environmental outcomes reporting clearly inadequate, but does opportunity knock?

The new Environmental Outcomes Report provisions set out by the government as a post-Brexit replacement for Environmental Impact Assessment and Strategic Environmental Assessment/Sustainability Appraisal are, in their current form, a major step backwards—but there is still a chance that, if done right and pointed upstream, they could lead to systems-wide improvements for health and the environment, say **Daniel Black** and **Edward Kirton-Darling**

Whether or not the selection of the acronym was chosen to sound like Pooh's forlorn friend, Eeyore, we must assume not and not get too despondent about the Environmental Outcomes Report (EOR) provisions at this stage. The provisions form part of the Levelling-up and Regeneration Act (Part 6), and will replace the EU-derived system of SEA/SA (Strategic Environmental Assessment/Sustainability Appraisal) and EIA (Environmental Impact Assessment).

The government consultation on the proposals¹ argued that the new approach will put in place 'a streamlined system that focuses on delivering our environmental ambitions', while allowing the government to 'reflect its environmental priorities directly into plan-making and decision-making processes on the largest developments'.

The plans amount to a very significant change in the ways in which impacts of large-scale development are assessed, and in what follows we analyse aspects of the consultation, starting with two critical areas not fully addressed in the proposals—health-related outcomes and issues with the current regimes—before outlining and examining some of the specific issues raised in the consultation.

Health-related outcomes

The failure to place health at the core of the impact assessment process is the most significant flaw with the proposals. While the consultation document does mention health explicitly and states that the 'purpose of Town and Country Planning is to deliver sustainable development, a cornerstone

Table 1

Counter-rationales to the issues within the existing EIA and SA/SAE regimes identified by the government consultation

Issue	Government rationale	Counter-rationale
Inefficiency	Need for early assessment, clarity and relevance of priorities.	Early assessment, clarity and relevance are all important, but so is full and comprehensive assessment.
Duplication	Overlapping with other assessments (for example inclusion of social, economic and housing matters).	Consideration of impact at a systems level is critical, especially when concerned with environment and health; by separating off each assessment, the whole is missed.
Risk aversion	Fear of legal challenge and resource needs, leading to delays.	The 'precautionary principle' is perhaps the most significant of environmental foundations, and yet is not mentioned once.
Loss of focus	Scope creep and lack of clear boundaries.	See the above point about duplication. Systems approaches also embrace inevitable 'fuzzy boundaries' and, when reasonably applied, should improve overall efficiency.
Issues with data	Poor accessibility, robustness and quality of data, leading to delays; significant volume of data, but often not the right type; data held in a variety of places; quality assurance concerns.	Data limits are inevitable, especially on health and environmental outcomes, but that should not prevent decision-making that prioritises them.

of which is improving the health and wellbeing of communities', it is notably absent from the detail of the planned reforms. The only reference is in two arguably weak—statements of intent: 'reforms will allow us to consider how best to address the environmental effects of development on communities, covering issues such as the health of local people'; and 'We will also consider how we can best use EORs to achieve health related outcomes'.¹ This failure to place health front and centre is a clear cause for concern, but also presents a clear opportunity to strengthen the proposals.

Issues with the current regime

The consultation identifies five issues that 'users' (it does not specify who in any detail) have with the existing EIA and SA/SAE regimes, and presents rationales for the proposed change. However, while these issues are all reasonable and justifiable, the analysis set out in the consultation fails to highlight important counter-rationales; illustrations of which are set out in Table 1.

The impact of the approach taken is that the consultation risks producing a system in which an emphasis on speed and streamlining comes at the expense of careful consideration of the nuances of an individual site. Furthermore, an opportunity to reduce box-ticking and encourage genuine assessment is missed.

Principles—to guide the development of outcomes

The consultation document sets out six principles for the development of outcomes, which, although practical, do not adequately cover what is needed. We suggest that six additional principles are needed, as set out in Table 2 on the following page.

