What Does a 'Sustainable Recovery' Look Like?

The View of the Environmental Profession

A Collection of Perspectives from the Environmental Policy Forum (EPF)

Autumn 2020

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The Views of EPF Member Bodies

Foreword

The first eight months of 2020 were hugely challenging. We all continue to face uncertainties in the remainder of 2020 and into 2021.

However, these uncertainties also bring opportunities along with their challenges, and we believe that we must grasp those opportunities now, or forever regret that we did not.

This is because, notwithstanding the understandable current focus on the Covid-19 global pandemic, the wider environmental issues, and the climate and environmental emergencies which we face have not "gone away" - but there are now new opportunities too, and a new sense of urgency and public appreciation of issues perhaps as never before. It is therefore now imperative that we immediately start to 'Build Back Better' and sustainably, for the greater good of the environment, the economy, and the lives and social fabric of current and future communities and generations.

We suggest a simple "***ABC***" by which to judge and model our future planning and activities, and more especially - their ***OUTCOMES***:

- ***A***bandon (what we can & which should be abandoned; do not continue as "old normal")
- ***A***dapt and ***A***dopt (what is useful & there already; resist the temptation to re-invent wheels)
- ***A***ccelerate our ***A***ctions (and embed a "new normal")

- ***B***uild ***B***ack ***B***etter

- **C**reate **C**ollaborative, **C**o-ordinated, **C**ooperative, **C**onnected, **C**ollegiate **C**ommunities, with
- **C**onfidence.

As economies starts to rebuild (which may of course be a long-term issue) and pressures increase for things to return to somewhere near to 'old normal', it is clear that the decisions we make now will have major implications. We need to create a 'new normal'. Now is the moment to ensure we grow an economy with sustainability at its core. By increasing investment in green technology, green infrastructure, and green jobs, we can stimulate the economy while benefiting the environment and addressing socio-economic inequalities.

The question we need to address is - "so, how do we do this?"

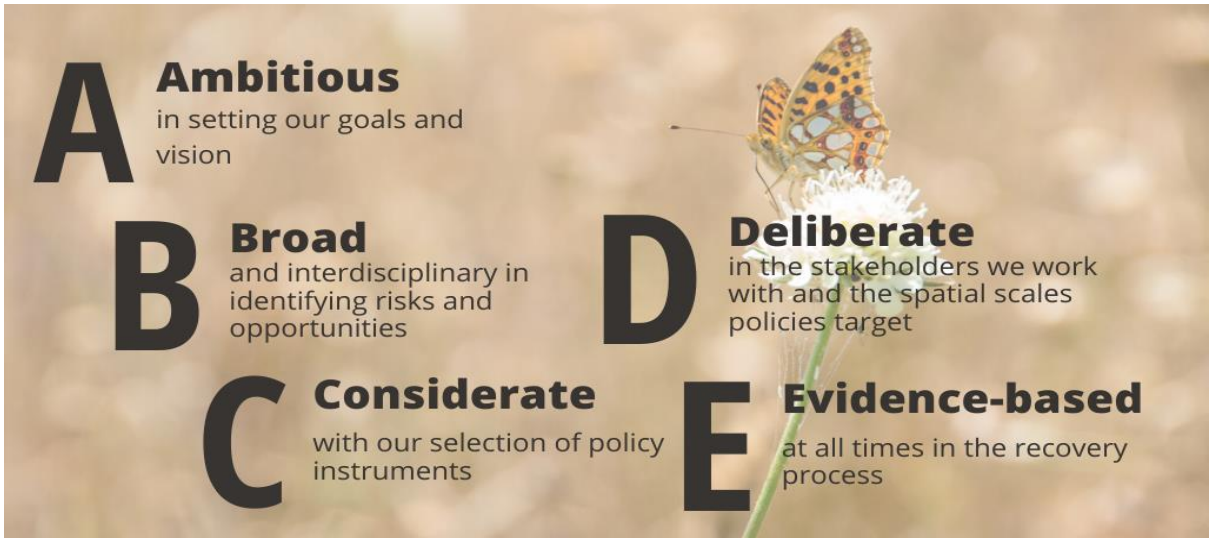
To this end, one of our EPF members, the Institution of Environmental Sciences (IES), has similarly set out 5 principles for a science-led green recovery, aiming to ensure

that the local, national and global recovery creates a future which is sustainable, fair, and resilient, with the sector being proactive in taking a leading role in scrutinising the policy instruments of that recovery. The following is an extract from the IES' position statement, which can be found in more detail at: https://www.the-ies.org/analysis/could-green-recovery-be-simple

*Ensuring that the UK's recovery is sustainable and that it coherently addresses economic, social, and environmental needs could be as simple as **ABCDE**.*

