

Written submission of the Institution of Environmental Sciences (IES), August 2020

Summary:

The IES supports taking a forward-looking systems approach to creating a sustainable, fair, and resilient post-COVID society. For such an approach to be successful, the IES believes that:

- Transformative change is necessary to achieve absolute decoupling of the UK economy from unsustainable systems of growth, consumption, and production, with policies simultaneously achieving environmental, social, and economic goals. This requires coherently planned strategies, actions, and governance which ensure 'just transitions' away from economic structures which are deeply interlinked with resource over-use and pollution;
- Interventions should address the interconnected relationships between key issues including biodiversity, climate, waste, and land, avoiding the risk that investment during the recovery process could lock the UK into unsustainable pathways or exacerbate inequalities. This necessitates making bailouts conditional on embedding sustainability, strategic interventions to transition towards net zero, restoring and enhancing biodiversity, and adopting other long-term holistic approaches;
- The UK should take a leading role in promoting a sustainable recovery from COVID-19 globally, using the internationally-agreed framework of the SDGs to underpin coherent policies to create sustainable, fair, and resilient communities worldwide, and to promote rapid progress towards meeting international targets on environmental problems which require cross-border solutions.

Background

The Institution of Environmental Sciences (IES) is a membership organisation that represents professionals from fields as diverse as air quality, climate, land contamination, water, waste, ecology, and education. The organisation leads debate, dissemination and promotion of environmental science and sustainability, and promotes an evidence-based approach to decision and policy making. The Institution stands up for science, scientists, and the natural world.

The IES is submitting evidence as it represents members with expertise across the environmental sciences. Each of these disciplines has crucial insights for how we can create an environmentally sustainable recovery from COVID-19. Additionally, the organisation's interdisciplinary background gives it a firm appreciation of the interconnected nature of environmental problems and the need to promote systems-based approaches to address them. These competencies are particularly pertinent to greening the COVID-19 recovery and ensuring that we create lasting systems which are sustainable, fair, and resilient.

1. Aligning with sustainability ambitions and improving on the response to the 2008 crisis (Questions 1 and 2)

- 1.1. In order to align fiscal and economic stimuli with the UK's commitment to achieving the Sustainable Development Goals (SDGs), it will be necessary to approach the recovery from COVID-19 with a clear and ambitious vision for long-term sustainability. As the SDGs are integrated and indivisible, stimuli will need to

- be part of a plan for transformative change which goes beyond incrementally adapting within systems of production and consumption which cannot be sustained.¹
- 1.2. The recovery should promote the transition of core production and consumption systems (such as energy, food, mobility, and the built environment) towards sustainability, tackling ‘wicked issues’ which cannot be solved without a holistic approach and avoiding regression or missed opportunities to embed sustainable structures in society.² On a national and global level, we cannot set our ambition for the recovery as returning to past systems which have proven to be unsustainable and which the UN’s Global Environment Outlook (GEO) suggests will increase our vulnerability to significant risks, including those linked to climate change, pollution, invasive species, habitat loss, and disease.³ This will necessitate transformative change which may have a high degree of shorter-term associated financial cost.^{4,5,6} However, combining the recovery from COVID-19 with adaptations to net zero and movement towards a more sustainable economy will prevent the need for two (or more) transitions, and will increase the UK resilience, saving money in the longer term.
 - 1.3. During the recovery periods following crises, there is significant scope for investment in the types of transformative change required to tackle environmental crises at the same time.⁷ However, this transformative change was not achieved in the response to the global financial crash and is still urgently needed.⁸ Following the global financial crash in 2008, the economic recovery in the UK failed to significantly embed decarbonisation or move away from unsustainable processes of production and consumption.⁹ There was no ambitious and coherent vision setting out the need for transformation, and no explicit objective to pursue environmental outcomes as well as economic ones. Subsequent attempts to decouple economic growth from carbon emissions on a national and international level have failed to make substantial progress towards removing environmental pressures or preventing deterioration.¹⁰
 - 1.4. To adapt the response to the current crisis in order to better achieve sustainable outcomes, further attempts should be made to pursue ‘greener’ forms of growth

¹ UN Environment Programme. (2019). *Global Environment Outlook 6 Summary for Policymakers*. Available at: <https://www.unenvironment.org/resources/assessment/global-environment-outlook-6-summary-policy-makers>

² Juniper, T., Howard Boyd, E., Worsley, W. (2020). *Now is the time to really put the ‘green’ into the green recovery*. Available at: <https://greenallianceblog.org.uk/2020/06/26/now-is-the-time-to-really-put-the-green-into-the-green-recovery>

³ UNEP. (Reference 1).

