by the previous questions?

(Yes/No - Please provide any additional information in support of your answer)

Response: Yes

11.1 As alluded to in our previous answers, we welcome and are pleased with the range of environmental principles covered in the statement, and the incorporation of biodiversity alongside environmental consideration. We are concerned that the statement forms part of a UK system that currently appears to provide far weaker protection of the environment than the EU law it replaces. For example, there is no provision for fining Departments that fail to adhere to the principles, as there was for EU environmental directives.

11.2 The Environment Bill relies heavily on environmental enforcement being undertaken at the ministerial level, yet the statement is a case in point for weakened protection – there is a clear risk that requirements, principles and actions for environmental protection will be disregarded at all levels of decision-making without fail safes, or definite steps to monitor the ramifications for our environment, and hold to account policy decisions and policy makers. Equally, there is no clear system laid out whereby the application of the statement – its effectiveness and range of use – are to be monitored for future improvement and reporting, or where failure to implement it could lead to sanctions. Monitoring of effectiveness and impact are important in any long term programme, and we look forward to further clarity on this.

11.3 The environmental principles are important to consider across the greatest possible breadth of decision-making. The natural capital approach provides further insights and a framework for decision-making that links ecological and

economic perspectives, which, if more widely adopted, would lead to better, sustainable decisions for the benefit of society.¹³

11.4 The statement can be clearer, stronger and more ambitious, and we have offered recommendations on how this might be achieved, which we hope are practical and realistic. We would be more than happy to offer further advice and assistance, for example through our training and professional development offering and links to our expert membership.

¹³ Bateman IJ and Mace GM, 2020. [The natural capital framework for sustainably efficient and equitable decision making.](#)

Appendix 1: Member Organisations of the Royal Society of Biology

Full Organisational Members

Agriculture and Horticulture Development Board
 Anatomical Society
 Association for the Study of Animal Behaviour
 Association of Applied Biologists
 Association of Reproductive and Clinical Scientists (ARCS)
 Biochemical Society
 British Association for Lung Research
 British Association for Psychopharmacology
 British Biophysical Society
 British Ecological Society
 British Lichen Society
 British Microcirculation and Vascular Biology Society
 British Mycological Society
 British Neuroscience Association
 British Pharmacological Society
 British Phycological Society
 British Society for Cell Biology
 British Society for Developmental Biology
 British Society for Gene and Cell Therapy
 British Society for Immunology
 British Society for Matrix Biology
 British Society for Neuroendocrinology
 British Society for Parasitology
 British Society for Plant Pathology
 British Society for Proteome Research
 British Society for Research on Ageing
 British Society of Animal Science
 British Society of Plant Breeders
 British Society of Soil Science
 British Society of Toxicological Pathology
 British Toxicology Society
 Daphne Jackson Trust
 Fisheries Society of the British Isles
 Fondazione Guido Bernardini
 GARNet
 Gatsby Plant Science Education Programme
 Genetics Society
 Heads of University Centres of Biomedical Science
 Institute of Animal Technology
 Laboratory Animal Science Association
 Linnean Society of London
 Microbiology Society

MONOGRAM – Cereal and Grasses Research Community
 Network of Researchers on the Chemical Evolution of Life
 Nutrition Society
 Quekett Microscopical Club
 Society for Applied Microbiology
 Society for Experimental Biology
 Society for Reproduction and Fertility
 Society for the Study of Human Biology
 South London Botanical Institute
 The Field Studies Council
 The Physiological Society
 The Rosaceae Network
 Tropical Agriculture Association
 UK Brassica Research Community
 UK Environmental Mutagen Society
 University Bioscience Managers' Association
 Zoological Society of London

Supporting Organisational Members

Animal & Plant Health Agency (APHA)
 Association of the British Pharmaceutical Industry (ABPI)
 AstraZeneca
 BioIndustry Association
 Biotechnology and Biological Sciences Research Council (BBSRC)
 British Science Association
 Ethical Medicines Industry Group
 Fera
 Institute of Physics
 Medical Research Council (MRC)
 NNedPro Global Centre for Nutrition and Health
 Northern Ireland Water
 Porton Biopharma
 Royal Society for Public Health
 Severn Trent Water
 Syngenta
 Understanding Animal Research
 Unilever UK Ltd
 United Kingdom Science Park Association
 Wellcome Trust
 Wessex Water
 Wiley Blackwell