Town planning and infrastructure development are inextricably linked to public health,^{2,3} and our health is dependent on our (local and global) environment health.^{4–6} We agree with the consultation document that environmental (and health) challenges are complex, and hence there is a need for impact assessment upstream and at root causes. For example, land availability assessment and site allocations impact substantially on car use, which in turn impacts on health and environment; and regulation of real-estate investment can prioritise health and environmental outcomes via issues of affordability.^{5,78}

While we agree that 'SEA has been expanded to include social and economic considerations' and that this 'has resulted in duplication and overlap' ¹ in some instances, there are very significant inter-relationships between social, economic and environmental elements that require full consideration in the round. If elements are considered in isolation, linked issues can get missed—such as the health co-benefits of climate action.⁹

Table 2

Six additional principles to guide the development of outcomes

Government principles		Proposed additional principles	
Outcomes should:		Outcomes should:	
1	Drive the achievement of statutory targets and the	1	Drive the achievement of human health outcomes.
2	Be measurable using indicators at the correct scale.	2 3	Be applicable to all plans at all levels, but focused especially at upstream/root cause factors to maximise efficiency, regardless of sector
3	Be designed using the knowledge and experience of sector groups and experts.		Include social and economic impacts where they
4	Have an organisation responsible for monitoring overall progress.	4	Be rooted in both the 'precautionary' and the
5	Be reviewed on a regular basis to ensure that they remain relevant.	5	Be designed using the knowledge of those affecting
6	Not duplicate matters more effectively addressed		and those affected by development plans or projects.
t	through policy.	6	Be applicable to both mixed-use places for people and large-scale, single-use infrastructure projects (these require different approaches).

Given the long-established enshrining of the 'precautionary principle' and 'polluter-pays principle' into environmental practice, it is remarkable, to say the least, that they are not included in the EOR proposals. We appreciate that they present issues of uncertainty and potential risk aversion, which the document seeks to address. They are nonetheless of fundamental importance, especially given the limited improvement from EIA through a reactive mitigation hierarchy¹⁰ and the need to strengthen its first stage.¹¹

Improving environmental and health outcomes is a complex challenge that requires working with incomplete data sets and unknowns: gualitative data, expert opinion, trust and transparency are needed, alongside new methods of decision-making under uncertainty. This is acknowledged in the consultation document: 'certain outcomes may not be conducive to a quantitative metric [...] agreed assessment methodologies that draw on gualitative assessment, using professional judgement, may have to be used'.1 These methods need to be developed prior to enacting the new regime. Further clarity and detail are therefore needed to ensure early impact assessment at root-cause decision points, to enable strong policy and legislation, and efficient development where appropriate; and hence our recommended principle 2 (in Table 2), which principle 4 would also underpin.

When addressing the complex challenge of environmental degradation (and impact on human health), stakeholders involve both those affect*ing* as well as those affect*ed by* development plans or projects.^{12, 13} Not specifying the 'sector groups and environmental experts' or the 'organisation responsible for monitoring overall progress of specific outcomes'¹ is problematic, as the choices made here could lead to wildly varying outcomes. The process for stakeholder identification and involvement must be clear and should include consideration of future generations and those with less 'voice'.

Principles that indicators will have to meet

The consultation document states that indicators must be:

- clearly and directly relevant to one or more priority outcomes;
- non-duplicative;
- proportionate;
- drawn from existing data sets;
- measurable at the correct scale;
- evidence based;
- replicable;
- owned and managed; and
- supported by a clear methodology and guidance.

While these are all common-sensical, they do not on their own give confidence. Significant lack of clarity remains, and—at the very least—clearer additional guidance will be needed.

For example, the consultation states on the one hand that the quality of data is often not of the type or standard required, yet at the same time says that the data must be drawn from existing data sets. This emphasis on existing data sets has significant implications. Evidence suggests that there is far more data on air pollution, for example, than on many more, no less important indicators (for example overheating).^{7,14, 15} We therefore agree strongly with the consultation statement above on the limitations of quantitative metrics and the need for qualitative assessment and professional judgement.¹ Yet there is no clear guidance on this.