⁴ European Environment Agency. (2019). *The European environment — state and outlook 2020: knowledge for transition to a sustainable Europe*. Available at: <https://www.eea.europa.eu/publications/soer-2020>

⁵ Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES). (2019). *Initial scoping report for Deliverable 1 (c): A thematic assessment of the underlying causes of biodiversity loss and the determinants of transformative change and options for achieving the 2050 Vision for Biodiversity*. Available at: https://ipbes.net/sites/default/files/Initial_scoping_transformative_change_assessment_EN.pdf

⁶ Environment Agency. (2020). *EA2025: Creating a better place*. Available at:

<https://www.gov.uk/government/publications/environment-agency-ea2025-creating-a-better-place>

⁷ Tienhaara, K. (2010), *A tale of two crises: what the global financial crisis means for the global environmental crisis*. *Env. Pol. Gov.* 20: 197-208. DOI: [10.1002/eet.537](https://doi.org/10.1002/eet.537)

⁸ Bina, O., La Camera, F. (2011) *Promise and shortcomings of a green turn in recent policy responses to the ‘double crisis’*. *Ecol. Econ.* 70 (12): 2308-2316. DOI: [10.1016/j.ecolecon.2011.06.021](https://doi.org/10.1016/j.ecolecon.2011.06.021)

⁹ UNEP. (Reference 1).

¹⁰ EEA. (Reference 4).

which address consumption, resource use, and carbon from a more sustainable perspective.¹¹ This can be achieved either by ‘decoupling’ growth from unsustainable processes, or by creating space to transition to an economic system which is not as reliant on quantitative growth.¹²

- 1.5. Fiscal and economic stimuli will have long-term effects on which economic processes and practices form the basis of the UK’s economy, and the decisions made during the recovery will limit future pathways for action.¹³ Similarly where budgets are mobilised, they should be pooled to achieve interconnected goals, rather than reinforcing fragmentation which limits the ability to address ‘wicked issues’.¹⁴ For these reasons, the recovery should not look solely at the creation of jobs or how to achieve already-agreed targets, it should also seek to instil a culture of sustainability in our strategies, actions, and governance.¹⁵
- 1.6. It should also be noted that any interventions or investments will be incomplete unless regulation and enforcement is in place to ensure that desirable outcomes are achieved. It will be necessary to ensure that regulation and enforcement is strong and effective, including through the soon-to-be-established Office for Environmental Protection. The Environmental Audit Committee has previously noted that this will need to have sufficient resources and capacity to effectively regulate and prevent regression on environmental regulations.¹⁶

2. Targeting interventions, tax, and bailouts to deliver mutual economic and environmental benefits (Questions 3, 4, and 5)

- 2.1. We believe the UK must adopt a forward-looking systems-led approach to creating a sustainable recovery, so would strongly recommend that the question of addressing the economic system is dealt with from a long-term and holistic perspective, rather than on the basis of short-term atomistic fiscal or economic policies. In order for the UK to align itself with Paris Agreement targets, IPCC pathways for controlling global temperature increases, and Sustainable Development Goals, there must be significant efforts to embed decarbonisation of the economy, which must go beyond incremental changes.¹⁷ Research published in the Proceedings of the National Academy of Sciences of the USA has shown that a ‘business as usual’ approach will fail to meet the needs of long-term sustainability, so it is vitally important that practices change, especially in high-carbon industries.¹⁸

¹¹ UNEP. (Reference 1).

