

TRANSFORM

FOR ENVIRONMENT AND SUSTAINABILITY PROFESSIONALS

Environment
Economy
Society

Aug/Sep 2021

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BUILDING BACK BETTER?

Why different economic
recovery policies are
now required



PLUS

Fresh thinking Ian Goldin on doing things differently post-pandemic

Stomach upset How soil degradation is harming the human gut

Mending our ways Can we reach net zero without behaviour change?

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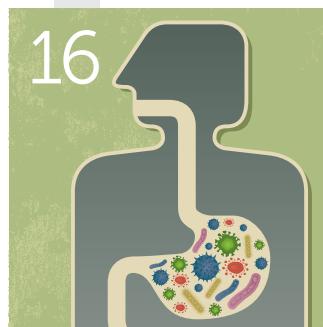
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SARAH MUKHERJEE, CEO, IEMA

Food for thought

Hello and welcome to another edition of *Transform* magazine. I hope you are staying safe and well, wherever you are in the world. I was honoured to be part of the advisory panel for England's recent National Food Strategy, which was published in July. The document recommends a series of actions that the food and farming sectors could take to make food healthier and more sustainable. It mentions the need to maintain a healthy gut – to support the microbes that help digest food, support our immune systems, and, as we are finding out through research, do a lot more besides in our bodies. We are aware that healthy soils produce healthy food, which is good for our gut microbiome – but what if our guts and our soils are in a synergistic relationship, each supporting the other? Sibylle Frey investigates on page 16.

The intensity and passion of those involved in the environmental and sustainability movement, it could be argued, is one reason there has been such government, press and societal interest in what we have to say as a sector. However, what happens when you come to the conclusion that what you passionately believed as a campaigner is no longer true? Mark Lynas was vehemently critical of genetic modification technology; now he is an advocate. He speaks to Marek Bidwell on page 18.

Forestry is in the news. Organisations around the world are starting to see planting trees as a way to offset carbon emissions, governments are encouraging farmers to consider planting trees to support better environmental outcomes, and there is a significant research base linking time spent in woodland with good mental health. There are many reasons to be interested and involved in forestry, and on page 30, Nicola Abbatt tells us about how she came to work in the sector, her thoughts on its environmental impact, and planting without plastic.

As always, we would be delighted to hear your thoughts and comments. I hope you enjoy the articles.

"The intensity and passion of those involved in the environmental and sustainability movement is one reason there has been such interest"



IEMA Transforming the world to sustainability

IEMA is the professional body for everyone working in environment and sustainability. We provide resources and tools, research and knowledge sharing along with high quality formal training and qualifications to meet the real-world needs of our members. We believe that together we're positively changing attitudes to sustainability as a progressive force for good. Together we're transforming the world to sustainability.

IEMA
City Office Park, Tritton Road,
Lincoln, Lincolnshire, LN6 7AS
tel: +44 (0) 1522 540069
info@iema.net | www.iema.net

Editor
Sharon Maguire
sharon.maguire@redactive.co.uk

Features and news journalist
Christopher Seekings
christopher.seekings@redactive.co.uk
iema@redactive.co.uk

Sub-editor
Kate Bennett

Business development manager
Daniel Goodwin
tel: +44 (0) 20 7880 6206
daniel.goodwin@redactive.co.uk

Sales
tel: +44 (0) 20 7880 6206
sales@iema-transform.net

Senior designers
Seija Tikkis McPhail, Yvonne Bailey

Picture editor
Claire Echavarry

Subscriptions
subscriptions@iema-transform.net
The 2021 annual subscription rate is £142.

Production manager
Aysha Miah-Edwards

Printer
Warners Midlands PLC, Lincolnshire

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Level 5, 78 Chamber Street, London, E1 8BL
tel: +44 (0) 20 7880 6200
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ROUNDUP

ENVIRONMENT &
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NEWS AND VIEWS

NATURAL RESOURCES

COVID-19 highlights lack of access to safe water globally



Billions of people worldwide have been unable to access safe drinking water and sanitation in their homes during the COVID-19 pandemic, according to a progress report from the World Health Organisation focusing on the UN's sixth Sustainable Development Goal (SDG 6) – to "ensure availability and sustainable management of water and sanitation for all by 2030".

Three in 10 people globally could not wash their hands with soap and water within their homes at the onset of the pandemic, and around a quarter lacked access to safe household drinking water. Nearly half also lack safely managed sanitation services, and "billions of children and families" will continue to be left without life-saving access to basic water, sanitation and hygiene services in 2030 unless SDG 6 progress quadruples.

The report does highlight reasons for optimism: between 2016 and 2020, the population with safely managed drinking water at home increased from 70% to 74%. Safely managed sanitation services grew from 47% to 54%, and handwashing facilities with soap and water increased from 67% to 71%. Last year, for the first time, more people used improved on-site sanitation – such as pit latrines and septic tanks, which can effectively contain and treat waste – than sewer connections.

However, the report also notes vast inequalities, with vulnerable children and families suffering the most. To achieve universal access to safely managed drinking water by 2030, the current rate of progress in the least developed countries would need to increase 10-fold.

Read the full report at bit.ly/WashData_Progress

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ADAPTATION

Consumers broaden food expectations

Half of consumers worldwide now consider the sustainability of food and drink itself, not just its packaging, when buying, a survey of 14,000 shoppers across 18 countries has discovered. This suggests that their understanding of sustainability is evolving to include wellbeing and nutrition, with sustainable packaging now considered standard.

The poll, by nutrition company Kerry, also found that eight in 10 consumers think it's important for each person to contribute to sustainability, although three in four relegate primary responsibility to the industry. People born between 1980 and 1989 were most likely to be deeply engaged, and those born between 1999 and 2004 expected manufacturers, brands and external authorities to take the lead.

Consumers, particularly in France, Benelux and the UK, see sustainability as both something that impacts them, and that they can impact. The largest barrier is a lack of understanding of personal impact, indicating an opportunity for producers and manufacturers as consumer demands evolve.