The same section of the consultation paper also lists eight 'matters' for consideration: biodiversity;

air quality; landscape and seascape; geodiversity, soil and sediment; noise and vibration; water; waste; and cultural heritage and archaeology. It acknowledges that this list is incomplete, and says that it will be expanded 'through regime specific outcomes, in accordance with the specific legislative and policy framework, and pressures and needs, of each regime'.¹ However, there is a significant risk that critical environmental and health matters will not be picked up without clearer guidance. There is also the critical and often overlooked issue of unaddressed cumulative impact (i.e. many smaller developments going 'under the radar', leading nonetheless to significant impact).

In summary, in our response to the consultation we suggested an additional principle—that indicators must be 'sufficiently comprehensive to ensure full coverage of environmental and health issues, regardless of regime, and linked upstream factors'. Without such a focus, there is a significant risk that the evidence relied upon will be partial and incomplete.

Principles — reporting and climate change

The consultation states that 'Each environmental assessment regime will be able to use the powers in the [Levelling-up and Regeneration] Bill to develop their own tailored approach to assessment.¹ It is clear that this could potentially drive improvement, but also flags multiple unknowns and risks and has the potential to increase bureaucracy without achieving the stated environmental benefits. The consultation also states that applicants will 'report on the performance of projects or plans against all relevant outcomes on a proportionate basis',¹ but it is not clear how 'relevance' and 'proportionality' be determined.

In relation to climate change, the consultation asks how the government can 'ensure that EORs support our efforts to adapt to the effects of climate change across all regimes'.¹ At the outset, it is important to underline that this phrasing suggests that the focus is solely on adaptation (adapting to the effects of climate change), rather than mitigation (seeking to reduce its effects). While adaptation is critical, it goes without saying that mitigation is vital. Another issue relates to data, as raised above. We agree with the statement that 'Matters like climate change are not a single issue but complex network of interconnecting consideration. Climate change covers many different considerations and is not always directly, or effectively, measurable in itself.'¹ That being so, it is hard to see how this can be reconciled with the issues of incomplete data without further methodological developments.

Similarly, we would agree with the statement 'Matters of importance at the national, and international, scale such as climate change are most effectively addressed through strong legislation and policy'.¹ However, the consultation document appears to suggest that climate change (and other similar matters of importance) *is* being addressed effectively through legislation and policy. Given significant evidence to the contrary, and the very significant risks, we suggest that there is a need for greater focus on impact assessment upstream.^{4, 5, 16}

To illustrate the point, the consultation uses the National Planning Policy Framework (NPPF) and the Building Regulations as examples of where national policy is addressing climate change. However, while we welcome the recent and significant improvements to Part L (Conservation of Fuel and Power) and Part F (Ventilation) of the Building Regulations,¹⁷ at the building level there are outstanding issues regarding air-tightness and ventilation,¹⁸ as well as performance gap, unregulated energy, and embodied carbon.¹⁹ The Building Regulations are also just one part of a much larger picture, and there is the outstanding issue of cumulative impacts from smaller developments. In theory, the NPPF sets out what is expected, but in practice it is far from clear. Central issues, from an environmental outcomes perspective, are:

- the interpretation of what is 'sustainable'; and
- the lack of quantifiable data on socio-environmental outcomes and pathways to impact.

The net result is that quantifiable economic outcomes dominate the less easily quantifiable social and environmental outcomes.

On waste, it is encouraging that there is a waste focus in the transition to net zero, and a drive to focus on upstream waste management over recycling downstream, which our research has demonstrated can produce significant benefits.¹⁵ However, there appear to be major structural barriers and perverse incentives encouraging waste,¹⁶ and hence the need for impact assessment upstream at root cause.