We need to be:

A. ***Ambitious** in setting our goals and vision*
B. ***Broad** and interdisciplinary in identifying risks and opportunities*
C. ***Considerate** with our selection of policy instruments*
D. ***Deliberate** in the stakeholders we work with and the spatial scales policies target*
E. ***Evidence-based** at all times in the recovery process*



*As we advocate for the environment, we need to remember that political realities diminish the potential for action over time. Right now, there is a will for long-term sustainability, which may not come again for some time. If we are not **ambitious** in our green vision now, we might miss an opportunity to make a real difference.*

*The IES has always championed the ways in which different disciplines and areas of expertise can supplement and support one another. Now, when the world is at its most vulnerable, we need to ensure we share our learning and listen to one another to avoid creating existential risks. Being **broad** and interdisciplinary in our approach will also help us to identify where the recovery can help us make considerable environmental progress.*

*In times of crisis, it is only human to look for solutions as quickly as possible. And while we do need to be swift and agile as we plan for recovery, speed cannot become an excuse to make rash decisions without fully understanding the potential consequences. We should be **considerate** as we make plans for recovery, looking at the big picture instead of finding solitary policy instruments and seeking to replicate them across inappropriate scales.*

This should also remind us that the pandemic has had differentiated and contextually-varied impacts. The recovery from COVID will need to account for this, and this will be especially true when it comes to addressing the complex systems that make up the

*natural world. We should therefore be **deliberate** and targeted as we select the scales where we want to intervene, and the stakeholders who will deliver interventions. With regard to the latter, we will need to recognise that the crisis has affected the delivery capacity of many organisations across the public, private, and voluntary domains.*

*By this point, it should be a given that **evidence** should underpin the response to COVID. The pandemic has shown us how important it is to inform decisions with science, and we have seen stories across the world which remind us the difference that scientific evidence makes to policy outcomes.*[1]

I thank all those who have contributed to this document, and I commend to you the approaches advocated by these environmental professionals and their professional bodies.

Professor William Pope HonFSE CEnv CSci FIEnvSci
Chair, EPF
Chair, Society for the Environment
Vice President, Institution of Environmental Sciences

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[1]extract and graphic reproduced by kind permission of Joseph Lewis at the Institution of Environmental Sciences, https://www.the-ies.org

SocEnv
Society for the Environment

Introduction

As the environmental professional community, we know how important it is that we show great respect to and for our communities which have been adversely impacted by the exceptional global health situation created by the Covid-19 pandemic. However, we must also recognise that other pressing challenges remain.

Coming together collectively as the Environmental Policy Forum (EPF), we represent environmental professionals across a wide range of sectors, such as ecology, forestry, environmental management, environmental sciences, materials, resources and waste, landscaping and land management.

As Secretariat of the EPF, we asked the forum's member bodies one question: 'What does a 'Sustainable Recovery' look like in your sector?' It is hoped that the priorities and specific examples outlined in this document demonstrate how such a goal can be achieved, and why a sustainable recovery is both necessary and desirable.

Could I take this opportunity to thank our colleagues for all their valuable contributions to this document. It is much appreciated.

Dr Emma Wilcox FIMMM CMgr FCMI
Chief Executive, Society for the Environment

About SocEnv:

The Society for the Environment (SocEnv) is comprised of 24 Licenced Bodies, with over 500,000 members between them. It received a Royal Charter in 2004, which empowers it to regulate the Chartered Environmentalist (CEnv) and Registered Environmental Technician (REnvTech) professional registrations globally. There are now over 7,400 environmental professionals currently registered who share a common vision of delivering sustainability through environmental professionalism.

www.socenv.org.uk

View of the Chartered Institute of Ecology and Environmental Management

At a glance:

- Environmental, social and economic wellbeing are inextricably linked. We cannot focus on economic recovery without taking the critically important opportunity to do so in ways that help tackle environmental crises rather than exacerbate them
- Nature-based solutions offer medium and long-term solutions to combatting the impacts of climate change whilst helping to address biodiversity loss. They are often lower-cost solutions than hard engineering approaches and yet more effective
- Building greener, new agri-environment schemes and natural approaches to coastal protection can offer huge opportunities to help deliver a green recovery. Legislative, policy and funding frameworks are urgently needed to implement such initiatives.

Whether we talk about sustainable recovery or green recovery we mean the same thing: rebuilding and recovering from the impacts of Covid-19 in ways that not only support the economy but also address the twin environmental crises of the climate emergency and near-catastrophic biodiversity loss. Why? Because environmental, social and economic wellbeing are inextricably linked. We cannot focus on economic recovery, as we did after the 2008 financial crisis, without taking the opportunity, the critically important opportunity, to do so in ways that help tackle these environmental crises rather than exacerbate them.