AGRICULTURE

Agricultural emissions to rise 4%

Global greenhouse gas emissions from agriculture are projected to increase by 4% over the next 10 years, despite the carbon intensity of production declining. That is according to a new report from the UN food agency and the Organisation for Economic Co-operation and Development (OECD), which forecasts that 80% of the increase will come from livestock.

The need to curb emissions while feeding the world is expected to be one of the greatest challenges for the sector, with demand for agricultural commodities forecast to grow at 1.2% per year by 2030. Consumers in middle-income countries are projected to increase food intake most significantly, while diets in low-income countries will remain largely unchanged.

The report also warns that COVID-19 has moved the world further away from achieving the UN Sustainable Development Goals and calls for "urgent attention" to the forces driving performance in agri-food systems. It explains how large-scale implementation of climate-smart production processes will be needed to mitigate emissions, especially in the livestock sector.

Read the full report at bit.ly/OECD_AgOutlook





RENEWABLE ENERGY

Green recovery could reverse 90% of COVID-19 job losses

The UK's pipeline for renewable energy projects could mitigate 90% of job losses caused by COVID-19 and help deliver the government's 'levelling up' agenda. That is according to a recent report from consultancy EY-Parthenon, which outlines how the UK's £108bn "visible pipeline" of investible renewable energy projects could create 625,000 jobs.

More than 700,000 jobs have been lost since the pandemic began. The report makes clear that a green economic recovery presents an opportunity to reverse this damage – especially in northern England and Scotland. It could also draw in billions of pounds in private capital to multiply the effect of economic stimulus spending, with renewable energy projects attracting around £100

of private investment for every £1 of government spending.

Globally, the report highlights how 13,000 'no regret' renewable energy projects in 47 countries have the potential to accelerate an economic recovery. These could provide 22% of nationally determined contribution emissions reduction targets, create up to 10m jobs, and provide a capital injection worth trillions of dollars.

Serge Colle, EY's global energy advisor, said: "This multi-country report, which has taken a bottom-up approach, maps the pipeline of 'shovel ready' investable projects that could be unlocked to enable a green recovery."

Read the full report at
bit.ly/ECF_CleanCOVID

WATER POLLUTION

Water companies fail to hit environmental targets

None of England's water and sewerage companies achieved all environmental expectations for the period 2015 to 2020, the Environment Agency has revealed. These targets included the reduction of total pollution incidents by at least one-third compared with 2012, and for incident self-reporting to be at least 75%.

In its progress report, the Agency says companies are "failing to live up to their responsibilities".

Although there were 285 fewer pollution incidents than in 2019, this was still the second highest number since 2015. Southern Water and South West Water both performed

significantly below target, with the Agency calling their performances "consistently unacceptable". More than half of serious incidents were due to Anglian Water and Thames Water.

Southern Water was sentenced to pay a record-breaking £90m fine earlier this year after pleading guilty to 6,971 unpermitted pollution discharges, while Thames Water was also fined £4m and £2.3m for separate pollution incidents.

Environment minister Rebecca Pow said companies must have more ambition. "I will not hesitate to set higher expectations for both water companies and regulators to ensure a level of service that the people of this country and the environment deserve," she added.

Read the full report at
bit.ly/WaterPerform



BUSINESSWATCH



Coca-Cola ends use of non-recycled plastic

Coca-Cola Great Britain will use 100% recycled plastic for all on-the-go bottles across its range, saving 29,000 tonnes of virgin plastic every year. The rollout commences across the UK in September and will increase the amount of recycled material in smaller bottles from 50% to 100%.

"This announcement marks an important step towards our global aim to help collect and recycle a bottle or can for every one that we sell by 2025," said Jon Woods, general manager at Coca-Cola Great Britain.

bit.ly/CCPlastic



HSBC staff to receive sustainability training

More than 500 HSBC staff will receive training on sustainable and responsible banking to ensure "every professional financial decision includes climate change". Employees will join the Chartered Banker Institute's Green and Sustainable Finance e-learning to help develop their expertise and support UK businesses transitioning to net zero.

"We must ensure every finance professional develops the expertise required to manage climate risks and identify the opportunities from the transition," said Simon Thompson, CEO of the Chartered Banker Institute.

bit.ly/HSBCSustain



Retailers launch net-zero collaboration

H&M Group, Kingfisher, Walmart and Ikea's holding company Ingka Group have launched an initiative to accelerate net-zero emissions within retail. Retailers can join the Race to Zero effort by setting science-based targets, working to halve greenhouse gas emissions by 2030, and committing to net-zero carbon by 2050.

"I encourage the retail industry to join us and take immediate climate action to halve global emissions by 2030. Together, we can win the race to zero," said Nigel Topping, UN high level climate champion for COP26.

bit.ly/NetZeroRetail

CONSULTATION

IEMA's response to proposed planning reforms

In June 2021, the UK's governing Conservative Party lost a by-election in Chesham and Amersham, a seat it had held for 47 years. The principal reasons reported as the cause of this defeat were proposed planning reforms and the promotion of housebuilding on greenfield sites across the south of England.

What are these planning reforms? In August 2020, the government's Ministry of Housing, Communities and Local Government (MHCLG) released its white paper *Planning for the Future*, which promised to modernise the planning system, transform the way communities are shaped and speed up housebuilding. The prime minister claimed that the planning system "is beginning to crumble and the time has come to do what too many have for too long lacked the courage to do – tear it down and start again". The consultation closed in October 2020 and received more than 40,000 responses, a figure described as "huge" by the MHCLG's chief planner.

In May 2021, the Queen's Speech stated that a Planning Bill would be brought forward in the autumn of 2021. However, the consultation on related reforms to environmental impact assessment, scheduled for autumn 2020, has never materialised;

nor has the government published any response to the 2020 consultation on the white paper.