¹² Donnan, A. (2012). *Making the growth equation work*. Environmental SCIENTIST. 21.4: 4-5. Available at: <https://www.the-ies.org/resources/green-growth-blueprint-future>

¹³ Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES). (2019). *Initial scoping report for deliverable 1(a): Assessing the interlinkages among biodiversity, water, food and health (thematic assessment)*. Available at: https://ipbes.net/sites/default/files/Initial_scoping_nexus_assessment_EN.pdf

¹⁴ Bovaird, T. and Loeffler, E. (2016). *Public Management and Governance*. 3rd edition. Abingdon: Routledge.

¹⁵ EEA. (Reference 4).

¹⁶ House of Commons Environmental Audit Committee. (2018). *The Government’s 25 Year Plan for the Environment*. Available at: <https://publications.parliament.uk/pa/cm201719/cmselect/cmenvaud/803/803.pdf>

¹⁷ EEA. (Reference 4).

¹⁸ Bamber, J.L., Oppenheimer, M., Kopp, R.E., Aspinall, W.P., Cooke, R.M. (2019). *Ice sheet contributions to future sea-level rise from structured expert judgment*. Proceedings of the National Academy of Sciences. 116 (23): 11195-11200. DOI: [10.1073/pnas.1817205116](https://doi.org/10.1073/pnas.1817205116)

- 2.2. Both the UN's GEO and the EU's State of the Environment Report note that environmental benefits are linked to healthy, sustainable, and resilient economies, and there are many synergies between economic and environmental benefits.^{19,20} The GEO also suggests that countries which prioritise low-carbon, resource-efficient practices may gain a competitive advantage in the global economy.²¹ This could include conditions relating to reporting or sustainability disclosures, to support fair and effective regulation, or legally-binding sectoral carbon budgets for high-carbon sectors like transport and tax disincentives to coal, oil, and gas exploration projects.²²
- 2.3. It is encouraging that the Government has recognised the importance of energy efficiency as a means of improving long-term sustainability, though efficiency improvements alone will not be sufficient to meet international targets on pollution control or climate change mitigation.²³ In order to unlock the full benefits of energy efficiency improvements for the environment and the economy significantly more investment will be required, so bringing forward more funding could provide a much greater long-term economic return.²⁴
- 2.4. The autumn budget should also provide opportunities to look into the possibility of sustainable sources of finance to better align financial flows with environmental priorities.²⁵ At a time when the Government is likely to be considering different sources of capital to fund the COVID-19 recovery, adopting a more sustainable financial model while promoting sustainable investments by businesses could lead to greater recognition of compound risk vulnerabilities associated with the environment and the manner in which they are embedded in the UK economy.^{26,27}

3. Green jobs (Question 6)

- 3.1. The IES believes that the priority for the recovery should be the creation of a sustainable, fair, and resilient system which caters to the interconnected needs of people and the planet, rather than focusing on controlling unemployment figures at the expense of a systemic approach to social and environmental needs.²⁸ The recovery and economic interventions present an opportunity to simultaneously achieve the goals of reinvigorating the economy, tackling high unemployment, and also achieving a 'just transition' towards a more sustainable economic structure. A 'just transition' recognising and explicitly seeking to tackle inequalities could also help to achieve buy-in from communities at the heart of the transition, whilst simultaneously achieving economic and environmental goals.²⁹

¹⁹ UNEP. (Reference 1).

²⁰ EEA. (Reference 4).

²¹ UNEP. (Reference 1).

²² CPRE, the countryside charity. (2020). *Greener, Better, Faster: Countryside solutions to the climate emergency and for a green recovery*. Available at: <https://www.cpre.org.uk/wp-content/uploads/2020/07/Greener-Better-Faster-July-2020.pdf>

²³ UNEP. (Reference 1).

²⁴ Murray, J. (2020). *Councils and mayors call on government to beef up energy efficiency funding*. Available at: <https://www.businessgreen.com/news/4017682/councils-mayors-government-beef-energy-efficiency-funding>

²⁵ EEA. (Reference 4).

²⁶ World Wide Fund for Nature. (2020). *Why sustainable finance is important*. Available at: <https://www.wwf.org.uk/what-we-do/projects/why-sustainable-finance-important>

²⁷ Rust, S. (2019). *Green finance: Financing environmental benefits*. Available at: <https://www.ipe.com/green-finance-financing-environmental-benefits/10029271.article>

²⁸ IPBES. (Reference 13).