We do have some aces up our sleeve. Focusing on sustainable approaches to resolving our current economic predicament makes good sense however you look at it. Financially, nature-based solutions (NbS) offer medium and long-term solutions to combatting the impacts of climate change whilst helping to address biodiversity loss. They are often lower-cost solutions than hard engineering approaches and yet more effective. Thriving nature and open spaces provide wide-ranging human health and wellbeing benefits that can help avoid the need for costly medical intervention and improve the nation's overall health. Creating new green jobs and greener ways of working will help tackle the increase in unemployment and future employment uncertainties. We can achieve a green recovery if we fully commit, beyond the rhetoric, to do so.

For many CIEEM members, the focus is on how we can use our expertise to provide those NbS as viable, better alternatives to more traditional (at least in the developed world) approaches to addressing society's needs.

The International Union for the Conservation of Nature (IUCN) defines NbS as "*actions to protect, sustainably manage and restore natural or modified ecosystems, which address societal challenges [such as food security, climate change, water security, human health, disaster risk, social and economic development] effectively and adaptively, while simultaneously providing human well-being biodiversity benefits*"[1].

Examples of NbS include restoring habitats such as peatlands, woodlands and kelp beds to absorb carbon dioxide. Creating and restoring wetlands also works to protect against flooding; and creating green and blue spaces in urban areas can also combat urban heating and enhance human health[2]. Soils also play a significant role in carbon sequestration and storage and are significantly impacted by habitat management approaches. For example, studies have shown that conversion from farmland to grassland and species-poor to species-rich grassland can significantly increase the soil carbon sequestration rate[3].

Building greener, new agri-environment schemes and natural approaches to coastal protection can offer huge opportunities to help deliver a green recovery. Our members will be at the forefront of initiatives to demonstrate their value, getting buy-in from stakeholders and delivering them to a high standard. What we need are the legislative, policy and funding frameworks to make them the essential tool in the toolbox for building a more sustainable future.

About CIEEM:

The Chartered Institute of Ecology and Environmental Management (CIEEM) is the leading professional membership body representing and supporting 5,000 ecologists and environmental managers in the UK, Ireland and abroad. Our Vision is of a society which values the natural environment and recognises the contribution of professional ecologists and environmental managers to its conservation.

www.cieem.net

[1] World Conservation Congress (Year) WCC-2016-Res-069-EN: Defining Nature-based Solutions (1-10 September 2016) [ONLINE]. Available from: https://portals.iucn.org/library/sites/library/files/resrecfiles/WCC_2016_RES_069_EN.pdf

[2] CIEEM (2020) Using Nature-Based Solutions to Tackle the Climate Emergency and Biodiversity Crisis. Available at: https://cieem.net/resource/using-nature-based-solutions-to-tackle-the-climate-emergency-and-biodiversity-crisis/

[3] Yang Y., Tilman D., Furey G. and Lehman C. (2019) Soil carbon sequestration accelerated by restoration of grassland biodiversity, Nature Communications, 10, 718.

View of the Chartered Institution of Wastes Management

At a glance:

- Maintain the momentum on policy proposals to deliver a step change in the design, use and end-of-life management of products to drive waste prevention and recycling, and ensure the successful delivery of these policies is resourced
- Embed resource efficiency and productivity as a cross-cutting, strategic priority for low-carbon, clean economic growth
- Fully exploit the opportunities for more circular economic models and infrastructure to ensure secondary raw materials play a role in improving the UK's economic resilience and contribute to green skills and jobs
- Take steps to engender a stronger sense of personal responsibility for waste and create a strong framework to support consumer engagement with waste prevention
- Strengthen the regulatory regime to deter waste crime and reduce its economic, environmental and societal impacts.

While the world is still battling the COVID-19 pandemic and will be for some time to come, the first six months of 2020 did serve to highlight how important the environment is to our wellbeing: being outdoors for that one hour a day, reconnecting with food, enjoying cleaner air - many people were touched positively in some way by the things that nature and our local environment can offer us.

Building back better means having a greater respect for the environment and for the resources it provides. For the resources and waste management sector, it shone a spotlight on the sector's role both as a frontline service that keeps our local environment clean and healthy and as a critical part of the UK's major infrastructure, keeping materials in the economic loop and managing those wastes that have to be safely disposed of. It is a sector that touches everyone and, sitting at the heart of our consumption-focused society, it has a huge contribution to make to supporting a sustainable recovery. In assessing the road ahead, the priorities ahead are bigger than the three 'R's we are all familiar with (reduce, re-use, recycle) - it is about another set of 'R's that will help us to fundamentally rethink our relationship with resources and how we value and manage them.