Scope

In relation to scope, the consultation acknowledges the need for better alignment between the strategic and the project scales and for navigable reports that avoid duplication, and it considers the assessment of 'reasonable alternatives'. However, it does not set out clearly how strategic and project assessment will be better aligned, and the analysis would benefit from a review of why 'assessment of cumulative effects has been challenging and ineffective, particularly at the project level'.¹ Overall, as with other sections of the consultation document, the approach to scope would benefit from clarification, but there are aspects of the analysis we agree with-for example, the length and complexity of reports is an issue, 'important details can be buried in technical appendices', and 'uncertainties in the science or data or in implementation are not clearly identified and not clearly expressed'.¹

We also agree with the statement that 'Many find the size of reports daunting, methodologies difficult to follow and conclusions on the 'likely significance' of an effect subjective, vague and non-committal'.¹ Interestingly, however, while the work by Singh *et al.*²⁰ is cited in support of this statement, that same paper also goes on to recommend that 'the EIA process could be improved by adopting more rigorous assessment methodologies and empowering regulators to enforce their use',²⁰ which appears at odds with the argument presented for needing a more simplified assessment through EOR.

Threshold (for requirement)

Regarding the proposal to require environmental assessment for 'all projects in, or partly within, sensitive areas such as protected sites',¹ it is surprising that this is not seen as an essential bare minimum. It should not be the only criterion, given that protected sites cover only a very small amount of our environment: they are the last remaining vestiges of a highly depleted natural world, especially in the UK, and are not the only environmental issue.²¹ It is also not clear how the following statement will be quality-assured: 'the greater the potential impact on the environment [...] the greater the probability that the plan or project will require an environmental assessment'.¹

The screening process is also not at all clear. A critical area to address is how effectively these issues are being addressed further upstream.^{5,7}

Mitigation

The mitigation section of the consultation document identifies a hierarchy of action: avoidance, mitigation, and compensation. This follows the same logic as the waste hierarchy-reduce, reuse, recycle-and we should expect the same results; i.e. recycling ends up receiving the most resources and attention (given systemic inertia tending towards business as usual), rather than reduction. In the same way, we should expect that compensation will end up being where most attention and resources go, rather than avoidance. First and foremost, therefore, the focus should be on addressing critical issues upstream, greatly reducing the need for mitigation (and compensation) downstream—but this is not emphasised, and how this is to be achieved needs focused attention.

At the moment, the discussion is limited. For example, the consultation document asks whether an adaptive approach is a good way of dealing with uncertainty—but by that point it is too late and only marginal mitigation is usually possible. The document suggests that such an approach is possible 'in response to greater certainty on effects following implementation',¹ but that would give licence to weaker action in advance, which has the potential for much greater inefficiencies.

Monitoring

The consultation document asks whether we would 'support a more formal and robust approach to monitoring', to which the answer is, of course, yes. However, resourcing this should not be at the expense of preventing poor environmental outcomes upfront. It is much better to prevent the harm in the first place than it is to monitor it after it has happened, and prevention would reduce ongoing costs of monitoring or issues such as post-decision costs and liabilities.

Data

On data, the consultation document focuses on the sharing of data, at the expense of complex questions about inherent gaps in data and the limits of quantifiable data.

We agree that there is a 'lack of relevant, accessible, robust and quality assured data', and that although 'a lot of environmental data' exists it is 'not necessarily of the type or standard required'.¹ We also agree that 'interactions and inter-dependencies'¹ are critical—and not just between habitats and species, but across all elements (for example the impact of unhealthy housing, food and drink on health and environment). We also appreciate that 'obtaining robust baseline data has been challenging'.¹ Given these issues with data, there is an urgent need for new methods to enable good decision-making under conditions of uncertainty.^{22, 23}

This links to the suggestions made above on the need for qualitative data and expert opinion. Although it comes with uncertainty, so too does quantifiable data. For example, there is significant and increasing evidence of the links between environmental degradation and human health,⁴ and we are aware of very significant future risks from the climate and biodiversity crises, but the full range of these impacts are still unknown and we cannot predict or quantify them easily, particularly in relation to piecemeal project development.