Meanwhile the Housing, Communities and Local Government (HCLG) Committee of the House of Commons launched an inquiry into the white paper in October 2020 and published its first report in June 2021. The HCLG Committee report is critical of many aspects of the proposed reforms, questioning the scientific justification behind the stated 300,000 annual housebuilding target. IEMA has been engaged throughout this period, publishing *Levelling Up EIA to Build Back Better* (September 2020), submitting a consultation response to the planning white paper (October 2020) and submitting written evidence to the HCLG committee (March 2021).

As IEMA and its members stand by for more details, we will be working to ensure that these 'radical reforms' are aligned to the urgent need to address the climate and biodiversity crises and help to deliver the government's commitments to the United Nations Sustainable Development Goals. Ultimately, the reforms should look to strengthen, rather than sacrifice, existing environmental and social protections to create a more sustainable, equitable and prosperous built environment.



TECHNOLOGY

Fellows develop thought piece on smart solutions

In 2020, amid the global crisis created by the COVID-19 pandemic, we saw numerous cross-sector collaborations involving tech companies, aiming to create smart solutions that would amplify positive environmental and social impacts across sectors and organisations – for example in online healthcare or mRNA vaccine platform technology. This led the public health crisis to be referred to as "the digital accelerant of the decade" by US cloud communications platform Twilio.

Recognising this, the IEMA Fellows Working Group on Disruptive Technologies and the Digital Economy reconvened to develop a second technology thought piece: *Cross-sector insights: The role of smart solutions in the transition to sustainability*. This looks at the role smart solutions can play in enabling sustainability professionals across sectors to scale up the transition to sustainability within their organisations.

The focus of the document aligns with IEMA's Build Back Better mission statement (bit.ly/IEMA_BBB), while building on the identified key actions of the 2019 *Thought Piece on Disruptive Technologies and Sustainability*. It contains case study inputs from IEMA members and experts, across sectors from agriculture to the built environment. These case studies, provided by representatives of organisations in both the public and the private sector (from NHS Digital to Siemens), offers practical recommendations on key action areas – from investment in upskilling to developing infrastructure that delivers sustainable economic, social and environmental outcomes.

Covering technology from cloud services to data visualisation AI, the recommendations should help to provide sustainability professionals with further support on how to better engage with smart solutions in their own organisations. To find out more, please read the summary blog at bit.ly/Fellows_SmartSol



DIVERSITY

Diverse Sustainability Initiative: update

IEMA's Diverse Sustainability Initiative (DSI) was launched in March 2021 and now has 44 partners – and new ones are coming onboard each week. These organisations have made a public commitment to improving diversity, which can be seen on the DSI website (diversesustainability.net).

The IEMA team has been working hard to build this collaboration since March, and is ready to act. At a June meeting of the CEOs of our partners, we discussed current progress and next steps. The majority of CEOs have added diversity to their internal risk registers and are now looking at how to make their board members more representative. Some partners are working on insight-gathering projects to inform new strategies.

The DSI is now looking at how it is governed, to ensure that the voices, challenges and concerns of under-

represented groups are brought forward and acted on by the CEOs of involved partners. This has led to a project to put the right structures in place, as well as the development of a Professionals Network for People of Colour. IEMA CEO Sarah Mukherjee will launch the network and invite all members who identify as being part of a minority ethnic group to sign up. It will be open to professionals working in all 44 partner organisations and will seek to bring forward experiences and challenge partners on progress.

Given the success in signing up so many partners, we are recruiting a full-time member of staff to oversee its activity. The DSI is still in its early stages, and we have a long way to go, but conversations are going in the right direction and steps are being taken to transform diversity within our profession.

POLICY

Draft environmental policy statement

Defra has completed a consultation on its draft environmental policy statement. This focuses on five core principles that policymakers will be expected to consider:

- **The integration principle** – policymakers should look to embed environmental protection in fields of policy that impact the environment.
- **The prevention principle** – government policy should aim to prevent, reduce or mitigate harm.
- **The rectification at source principle** – if damage to the environment cannot be prevented, it should be tackled at its origin.
- **The polluter pays principle** – those

who cause pollution or damage to the environment should be responsible for mitigation or compensation.

- **The precautionary principle** – where there is a threat of serious environmental damage, a lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent degradation.

IEMA's response sets out the need for clarifications and amendments, including a recommendation for more direction on how the statement should be used in conjunction with other guidance. Read the full response at bit.ly/Defra_response

INQUIRY

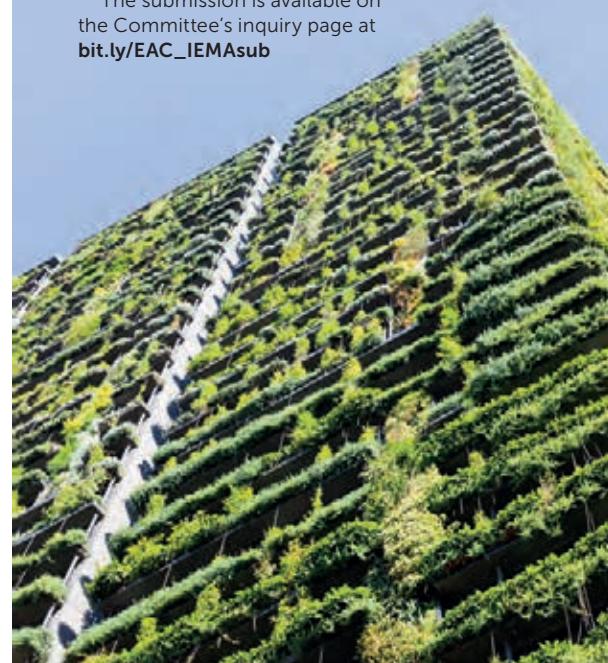
Creating a more sustainable built environment

In March, the Environmental Audit Committee kicked off an inquiry focused on improving the sustainability of the built environment sector (bit.ly/BuiltEnv_Inq). IEMA provided written evidence, with our submission focusing on two specific areas whereby sustainability could be improved in the built environment. The first relates to the strategic management of greenhouse gases across supply chains in the sector, while the second concerns ensuring that high-quality impact assessment continues to play an important role in future planning processes.