Reform

To deliver a sustainable recovery, Government leadership on the environment will be critical but producers, retailers, councils and consumers all have an important part to play.

Against the backdrop of the UK's exit from the EU, the focus must be on moving forward with the three major bills - the Agriculture, Fisheries and Environment Bills - that will shape how we manage and protect our terrestrial and aquatic environment for years to come.

For the resources and waste sector, sitting within the Environment Bill are a raft of important provisions, from new overarching waste targets through to measures to deliver a fundamental shift in the design, use, and end-of-life management of products.

Of these, the UK-wide roll out of Extended Producer Responsibility (EPR) is possibly the most important policy framework currently under consideration to reduce the tide of packaging, textiles, electronics/electrical and other wastes by incentivizing resource efficient design at the beginning of a product's life and driving up re-use and recycling at the other. It is an ambitious and complex set of reforms; for packaging alone EPR means significant additional costs for producers, investment in the UK's collection and sorting infrastructure, improved data collection, and the right resources to monitor and enforce the new system. It will require long-term commitment to drive forward and the relevant UK government departments and regulators will need to be resourced and supported to deliver - a factor that must be reflected in the upcoming Comprehensive Spending Review.

Resilience

COVID-19 has also shone a light on the strengths and vulnerabilities within our existing resources and waste management system and these lessons must be incorporated into a sustainable recovery.

The UK's reliance on export markets for many waste streams - notably plastics, WEEE and textiles - led to disruption and increased illegal activity during the first few months of the pandemic and leaves the UK vulnerable to other potential major global shocks in the future, from oil price volatility to extreme weather events related to climate change.

The sector has long debated the need for increased investment in UK reprocessing capacity and now is the time to develop a strategic infrastructure roadmap for secondary materials that will not only increase resilience but will allow us to capture the value of these materials for the UK economy and support the clean growth agenda.

The Plastics Packaging Tax, which will come into force in 2022 and will stimulate the uptake of recycled plastic, should improve the outlook for UK-based plastics reprocessing capacity but the issue is a much wider one. In 2018, for example, European Commission vice-president Maroš Šefčovič warned of the need to be "very vigilant" that today's dependency on imported oil and gas is not replaced by dependency on critical raw materials that industries need for the green transition; two years on, the European Union has just added lithium, used in batteries that

power electric vehicles, to a list of critical materials with plans to reduce reliance on imported supply.

Aligning the UK's industrial strategy with the resources agenda has the potential to support a sustainable and circular economic recovery by improving our access to important secondary materials, maximising clean growth opportunities, and contributing to the Government's ambition to double resource productivity by 2050. It also has a valuable contribution to make to skills, new jobs and local economic development right across the UK - all of which will be important as the UK 'builds back' after COVID-19.

Recognition and responsibility

The resources and waste sector is a critical frontline service and the pandemic has served to shine a spotlight on its role, both in protecting public health and ensuring that recycling and the safe treatment of waste are maintained in the face of societal disruption. But this role is all too often conveniently forgotten too. We clapped for our bin men during lockdown but left 41 tonnes of rubbish on Bournemouth beaches in just two days as restrictions were lifted. For a sustainable recovery, changing mind sets and behaviors will be essential, and we need to build on the former and clamp down on the latter.

Change is needed at every level; from ensuring that the next time the National Infrastructure Commission conducts an infrastructure resilience analysis the resource and waste sector is not ignored to better public communications and product labelling, and stronger penalties for misbehaviour.

To drive waste prevention, increase re-use and recycling, reduce litter and end the scourge of marine plastic, a range of measures will be needed to encourage greater personal responsibility as consumers, more respect for public spaces and their role in enhancing wellbeing, and engagement with re-use, recycling and waste services, including the proposed Deposit Return Scheme for beverage containers. Consumers need to be empowered too and UK governments must underpin behavior change with robust and ambitious waste prevention plans (the one for England is expected for consultation later this year) and a genuine commitment to developing a UK eco-design framework.

Regulation

Tackling waste crime must also continue to be a priority. Serious and organised waste crime is estimated to cost the UK economy at least £600 million a year, and the problem is growing. Large-scale fly-tipping in England, for example, has more than doubled in six years, costing councils and private landowners £millions to clear. In addition, illegal waste exports continue to contribute to pollution in countries around the world and undermine public confidence and participation in recycling.

Measures currently planned to tighten up the regulatory regime and develop new intelligence-led approaches to tackling waste crime and illegal exports must not fall victim to budget cuts or any deregulatory agenda as the UK leaves the EU.