Given the issues with data, it is not always the case that it will 'deepen our understanding of the state of the environment'¹—it depends on what data is available and how the overall picture is balanced with a clear understanding of unknowns.

The consultation also asks what data should be prioritised for the creation of standards to support environmental assessment. However, every context is different, and so to prioritise certain environmental data sets would be to miss the bigger picture. We would suggest that the premise that 'the evidence needs of assessment can be large, so we will need to prioritise certain data sets'¹ should not be the case. If a proxy data set is essential, the decision on the simplification of data would need to be from a balanced view taken by *trusted* experts, as well as those affected by the proposals (including those with limited 'voice' and future generations).

Conclusion

There is much that is unclear in the consultation, and there are some fairly straightforward ways in which the provisions could be improved—not least by prioritising and defining health, by including and clarifying critical foundational principles, and by developing gaps in methodology identified above. This will take some work, but for the outcomes to be better—which is the stated purpose of EORs this work is evidently essential. To borrow and adapt from Eeyore: 'It's not much of an environment that we have left, but we are sort of attached to it.'

• Daniel Black is a Research Director with Daniel Black + Associates |db+a and is currently Programme Director of TRUUD in Population Health Sciences, Bristol Medical School, University of Bristol. Dr Edward Kirton-Darling is a Senior Lecturer at the University of Bristol Law School. The views expressed are personal.

Notes

- Environmental Outcomes Report: A New Approach to Environmental Assessment. Consultation. Department for Levelling Up, Housing and Communities, Mar. 2023. www.gov.uk/government/consultations/environmentaloutcomes-reports-a-new-approach-to-environmentalassessment#:~:text=The%20introduction%20of%20 outcomes%2Dbased,process%20on%20the%20 largest%20developments
- 2 P McManus: 'Infrastructure, health and urban planning: rethinking the past and exploring future possibilities as a response to Harris & De Leeuw (2022)'. Oxford Open Infrastructure & Health, 2023, Vol. 1, ouac001. https://doi.org/10.1093/ooih/ouac001
- 3 J Ige-Elegbede, P Pilkington, J Orme, et al.: 'Designing healthier neighbourhoods: a systematic review of the impact of the neighbourhood design on health and wellbeing'. Cities & Health, 2020, Vol. 6(5), 1004–19. www.tandfonline.com/doi/full/10.1080/23748834.2020. 1799173
- 4 A Haines and K Ebi: 'The imperative for climate action to protect health'. New England Journal of Medicine, 2019, Vol. 380, 263–73. www.nejm.org/doi/full/10.1056/ nejmra1807873
- 5 D Black, S Ayres, K Bondy, et al.: 'Tackling Root Causes Upstream of Unhealthy Urban Development (TRUUD): Protocol of a five-year prevention research consortium [version 2; peer review: 3 approved]'. Wellcome Open Research, 2022, 6:30.
 - https://doi.org/10.12688/wellcomeopenres.16382.2
- 6 H Barton and M Grant: 'A health map for the local human habitat'. *Journal of the Royal Society for the Promotion of Health*, 2006, Vol. 126 (6), 252–53
- 7 D Black, P Pilkington, B Williams, et al.: 'Overcoming systemic barriers preventing healthy urban development in the UK: Main findings from interviewing senior decision-makers during a 3-year planetary health pilot'. *Journal of Urban Health*, 2021, Vol. 98, 415–27. https://doi.org/10.1007/s11524-021-00537-y
- 8 Housing and Economic Needs Assessment. Guidance. Ministry of Housing, Communities and Local Government, Mar. 2015. www.gov.uk/guidance/housing-andeconomic-development-needs-assessments
- 9 A Haines: 'Health co-benefits of climate action'. *The Lancet Planetary Health*, 2017, Vol. 1 (1), E4–E5. www.thelancet.com/journals/lanplh/article/PIIS2542-5196(17)30003-7/fulltext
- 10 C Jacob, S Pioch and S Thorin: 'The effectiveness of the mitigation hierarchy in environmental impact studies on marine ecosystems: A case study in France'. *Environmental Impact Assessment Review*, 2016, Vol. 60, 83–98. https://doi.org/10.1016/j.eiar.2016.04.001