IEMA's full recommendations to the Committee were that:

- IEMA's management hierarchy for greenhouse gas emissions is used widely in the built environment sector to improve its performance on sustainability and the natural environment.
- The government's planning reforms, geared at speeding up permissions, do not come at the expense of high quality impact assessment that is integral to safeguarding natural and social assets.
- Impact assessment approaches are enhanced as part of the government's wider planning reforms, particularly in terms of mandating the use of environmental management plans and embracing innovation and digitisation.

The submission is available on the Committee's inquiry page at bit.ly/EAC_IEMAsub



LEGISLATION

Environment Bill progresses through House of Lords



The Environment Bill returned to Parliament following the Queen's speech and is making progress through the House of Lords. The government has added amendments to the Bill to introduce new provisions or provide clarity, including:

1. Environmental Due-Diligence for Forest Commodity Products
2. A new legally binding target on species abundance in England for 2030 – to be set through the target-setting process
3. Wide-ranging powers to 'refocus' the habitats regulations in England
4. New duties will require government to publish a plan to reduce sewage discharges from storm overflows by September 2022, and report to parliament on progress towards implementing the plan
5. Biodiversity net gain will be extended to include all nationally significant infrastructure projects
6. Devolution-focused amendments to support environmental co-operation across the UK and to provide clarity on UK-retained powers.

Meeting the Bill's long-term environmental targets, as well as the net-zero target, depends heavily on early investment and action from business. This, in turn, requires clear

public policy signals that can drive private investment at pace and scale, and at low cost. There are areas where the Bill could be better; we have been liaising with peers on potential amendments, and have met with Defra minister Lord Goldsmith to discuss how aspects might be improved.

We will keep members updated, and when the Bill receives Royal Assent (expected in the autumn) we will provide a full briefing and analysis.

Environment Bill governance provisions in Northern Ireland

IEMA is a core member of the Environmental Policy Forum (EPF), a grouping of professional bodies and learned societies that collaborate to influence environmental policy. Through EPF, we ran a series of engagement sessions on the Environment Bill governance provisions in Northern Ireland to allow members to explore key aspects of the Bill and how to support long-term environmental improvement.

Representatives of Northern Ireland's Department for Agriculture, Environment and Rural Affairs engaged in all sessions, and participants' feedback is helping to shape how the Bill will be implemented.

POLICY

Climate risks and climate reporting

In 2021, the World Economic Forum identified extreme weather, climate action failure and human-led environmental damage as being among the most likely risks of the next 10 years. However, despite this awareness, climate change is still seen as a distant threat by many businesses – especially during the difficult and challenging times precipitated by the COVID-19 pandemic. To help achieve economy-wide net zero emissions and support business transitions, IEMA believes companies should understand and report on their climate-related risks and opportunities.

IEMA set out this imperative, along with recommendations, in its response to the UK government's consultation (bit.ly/TCFD_consult) on proposals to mandate climate-related financial disclosures by publicly quoted companies, large private companies and limited liability partnerships. The proposals build on the government's 2019 Green Finance Strategy (bit.ly/GreenFinStrat), in line with Task Force on Climate-related Financial Disclosure recommendations (bit.ly/FSB_TCFD).

Following a roundtable with IEMA Fellows and climate change professionals, IEMA submitted a number of comments. A central recommendation was that scenario analysis should be part of the requirements – not excluded, as proposed. A further recommendation indicates that there are opportunities to further support businesses through better use and updating of existing government information and guidance, noting that some of the guidance is now very dated. We provide examples in our response, such as connecting with the extensive work published within the UK's Climate Change Risk Assessment.

In 2019, the IEMA Board declared a climate and environmental emergency and reaffirmed the need for climate leadership across society, recognising both the urgency and the business relevance of climate change. Although mandatory obligations may not be welcomed by some businesses, especially during these difficult economic times, these proposals can help businesses to better understand and manage their real exposures and medium-term risks.

IN COURT

Water company fined £4m for 'catastrophic' sewage leak

Thames Water has been fined £4m after untreated sewage escaped from sewers below London into a park and a river.

The court heard how dozens of high-priority alarms would have told staff about the incident but were either missed or ignored, leading to pollution of a popular park, a woodland and the Hogsmill River.

The sewage treatment works at Surbiton could not handle the amount of sewage produced by Storm Imogen in winter 2016, resulting in the incident. The pumps failed, allowing raw effluent to back up along the sewer network and burst out of a manhole, covering an area the size of three football pitches.

An engineer from Thames Water described finding an "avalanche of foul waste" and said the sewage travelled with force across the park and into the river, leaving thick sludge, toilet paper and wet wipes covering the riverbank, grass, shrubs and a wooded area.

Enough toilet paper to fill 2,500 refuse bags was recovered from the scene.

An investigation by the Environment Agency discovered that problems at the works began just after midnight on 8 February 2016. The park was closed for a month during clean-up, but toilet paper was still visible in the woods months later.

A power failure triggered alarms after pumps used in sewage treatment stopped working. The malfunction should have been answered remotely by Thames Water staff and an engineer sent immediately to the works, which is unmanned at night. As untreated sewage built up below ground, almost 50

warning alarms were set off during the next five hours – but each was left unchecked.

It was only after several hours that a Thames Water engineer arrived at the treatments and found problems with sewage flow and the power supply. With many pumps out of action, effluent rushed through the network and out above ground, flooding the surrounding area.

Thames Water took 15 hours to report the incident to the Agency – a legal requirement – and it was another 12 hours before the company had a sizeable presence at the scene.

At Aylesbury Crown Court on 26 May, the judge noted Thames Water's new commitment to improving compliance, but issued a warning that it will be held to this commitment in future cases.

Around 79m litres of sludge escaped across an area of about 6,500 square metres, and it took 30 people per day almost a month to clean up sludge that was ankle-deep in places.