About CIWM:

CIWM is the leading professional body for the resource and waste management sector representing around 5,700 individuals in the UK, Ireland and overseas. Established in 1898, CIWM is a non-profit making organisation, dedicated to the promotion of professional competence amongst waste managers. CIWM seeks to raise standards for those working in and with the sector by producing best practice guidance, developing educational and training initiatives, and providing information on key waste-related issues. It uses the body of knowledge represented by its membership to inform and influence policy and regulation on resources and waste management to increase resource efficiency and productivity and promote sustainable development.

www.ciwm.co.uk

Institute of Chartered Foresters

View of the Institute of Chartered Foresters

At a glance:

- Trees are integral to a sustainable future for climate, nature, people and the economy
- Their crucial role locking up carbon works via sequestration, substitution, storage and support
- Access to woodlands during the pandemic has raised awareness of their important role for our health and wellbeing
- We must treat trees and woodlands as critical strategic assets in the transition to sustainable places, businesses and communities.

As we emerge from the first stage of the COVID-19 crisis, many people and organisations are embracing the need – and the opportunity - for a sustainable recovery. This is happening internationally (e.g. EU Green Deal or conditions on Canadian bail-outs), within business communities (e.g. Unilever, BP) and within countries and communities.

Within this lively policy space, one of the most politically popular subjects has been trees: planting them, growing them, caring for them and using them. Before the pandemic, this enthusiasm for trees was largely driven by the climate emergency. During lockdown, the other roles of trees in people's everyday lives became more visible: foresters and others in the timber sector were designated key workers to keep the supply of timber flowing for vital goods, and people were reconnecting with nature in green spaces in their daily exercise hour. Instagram exploded with pictures of trees and other plants, and the pent-up demand for access to public forests was palpable.

Our woodlands will be our allies in the era of recovery and rebuilding. As the art and science of establishing, cultivating, protecting, managing, harvesting and marketing forests, woodlands, trees, timber and wood, forestry and arboriculture have a vital role to play. In the context of the climate, we will need to work with trees to provide more:

- **Sequestration** – absorbing CO2 from the atmosphere
- **Substitution** – harvesting wood-based products to substitute for those with higher embodied carbon, and to improve the carbon-efficiency of buildings
- **Storage** – storing sequestered carbon in wood, other biomass and forest soils
- **Support** – using trees to support other parts of the system to reduce carbon footprints, to adapt and to thrive (e.g. reducing flooding, increasing farm productivity, providing habitat).

But trees are important for more than just their ability to help address the climate challenge, and there are many other opportunities to work with trees in the recovery to improve our economic, environmental and social well-being. For example, communities could make greater use of woodland as healthy outdoor classrooms, green gyms and active transport corridors, and innovations in the use of wood products could stimulate new industries in the bio-economy to replace those reliant on petro-chemicals or less sustainable alternatives.

Trees, woods and forests are therefore a strategic asset of critical importance in our transition to living and thriving post-pandemic. As with any asset, the value and vulnerability of the UK's woodland assets can vary widely over time and location. Forestry professionals are skilled in weighing up these values and risks. We work to internationally recognised standards of sustainability (the UK Forestry Standard) and taking a 'long-term view' is fundamental to our profession.

As we leave the EU (and the CAP), each of the nations of the UK is considering how best to re-set land management policy and practice – especially in the context of Covid and the climate emergency. Forestry and arboriculture are right at the heart of this transition, and those professionals will work ever more closely with others to care for and make the most of our trees through the transformation to more sustainable places, businesses and communities.

About ICF:

The Institute of Chartered Foresters (ICF) is the Royal Chartered body for foresters and arboriculturists in the UK and is the only UK body to offer the Chartered Forester and Chartered Arboriculturist titles. The Institute regulates standards of entry to the profession; provides support to its members; guidance to professionals in other sectors; information to the general public; and educational advice and training to both students and tree professionals seeking to develop their careers in the forestry and arboricultural industry.

www.charteredforesters.org

IEMA Transforming the world to sustainability

View of the Institute of Environmental Management and Assessment

At a glance:

- The need to transform to a low carbon, sustainable economy is more urgent than ever. We must ensure that these vital transformations drive post-COVID recovery, along with addressing longstanding and systemic social problems and inequality
- We do not have to start from scratch. The UK Government has already laid the groundwork in policy and legislation for achieving net zero by 2050, restoring biodiversity and natural capital and creating a circular economy. Now is the time to deliver on these commitments
- There are five key priorities for the recovery that will drive jobs, investment, training, technology and green finance. These are: (i) setting clear expectations across the public and private sector; (ii) Investing in levelling up society; (iii) supporting placemaking and community wellbeing; (iv) investing in infrastructure that is sustainable; and (v) supporting collaboration to resolve critical sustainability challenges and trends.