- 3.2. A 'just transition' would mean a transformation of the concentration of employment from carbon-intensive economic activity towards employment in low-emission and environmentally-sustainable sectors in a manner which is fair and appropriately participatory. This transition would require an investment not only in 'green' jobs, but also in skills and training, which should be underpinned by a re-orientation towards sustainability in our investments in research and innovation.
- 3.3. The Government's Green Jobs Challenge Fund is a welcome intervention to support conservation in the short-term, though more needs to be done to deliver long-term benefits for conservation and averting biodiversity loss.³⁰ Investment should directly address major pressures on biodiversity, which include unsustainable agricultural practices, spreading invasive species, pollution, and overexploitation of natural resources.³¹ Investment in jobs in sustainable land management, green infrastructure projects, such as restoring woodlands and peatlands, or safeguarding habitats, may provide an opportunity for economic recovery. The environmental co-benefits of this investment include: addressing the climate emergency through better carbon storage, restoring natural processes through rewilding, and building greater resilience against system vulnerabilities into the food system.^{32,33,34} Not only could sustainable land management help to deliver mutual environmental and economic benefits in the short-term recovery period, a long-term investment could help prevent future crises from changing climates, biodiversity loss, and flood risk.³⁵
- 3.4. Interventions must recognise that many jobs are currently tied in complex ways to pollution and resource use throughout the value chain; from resource extraction through production and consumption to end-of-life. Creating jobs in industries which have these complex interlinkages at their foundations could risk further embedding the drivers of environmental and climate pressures into the UK economy for a significant period of time, with social and economic consequences.³⁶ It also embeds the risk of creating 'stranded industries' that lose their international markets after regulation changes in other countries. A long-term holistic approach must be taken to ensure that new jobs are not further entrenching unsustainable patterns of pollution or resource use, either in the UK or globally, throughout their value chain.³⁷ The IES recommends basing the approach here on the precautionary principle to avoid the risk of worsening system vulnerabilities.

4. Continuing trends on air pollution and greenhouse gas emissions (Question 7)

- 4.1. There has been a notable effect on transport demand during the lockdown period, which has had beneficial short-term effects for some air pollutants as well as for greenhouse gas emissions. In order to sustain this, the UK's Committee on

²⁹ Institute for Public Policy Research. (2019). *A just transition: Realising the opportunities of decarbonisation in the north of England*. Available at: <https://www.ippr.org/research/publications/a-just-transition>

³⁰ Department for Environment, Food & Rural Affairs. (2020). *Government announces £40 million green jobs challenge fund*. Available at: <https://www.gov.uk/government/news/government-announces-40-million-green-jobs-challenge-fund>

³¹ UNEP. (Reference 1).

³² Juniper, T., Howard Boyd, E., Worsley, W. (Reference 2).

³³ CPRE. (Reference 22).

³⁴ IPBES. (Reference 5).

³⁵ UNEP. (Reference 1).

³⁶ IPBES. (Reference 13).

³⁷ EEA. (Reference 4).

Climate Change has recommended improving decarbonisation of public transport while also ensuring that changing demand for transport is sustained.³⁸ This should include efforts to ensure that public transport, cycling, and walking are viable alternatives to vehicle use, as well as direct interventions to ensure that traffic levels do not rise substantially during or after the recovery period.

- 4.2. Whilst acknowledging the significant benefits which can be achieved by continuing the trends which have begun during lockdown, there is still more action required to achieve long-term benefits for air pollution and greenhouse gas emissions. This must include a long-term and holistic approach to the management of land and the protection of crucial ecosystems. For example, peatland decomposition contributes to 5 per cent of annual global carbon emissions, and peatlands also contribute more to carbon storage than all global forests combined.³⁹ In order to meet international targets for managing carbon and its effects on global climate, it will be necessary to also address the other ways which human actions influence atmospheric carbon and greenhouse gas emissions.⁴⁰
- 4.3. Simultaneously, Government action on air quality should not exclusively address greenhouse gases and pollution, at the expense of recognising the full range of pollutants affecting outdoor and indoor air quality, as well as their effects on health, wellbeing, and the wider environment and ecosystems.^{41,42,43} In practical terms, this means opportunities should be taken throughout the recovery to cut down all harmful air pollutants, rather than taking a limited approach to solely tackling greenhouse gas emissions caused by transport.