Thames Water pleaded guilty to depositing sewage waste at the ground in February 2016. The court also took into

consideration the breach of a permit regarding this incident and discharge incidents into the Hogsmill River in January and October 2018, as well as an incident in September 2019 where sewage sludge was released from Hogsmill Sewage Treatment Works in error.

The Agency charged Thames Water under the Environmental Protection Act 1990 and the Environmental Permitting (England and Wales) Regulations 2016. It was fined £4m and ordered to pay the Agency's costs of £84,669. This latest conviction brings the total amount of fines given to Thames Water since 2017 to £28.4m for 10 cases of water pollution.



CASE LAW

UK Emissions Trading Scheme ruled lawful

In *Elliott-Smith v Secretary of State for Business, Energy and Industrial Strategy*, the claimant applied for judicial review of the legality of the defendants' joint decision to create the UK Emissions Trading Scheme (UK ETS) as a substitute for UK participation in the EU Emissions Trading Scheme (EU ETS).

The aim of both schemes is to motivate the reduction of greenhouse gas (GHG) emissions. Each operates under a 'cap and trade' system. A cap is set on the amount of certain GHGs that can be emitted by sectors of the economy in a given period. The cap is divided into allowances, which are either given to those required to participate in the scheme, or must be purchased to cover emissions generated. The cap is reduced over time to cause a steady fall in emissions.

The claimant brought the application for judicial review on the grounds that the Paris Agreement required urgent action to limit GHGs. In approving the UK ETS with the cap and auction reserve price proposed, the claimant



NEWREGULATIONS

argued that this criteria was not fulfilled.

The court concluded it was not for the court to decide on an international treaty, but it could assess whether the defendants' view of the Paris Agreement was tenable. The judge stated: "adopting this tenable view approach, I am entirely satisfied that the approach to the Paris Agreement... is one which is tenable and entirely appropriate".

The claimant also argued that under the Climate Change Act 2008, "limiting or encouraging the limitation of activities" must be interpreted to mean a reduction in GHG emissions, which was not satisfied by the UK ETS.

The court considered the definition of a trading scheme in the Climate Change Act 2008, the long title of the Act, and the Explanatory Memorandum. Justice Dove concluded that a trading scheme under the Act "does not necessarily have to achieve a reduction in the activities consisting of GHG emissions or causing or contributing such emissions: it is sufficient that the design of the scheme limits or encourages the limitation of those activities".

The application was refused.

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THE LATEST

■ LEGISLATION ■ GUIDANCE ■ CONSULTATION



LEGISLATION

Ecodesign and energy information

The Ecodesign for Energy-Related Products and Energy Information Regulations 2021 provide new ecodesign and energy labelling requirements for certain energy-related products that are placed on the market. They will:

- Increase the minimum energy performance and set material efficiency of electric motors, household washing machines/washer-dryers, household dishwashers, household refrigeration and electronic displays
- Set minimum energy performance and material efficiency standards for welding equipment and commercial refrigeration for the first time
- Introduce energy labelling requirements for commercial refrigeration.

[cedr.ec/7rn](#)



LEGISLATION

Low emission zones

The Low Emission Zones (Emission Standards, Exemptions and Enforcement) (Scotland) Regulations 2021 set national emissions standards for compliance with low emission zones (LEZs), exemptions and penalty charge rates. They also cover circumstances where a charge is payable by someone other than the vehicle's registered keeper, and set out enforcement provisions.

[cedr.ec/7rl](#)

long-term care facilities, hospices, pharmacies and veterinary practices.

GPP21, on pollution incident response plans and GPP24, on stables, kennels and catteries, have also been updated.

[cedr.ec/7rd](#)



GUIDANCE

F-gas qualifications

Guidance on the qualifications required to work with F-gas has been updated. If you have a UK F-gas certificate as a company or individual, it is no longer valid for work in the EU. To work on equipment containing F-gas in the EU, you will need to get a recognised qualification and certification from one of the 27 EU member states.

[cedr.ec/7r8](#)



LEGISLATION

New Finance Act

The Finance Act 2021 has been published, setting new rates for landfill tax and the climate change levy. It scraps the Carbon Emissions Tax, which never came into force, and introduces provisions for a Plastic Packaging Tax that encourages the use of recycled plastic within packaging. The rate of the tax is £200 per tonne of plastic packaging containing less than 30% recycled plastic content.

[cedr.ec/7rf](#)



LEGISLATION

Emissions trading

The Greenhouse Gas Emissions Trading Scheme Auctioning Regulations 2021 make provision for the auctioning of emissions allowances to emit one tonne of carbon dioxide equivalent under the UK Emissions Trading Scheme (UK ETS), and introduces mechanisms to support market stability in this new scheme.

[cedr.ec/7rm](#)



CONSULTATION

Environmental permitting

The Environment Agency is consulting on changes to the attendance requirements for technically competent managers (TCMs) in the waste industry. Operators currently demonstrate competence through a scheme run by the Chartered Institution of Waste Management and the Waste Management Industry Training and Advisory Board, and the Agency requires TCMs to be on site for a specified amount of time a week. Changes are needed to this requirement so that poor performers receive additional supervision by TCMs to rectify non-compliances and reduce risk.

[cedr.ec/7rk](#)

Ian Goldin has met many leaders and statesmen in his time, but one was exceptional: as chief executive of the Development Bank of Southern Africa between 1996 and 2001, he was an adviser to Nelson Mandela.

"He was by far the most impressive person I've ever met, and stands out for many reasons," Goldin says. "We spent a lot of time together. I accompanied him on numerous overseas trips, and he was absolutely consistent as a listener, as a leader and as a friend interested in one's personal circumstances. A non-hierarchical person, he would have the same interest in the cleaner as he would in someone of great significance, which is unusual in leaders."

Goldin, who is professor of globalisation and development at Oxford University, thinks we urgently need more Mandelas, and his latest book, *Rescue: From Global Crisis to a Better World*, explains why. His canvas is panoramic, covering the numerous Everests facing a post-pandemic world – climate change, globalisation, governments, businesses, poverty, inequality and the future of cities.