As we rebuild our society and economy from the devastating effects of the COVID-19 pandemic, we have an opportunity to build back better. We have already seen the benefits, in terms of improved air quality, carbon saved and employee wellbeing, that just one change - to working from home - has brought about.

In the same way, we have seen how collaboration – on new ventilators or vaccines – has taken place between the private sector and the scientific community at a pace that would have been considered unachievable even a few months ago. We are learning that, if we have a clear and universally acknowledged goal, change can be more comprehensive, profound and transformative than we could have imagined.

The need to transform to a low carbon and sustainable economy is just as urgent. The overwhelming scientific and economic evidence for rapidly addressing a range of sustainability issues such as climate change, plastics and resource use, modern slavery, biodiversity loss, poverty, health, wellbeing and pollution has not changed.

Given the experiences of the BAME community during and since COVID, we must recognise that all of us, including the environment and sustainability sector, need to work hard to reflect modern Britain in the workforce and in all facets of life that have accepted or legitimised a culture of privilege and discrimination.

We must now seize the moment that post-COVID recovery presents us with by ensuring that all of these vital transformations are integrated into the recovery. There is a growing body of evidence that a sustainable, low-carbon future can drive job

creation and increase prosperity. The business case for a rapid transition to a resilient, sustainable, just and equitable future has become stronger than ever.

We do not have to start from scratch. For example, the UK Government has already laid the groundwork in policy and legislation for achieving net zero by 2050, restoring biodiversity and natural capital and creating a circular economy. Countries have collectively committed to achieving the UN Sustainable Development Goals by 2030. Now is the time to double down on these commitments and deliver on them across the whole of government, the business community and society.

This will mean directing jobs, training, technology, finance and investment towards programmes and initiatives that will cut carbon emissions, renew our cities, restore natural capital, improve efficiency and build resilience into supply chains. Many of these measures, such as investing in broadband, improving the housing stock and re-training and redeploying workers, will also help to address the sometimes glaring inequalities highlighted by the pandemic.

IEMA considers that the following priorities and actions are necessary to build back better and support this transition:

1. Set clear expectations that require and enable sustainability across the public and private sector
2. Invest in skills, training and jobs that level-up society and address systemic social problems
3. Support placemaking, community connection and wellbeing
4. Invest in infrastructure that delivers sustainable economic, social and environmental outcomes
5. Support and promote business models and collaborative decision-making that can resolve critical sustainability challenges and trends.

About IEMA:

IEMA is a professional body with nearly 16,000 members in 116 countries. Our members are sustainability experts working in public and private sector roles across a wide range of industries from financial services to development and construction. Through a combination of training programmes, sharing of best practice and thought leadership and advocacy, we work with our members to drive change in areas such as corporate sustainability, climate change and energy, the circular economy, environmental management and impact assessment.

We have a wealth of experience, case studies and insights to support the rebuild.

www.iema.net

The Institute of Materials, Minerals and Mining

View of the Institute of Materials, Minerals and Mining

At a glance:

Transitioning to a low carbon, resource efficient economy is fundamental to a sustainable recovery and will require:

- Circular economy principles to be embedded and materials and products to be kept in use for longer
- Access to secure supplies of critical materials
- Increased sustainability of raw material extraction and resilience of supply chains
- Investment in new technologies and innovation to support difficult to decarbonise sectors
- The proposed regulatory and fiscal measures to reform the management of packaging waste to be complementary and rapidly implemented.

The economic recovery from COVID-19 must seize this unique opportunity to embed much-needed transformative change towards a low carbon, resource efficient and more resilient society.

Materials play a fundamental role in our daily lives, from forming the building blocks of infrastructure to vehicles and packaging. Widespread supply chain disruption during the COVID-19 crisis exposed the fragility and weaknesses of how we currently use, manage and value materials, including our reliance on a linear take-make-and-dispose economic model and 'just in time' production and distribution approaches.

Moving towards a more circular economy, where the use of new resources is reduced and materials, components and products are kept at their highest value and utility for as long as possible, is fundamental to a sustainable and resilient recovery. Developing a domestic source of secondary material to meet some of the demand, has the potential to reduce reliance on imported raw materials and products, reducing the risks associated with complex international supply chains and volatile commodity prices. Improving circular economy infrastructure could add over 100,000 net jobs of various skill levels across the UK[4], stimulate economic growth and support the transition to a low carbon, more resource efficient society.

Critical raw materials are economically and strategically important, including being required for low carbon technologies, and have high risks associated with their supply. Electric vehicles, wind power and stationary battery storage in the UK could

[4] www.wrap.org.uk/content/employment-and-circular-economy

require 2.2 kilotonnes of rare earth elements and 19.6 kilotonnes of cobalt per year by 2035.[5] Developing domestic recovery infrastructure, combined with investment in innovation, could unlock a new supply of these key materials from end of life technology.