- 11 B Phalan, G Hayes, S Brooks, *et al.*: 'Avoiding impacts on biodiversity through strengthening the first stage of the mitigation hierarchy'. *Oryx*, 2018, Vol. 52(2), 316–24. https://doi.org/10.1017/S0030605316001034
- 12 G Bammer: Disciplining Interdisciplinarity: Integration and Implementation Sciences for Researching Complex Real-World Problems. ANU Press, 2013. https://press. anu.edu.au/publications/disciplining-interdisciplinarity
- 13 D Black, G Bates, S Ayres, et al.: 'Operationalising a large research programme to tackle complex urban and planetary health problems: a case study approach to critical reflection'. Sustainability Science, 2023, Vol. 18, 2373–89. https://link.springer.com/ article/10.1007/s11625-023-01344-x
- 14 J Ige, P Pilkington, J Orme, et al.: 'The relationship between buildings and health: A systematic review'. Journal of Public Health, 2018, Vol. 41 (2), E121–E132. Available from http://eprints.uwe.ac.uk/37521
- 15 E Eaton, A Hunt, A Di Leo, et al.: 'What are the environmental benefits and costs of reducing food waste? Bristol as a case study in the WASTE FEW urban living lab project'. Sustainability, 2022, Vol. 14(9), 5573. https://doi.org/10.3390/su14095573
- 16 D Black, T Wei, E Eaton, et al.: 'Testing food waste reduction targets: Integrating transition scenarios with macro-valuation in an urban living lab'. Sustainability, 2023, Vol. 15 (7), 6004. https://doi.org/10.3390/su15076004
- 17 The Future Homes Standard: 2019 Consultation on Changes to Part L (Conservation of Fuel and Power) and Part F (Ventilation) of the Building Regulations for New Dwellings. Summary of Responses Received and Government Response. Ministry of Housing, Communities and Local Government, Jan. 2021. www.gov.uk/government/consultations/the-futurehomes-standard-changes-to-part-I-and-part-f-of-thebuilding-regulations-for-new-dwellings
- 18 'Future Homes Future Buildings: call for evidence'. Webpage. Passivhaus Trust. Mar. 2021. www.passivhaustrust.org.uk/news/detail/?nld=954
- 19 'UKGBC reacts to consultation on Future Homes Standard and Building Regulations'. News Release. UK Green Building Council (UKGBC), 2 Oct. 2019. https://ukgbc.org/news/ukgbc-reacts-to-consultationon-future-homes-standard-and-building-regulations/
- 20 GG Singh, J Lerner, M Mach, et al.: 'Scientific shortcomings in environmental impact statements internationally'. People & Nature, 2020, Vol. 2 (2), 369–79. www.researchgate.net/publication/340097916_ Scientific_shortcomings_in_environmental_impact_ statements_internationally
- 21 'New report shows the UK is the least effective G7 member at protecting nature'. Press Release. RSPB, May 2021
- 22 G Heal and A Millner: 'Uncertainty and decision making in climate change economics'. *Review of Environmental Economics & Policy*, 2014, Vol. 8(1), 120–37. www0.gsb.columbia.edu/faculty/gheal/ EnvironmentalEconomicsPapers/REEP%20 uncertainty%20published.pdf
- 23 K Klima: 'Decision making under deep uncertainty: Climate change and infrastructure management'. In W Tad Pfeffer, J B Smith and KL Ebi (Eds): *The Oxford Handbook of Planning for Climate Change Hazards.* Oxford University Press, 2018