He is optimistic about solving these problems, and believes that COVID-19 is a once-in-a-generation chance to reset people's lives and societies onto a sustainable path.

However, Goldin is disturbed by the rhetoric surrounding pandemic recovery – "bouncing back", "bouncing forward" and returning to "business as usual". Even "building back better", used by US president Joe Biden's administration, fails to acknowledge that the world is built on unstable foundations, he argues.

This kind of thinking is a "road which leads over a cliff and will lead to future pandemics, to escalating climate change, growing inequality, increasing tensions within our societies and between them," he says. "The idea that you are somehow going to relapse into a more stable world if you don't do anything is fantasy. The future world is radically uncertain and unstable.

COVID-19 offers the world a huge chance to beat a path to sustainability, says Oxford University professor **Ian Goldin** – but we must learn from past crises, he tells Huw Morris

Warnings from history

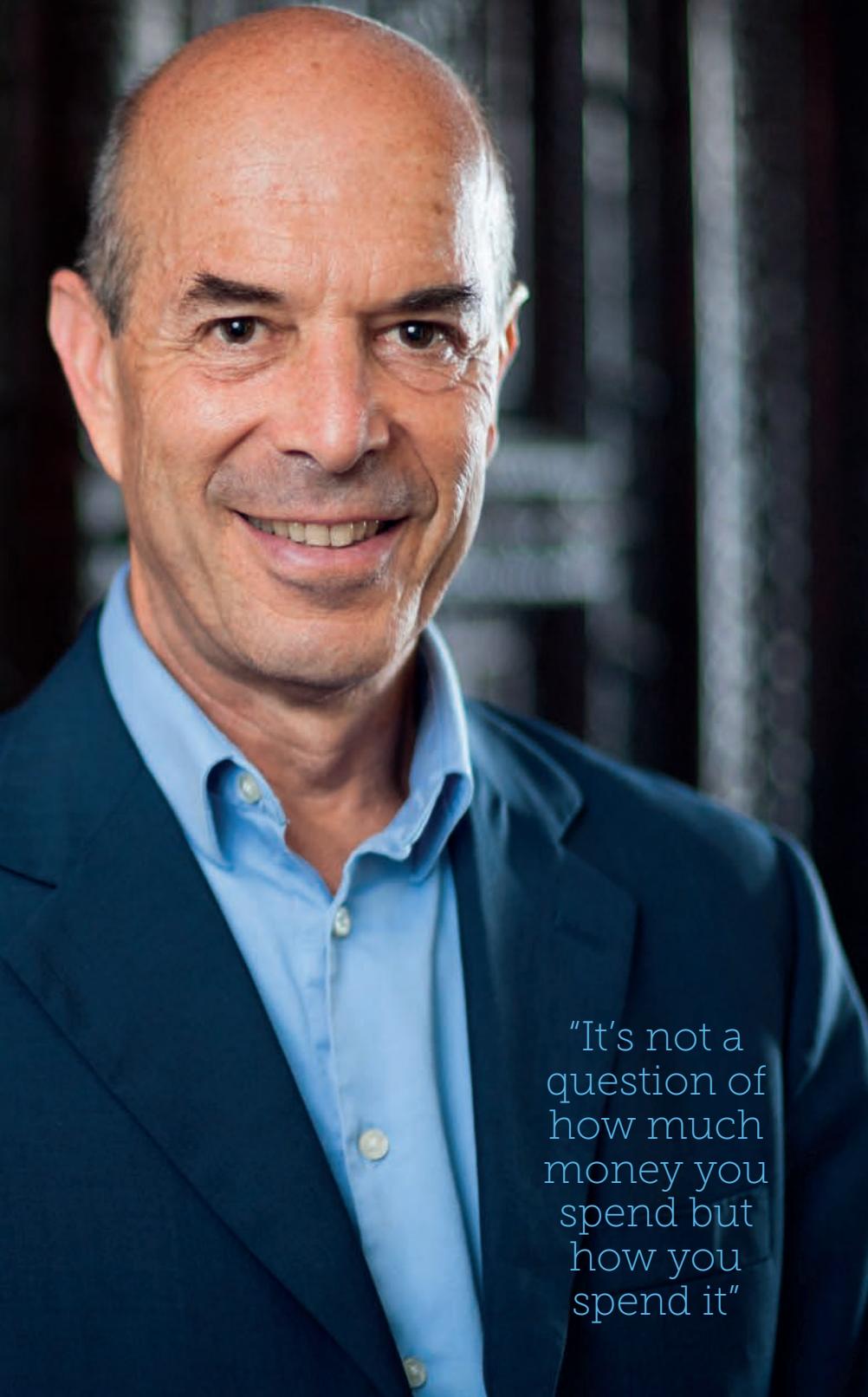
"The phrase I'd like to see is 'let's do things differently'. That's a radical reform agenda, and the word 'radical' itself worries people. But it's a far more comforting idea than a continuation of business as usual, which is the really disquieting thing and will lead to future disasters."

Learning lessons

Goldin argues that those who fail to learn the lessons of history are doomed to repeat them. A century ago, the world recovered from the First World War and a brutal flu pandemic by entering the 'Roaring Twenties' of consumerism and a surging economy. This led to the Depression, inequality, joblessness, protectionism, fascism and "an even worse war that killed more than double the number that the First World War killed.

"It's worrying that if we have another 'Roaring Twenties', the outcome could be not totally dissimilar, with rising protectionism, nationalism and another economic crisis. It doesn't have to lead to another war – it could be another pandemic that is even worse than the previous one, alongside escalating climate change and the catastrophes that come from that. It's vital that we don't go back to business as usual."