Raw material extraction will continue to play an important role in the economy to meet the remaining primary demand. As economies start to reopen, commitments to sustainable and responsible ways of extracting these valuable resources should be strengthened. Electrification, investment in renewable energy infrastructure, innovation and partnerships with downstream companies can reduce the carbon and environmental footprint and increase resilience to future challenges.

To enable the effective and transparent management of available resources, better data and information on materials and product flows is required. EPF supports the ONS-led National Materials Data Hub work to provide comprehensive data on raw and secondary materials, including chemicals, across the value chain.

Key energy intensive industries such as steel, cement, ceramics, paper and chemicals require a comprehensive mix of policy instruments to incentivise and support the transition to low-carbon processes and technologies. Industrial electrification, supported by the rapid deployment of renewable energy, increasing energy efficiency and fuel switching have key roles to play in improving existing technologies.

Energy efficiency alone is not enough, however, as many of these industrial processes emit greenhouse gases themselves. The energy intensive process of traditional steel making, using a blast furnace, is already extremely efficient, having been driven by the desire to reduce costs. Whilst electric arc furnaces run with renewable energy will be part of the answer, they are limited by the quality and availability of collected material. Investing in new technologies and innovation, such as using hydrogen as a reductant instead of coal, carbon capture use and storage, or laser induced breakdown spectroscopy and robotic sorting will be necessary to ensure we can make enough steel within our carbon budgets. Establishing an effective secondary market for scrap steel could generate more value-added economic activity, reduce iron ore imports and cut carbon emissions from steel production by around 30%.[6]

There is considerable potential to reduce emissions from the process of producing aluminium. New production methods coupled with renewable energy resources, could lower emissions by as much as 77%.[7] Recycled aluminium requires 95% less energy to produce and can be recycled multiple times with little loss of quality.

[5] www.green-alliance.org.uk/resources/Completing_the_circle.pdf
[6] https://www.green-alliance.org.uk/resources/Completing_the_circle.pdf
[7] https://www.green-alliance.org.uk/resources/Fixing_the_system.pdf

The UK Government has proposed a number of important regulatory and fiscal policy measures that have the potential to reform the packaging industry. So long as these measures are designed to work well together and are adequately supported by innovation funding and infrastructure investment, they should drive resource efficient design, including material reduction and recyclability. The Government should move forward rapidly to implement these measures.

COVID-19 has highlighted to the public the importance and value of packaging for hygiene and the supply and distribution of goods. Whilst the mismanagement of packaging waste must be addressed, the benefits of packaging such as protection of humans and food must be fully recognised in a sustainable recovery.

About IOM3:

The Institute of Materials, Minerals and Mining (IOM3) is a major UK engineering institution whose activities encompass the whole materials cycle, from exploration and extraction, through characterisation, processing, forming, finishing and application, to product recycling and land reuse. It exists to promote and develop all aspects of materials science and engineering, geology, mining and associated technologies, mineral and petroleum engineering, and extraction metallurgy, as a leading authority in the worldwide materials and mining community.

www.iom3.org

View of the Institution of Environmental Sciences

At a glance:

- The recovery is an opportunity to transition away from unsustainable systems, avoiding multiple transitions and saving on long-term costs
- Green ambitions, set by international evidence-based targets, can only be achieved through system-wide transformative change
- Environmental science has a key role to play in ensuring we do not regress on sustainability as a result of the pandemic and the recovery
- We need to ensure science-led environmental accountability and capacity are in place to deliver a sustainable recovery.

Our ambition for the COVID-19 recovery should not be to return to past systems which have proven to be unsustainable and which increase our vulnerability to significant risks, including those linked to climate change, pollution, invasive species, habitat loss, and disease.

To achieve a sustainable recovery, we should look beyond merely the creation of jobs or how to achieve already agreed targets and seek to instil a culture of sustainability in our strategies, actions, and governance. We must take this opportunity to promote the transition of core production and consumption systems towards sustainability, tackling 'wicked issues' which cannot be solved without a holistic approach.

This type of recovery will necessitate transformative change which may have a higher degree of short-term associated financial cost. However, combining the recovery from COVID-19 with adaptations to net zero and movement towards a more sustainable economy will avoid inflating stranded industries, and will negate the need for multiple transitions increasing UK resilience and saving money in the longer term.

In order to align with Paris Agreement targets, IPCC pathways for controlling global temperature increases, and Sustainable Development Goals, there must be significant efforts to embed the necessary instruments of long-term environmental sustainability, including widespread decarbonisation and protections for biodiversity.