5. International influence (Question 8)

- 5.1. It is important to recognise that our goals for sustainability cannot be achieved in isolation and will require widespread action around the world. The UK should take a leading role in promoting sustainability and economic action which supports environmental goals. Given the need for widespread adoption and collaboration, the SDGs will play a particularly important role.⁴⁴ As they are an internationally-accepted framework for creating sustainable, fair, and resilient communities, the goals and their associated targets will need to underpin how the UK promotes environmental, social, and economic outcomes around the world.
- 5.2. The universal nature of the SDGs also provide a framework around which coherent policies can be structured to achieve the mutual and indivisible goals of a

³⁸ Committee on Climate Change. (2020). *Reducing UK emissions: 2020 Progress Report to Parliament*. Available at: <https://www.theccc.org.uk/publication/reducing-uk-emissions-2020-progress-report-to-parliament/>

³⁹ UNEP. (Reference 1).

⁴⁰ Natural Capital Committee. (2020). *Interim response to the 25 Year Environment Plan Progress Report & advice on a green economic recovery*. Available at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/903214/ncc-interim-response-25yr-env-plan.pdf

⁴¹ Institute of Air Quality Management. (2020). *A guide to the assessment of air quality impacts on designated nature conservation sites*. Available at: <https://iaqm.co.uk/text/guidance/air-quality-impacts-on-nature-sites-2020.pdf>

⁴² World Health Organization. (2018). *Household air pollution and health*. Available at: <https://www.who.int/news-room/fact-sheets/detail/household-air-pollution-and-health>

⁴³ British Lung Foundation. (2018). *Indoor air pollution*. Available at: [https://www.blf.org.uk/sites/default/files/Indoor air pollution downloadable PDF.pdf](https://www.blf.org.uk/sites/default/files/Indoor%20air%20pollution%20downloadable%20PDF.pdf)

⁴⁴ UKSSD. (2020). *Leaders call on Prime Minister to create socially just and green recovery from Covid19*. Available at: <https://www.ukssd.co.uk/build-back-better>

sustainable planet and a fair and resilient society. It will be vital that the UK uses the SDGs as the basis of its recovery strategy, embedding progress towards fulfilling the SDGs in all instruments of the recovery.⁴⁵ As the world is not currently on track to meet the 2030 Agenda for Sustainable Development, the recovery will be an important opportunity to make progress towards that vision, avoiding worsening the risks which are already demonstrably emerging.⁴⁶

- 5.3. There may also be potential to shape the state of global economic rescue packages through leadership on international agreements. These are particularly important on issues such as biodiversity, climate, and resource use which require international buy-in to address, and which manifest across borders in a manner which demands linked-up solutions.⁴⁷ The UK should use its position of leadership to continue to promote greater achievement of international objectives such as the Aichi Biodiversity Targets within the United Nations Convention on Biological Diversity's Strategic Plan for Biodiversity 2011–2020.⁴⁸ The increasing recognition of the links between climate change and biodiversity are promising, though we must use the opportunity of the recovery to build on this starting point to create a better understanding of other system vulnerabilities, including chemical waste, resource use, and land-use change, all of which should be addressed more holistically at an international level.⁴⁹

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⁴⁵ UN Department of Economic and Social Affairs. (2020). *Recover Better*. Available at: <https://www.un.org/development/desa/en/about/high-level-advisory-board.html>

⁴⁶ UNEP. (Reference 1).

⁴⁷ EEA. (Reference 4).

⁴⁸ UN Environment Programme, Convention on Biological Diversity. (2011). *Living in harmony with nature: Strategic Plan for Biodiversity 2011–2020*. Available at: <https://www.cbd.int/undb/media/factsheets/undb-factsheet-sp-en.pdf>

⁴⁹ IPBES. (Reference 13).