Goldin points out that, during the Second World War, "while bombs were dropping on Whitehall and



"It's not a question of how much money you spend but how you spend it"

the country was fighting on five fronts, its leaders were able to think long-term – to say this will be the war to end wars.” This thinking led to the Beveridge Report (establishing the welfare state), the creation of the United Nations to ensure international co-operation, and the launch of the Bretton Woods Institutions to encourage trade and economic integration for reconstruction and development.

“What the Second World War experience teaches me, and also the failures of the First World War and other crises, is that if we don’t act now while this is still fresh in our minds, before we slip back into the complacency and familiarity of the old, we’re going to miss a once-in-a-generation opportunity to change the world for the better.”

Collective amnesia is a huge threat, he argues, which is why history is extremely important. Leaders made radical changes after the Second World War because they remembered the horrors of the first. Education, communication and the media are equally important now, because “a lot of young people never lived through the Cold War”.

“What you learn in school is extremely important, whether it’s about the Holocaust or the wars, colonialism, slavery – people need to understand and digest them,” he says. “This all has a vital role in informing us about the future, because while history doesn’t repeat itself, it does rhyme. We can pick up signals and patterns, and if we ignore them we do so at our peril. That’s certainly the case with pandemics.”

Build back greener

The environment is a case in point. Global carbon dioxide levels plummeted by 17% because of lockdowns in 2020, and overall greenhouse gas emissions fell about 8%. Goldin warns that such improvements are temporary and will be reversed without decisive action; much depends on what governments at all levels do next.

The smart choice is to “build back cleaner” and invest in emissions

Interview



A CAREER IN BRIEF

Before becoming founding director of the Oxford Martin School, a research and policy unit based in Oxford University's social sciences division, Goldin was vice president of the World Bank, having served as chief executive of the Development

Bank of Southern Africa. He has been principal economist at the European Bank for Reconstruction and Development and programme director at the Organisation for Economic Co-operation and Development.

Today he leads the Oxford Martin School's programmes on the future of work, development, and technological and economic change. He is the author of 23 books and more than 60 learned journal articles.

reduction, he says. More than two dozen cities have committed to slashing the use of cars, building cycle lanes, pedestrianising streets and launching rideshare schemes. The commitment by China – the biggest global importer of oil and coal – to carbon neutrality by 2060, and peak emissions by 2030, will hasten the transition to a zero-carbon economy. He predicts that the Organization of the Petroleum Exporting Countries (OPEC) will fall apart, with petro-states replaced by electro-states that are able to produce renewable power cheaply.

The old argument that governments cannot afford higher expenditures have

been "rendered redundant by the massive boost to spending that the pandemic precipitated", Goldin states. As for the notion that people cannot change their behaviour, he points to the rapid individual lifestyle changes encouraged by official guidelines. "Who would have thought a government could tell you not to hug someone and you would listen?"

The real question is how government stimulus packages, which globally total US\$16trn dollars, are spent. The aftermath of the 2007-08 financial crisis saw a massive spike in greenhouse gas emissions as the bulk of infrastructure funded by the stimulus was built using

cement and steel; Goldin points out that "that's what we need to avoid".

"If it's given to the pals of ministers, it's a waste of money," he says. "If it's invested in education, energy transition, better health services, then you improve the effectiveness of your country, the stock of the people and their skills. You improve your efficiency and output, and your economy grows more quickly."

"It's not a question of how much money you spend but how you spend it. We can have a massive debt and it leads to a debt crisis, or we can have a massive debt that leads to higher growth."

"If there's one thing this pandemic has taught us, I hope it's the need to co-operate between countries. There is no wall high enough that will keep out the great threats we face in the future, be they climate change, pandemics or others. What high walls do keep out are the ideas, the technologies, the people, the investment, the export opportunities and, most of all, the understanding and ability to co-operate with others to manage these shared threats."

Achieving the impossible

He started *Rescue* in September and submitted the manuscript in March for launch in May – eight months from pen to publication. He was inspired to write because "all the deaths, the losses, the sickness, the disruption to lives, the unemployment and growing inequality should not be in vain".

Yet if this is "the pandemic to end all pandemics", like the war to end all wars, "we must recognise what is important in our lives, to recalibrate and think afresh. It's our turn to answer the call that has been invoked over generations – if not now, then when? If not us, then who?"

The opportunity is there, Goldin argues, remembering Nelson Mandela's words for inspiration: "It always seems impossible,

until it's done."

HUW MORRIS
is a freelance
journalist.



From crisis to community

COVID-19 has forced us to adapt the way we live and to reflect on the future. Climate change, inequality and discrimination remind us of our interconnectedness while highlighting the role of business, as global brands and local enterprises bring us together. While business contributes to these crises, it can also deliver solutions.

A 2020 B Lab UK poll revealed that 72% of the UK population think business should have a legal responsibility to the planet and people, and an Institute of Directors survey in May 2021 found that 62% of directors believe businesses should not exist solely to make money and generate shareholder profits. Financial markets are chiming in, too: according to The Investment Association, investors poured £7.1bn into responsible environmental, social and governance (ESG) funds in the UK during the first three quarters of 2020, while a March 2021 study by PlanetOne Capital predicts that the ESG market is set to double in 2021.

Company law

The Companies Act is still rooted in shareholder primacy. While the 'enlightened shareholder primacy' principle requires directors to have 'regard' for other stakeholders, it has created ambiguity and failed to remove the overriding principle of shareholder primacy, which CEOs may still invoke in defence of harmful actions.

We must create a new level playing field, where every business puts the interests of people, profit and planet at the heart of their

The Better Business Act would put responsibility to society and the environment on the same footing as responsibility to shareholders, explains **Chris Turner**



"CEOs may still invoke shareholder primacy in defence of harmful actions"

purpose, and directors. The Better Business Act is an amendment to Section 172 of The Companies Act that will ensure directors are responsible for

- Shareholder interests should be advanced alongside those of society and the environment. This establishes a principle of fiduciary duty within Section 172 of the Companies Act.
- Directors should be empowered to exercise their judgment in weighing up and advancing stakeholder interests.
- It must apply to all businesses.
- Businesses must report on how they align long-term interests of people, planet and profit in a strategic report or impact report, where required.