As the professional body and voice for environmental scientists across disciplines and sectors, the IES believes that any recovery from COVID-19 must take an interdisciplinary systems-based approach if it is going to lead to a sustainable, fair, and resilient society. We would strongly recommend that the recovery is addressed

from a long-term and holistic perspective, rather than on the basis of short-term atomistic policies.

There will need to be a significant role for the environmental sciences in creating a sustainable recovery. To ensure non-regression on environmental sustainability, the role of the environmental sciences in decision-making about planning and development will be as important as ever, as will the role of environmental science in monitoring and addressing specific issues such as air quality and land contamination. The pandemic and recovery period cannot become an excuse to diminish these key processes of environmental accountability.

We must also take steps to ensure that capacity is in place to include environmental scientists in the delivery of the recovery. For example, where a substantial amount of conservation work is being delivered through environmentalists working in civil society, it may be necessary to ensure that organisations which have suffered financially during the pandemic are supported so that they can deliver effectively.

Fundamentally, the IES believes that a 'sustainable recovery' is one which allows for the creation of sustainable systems, accounting for the risk of 'wicked issues' and avoiding regression or missed opportunities to embed sustainable structures in society. There is currently a will for long-term sustainability which may not come again for some time, which we must take advantage of if we are going to avoid further crises caused by environmental degradation and changing climates.

About IES:

The Institution of Environmental Sciences (IES) is a membership organisation that represents professionals from fields as diverse as air quality, land contamination and education - wherever you find environmental work underpinned by science. A visionary organisation leading debate, dissemination and promotion of environmental science and sustainability, the IES promotes an evidence-based approach to decision and policy making.

www.the-ies.org

Landscape Institute
Inspiring great places

View of the Landscape Institute

At a glance:

- We need **'shovel-worthy'** as well as '**shovel-ready'** projects to address climate change, reduce health inequality, and improve our quality of life with better, greener places
- This means **parks and green spaces need significant investment.** These vital national assets help build our resilience to climate change: cooling our cities, slowing flood waters, and stopping air pollution
- We need **national standards for green infrastructure** to avoid a **race to the bottom** in new planning reforms
- We need to **level up access to green space, prioritising places that have the greatest need**. The current disparity results in huge health inequality and wastes billions in potential health benefits
- It's not all about shiny new development – we need to make the most of the assets we already have, **supporting skills and long-term maintenance.**

The economic recovery from COVID-19 must be delivered in a way which addresses the climate emergency, reduces public health inequalities and improves the quality of life for everyone in Britain. One of the best ways to achieve this is by investing in better, greener places.

Previous national responses to recessions, both in the UK and overseas, have tended to focus on short-term economic growth at the expenses of longer-term sustainability – both economically and environmentally:

1. Increasing government investment in public infrastructure and housing is a tried-and-tested method of boosting economic activity but it must be shovel-worthy as well as shovel-ready. Delivery is about more than just numbers – we need affordable, good-quality homes. Strengthening of new building standards is critical in meeting the governments net-zero pledge and delivering higher quality, healthier homes and buildings. Government investment in infrastructure more broadly must take a natural capital approach.

2. The need to invest in existing places, through maintaining green infrastructure as well as improving and enhancing it, and retrofitting places with SuDS, urban greening, street furniture and active transport infrastructure. Re-inserting landscape back into the built environment can provide biodiversity and microclimatic benefits, improve health and wellbeing, increase community access and solve flood management problems.

3. Set higher standards for green infrastructure quality and accessibility. Access to green space is unevenly distributed; use investment into the landscape and urban green space to tackle persistent inequalities in our communities.

4. Investment in natural solutions to tackle climate change. Economic growth is unsustainable without a strong natural environment, and this needs to be better planned and co-ordinated across spatial scales – from upland and peatland restoration to mass afforestation. There is a need to make ELMs and rural spending natural capital based. England's National Tree Strategy must ensure that woodland is well-located and set targets for quality of trees rather than simply quantity. The strategy and subsequent investment must also aim to protect and improve existing woodland stocks, setting targets to restore ancient and native woodland sites and enhance biosecurity.

5. To deliver the necessary strong natural environment with thriving landscapes and good quality parks and green spaces will require re-tooling the workforce with green skills fit for the 21st century. There is an opportunity to harness technological innovation to foster more efficient and inclusive planning, building upon the innovations by planners under the Covid-19 lockdown. This should include making all planning documents machine readable, standardising terminology and processes across government.

About LI:

The Landscape Institute (LI) is the chartered body for the landscape profession. It is an educational charity working to promote the art and science of landscape practice. The LI's aim, through the work of its members, is to protect, conserve and enhance the natural and built environment for the public benefit. The Landscape Institute provides a professional home for all landscape practitioners including landscape scientists, landscape planners, landscape architects, landscape managers and urban designers.

www.landscapeinstitute.org


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