Since it launched in April 2021, more than 600 businesses have joined the Better Business Act coalition – including brands such as John Lewis, Innocent Drinks, Iceland, Danone, The Body Shop and Bulb. The Act is an opportunity for the UK to demonstrate leadership – creating a competitive advantage, driving innovation,

accelerating progress to net zero, and aligning with the government's ambition to 'build back better'. [❶](#)

Visit betterbusinessact.org to find out more.

Read a longer version of this article at bit.ly/Crisis_Comm

CHRIS TURNER is campaign director for The Better Business Act and executive director at B Lab UK.

Soils are an essential reservoir for the human gut, and the largest microbial gene pool on earth. Their rich microbial diversity is essential for microbial ecology, nutrient cycling, biomass production and plant behaviour. They take thousands of years to make and few to destroy.

However, population pressures, modern lifestyles and farming practices are causing alarming losses. Globally, 33% of soils are degraded – rising to nearly 70% in Europe, causing the continent €50bn of losses per year. Only now are we beginning to grasp the links between soil and gut microbiomes (the genomes of all micro-organisms in an environment), and the fact that their decline may have consequences for human health.

The human gut microbiome

From early childhood, the human gut is constantly colonised by microbes from food, water, air and direct contact with soil. Teeming with around 100trn micro-organisms, the gut microbiome instructs more than three million genes and creates thousands of metabolites that affect the host's fitness, phenotype and health. Like an organ with diverse physiological and neurobehavioural functions, it is involved in the body's immune system and metabolism, as well as prevention of infections. With modern lifestyles, the diversity of the human gut microbiome has declined drastically.

The soil's rhizosphere and the human gut are both open systems overcrowded by microbes. Both microbiomes produce similar bioactive compounds, adjust gene expression and contribute to the host's metabolism. Both protect their hosts against pathogens and regulate their immune systems (*Figure 1*).

Scientists now believe the soil and gut microbiomes are two interrelated superorganisms that replenish each other with microbes and molecules. Their evolutionary and functional similarities also hold the potential for biological pathogen control.

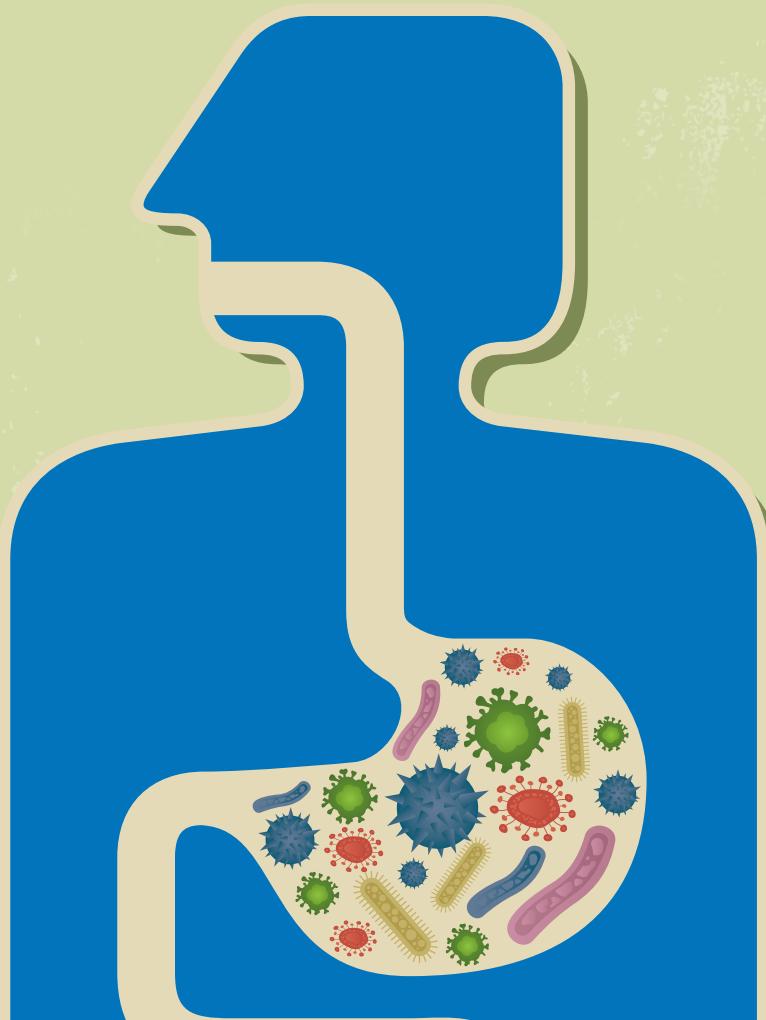
Disturbed gut microbiota

Diverse gut microbiota are essential for the evaluation of environmental toxins and good health. A rich gut ecosystem may protect better against environmental factors because microbes with similar functions can compensate for missing species.

However, lifestyle factors – including diet, drugs and environmental chemicals – disrupt the gut microbiota, and play a greater role in shaping microbiota configuration than genetics. In primates, for example, a study has found that soil characteristics were 15 times stronger in predicting gut microbiome composition than host genetics (bit.ly/RSB_Grieneisen). This may be because soil affects which

Going against our gut

There is a close link between soil and our gut, says **Sibylle Frey** – so soil degradation is a pressing issue for human health



food is grown, or because of the soil microbes ingested with it.

Further animal and human studies have found that contact with soil is beneficial for gut health. While modern hygiene has reduced disease and mortality, it seems that soil pathogens and benign microbes stimulate human immune tolerance. Children raised in 'poor' sanitary environments such as traditional farms are less prone to developing autoimmune disorders, and in baboons and mice, an environment with lower soil biodiversity is linked to reduced gut microbial diversity.

In humans, the lowest bacterial diversity was found in the guts of urban dwellers, whereas the most secluded Amazonian tribes had the highest. Urban environments often provide less natural biodiversity and contact with beneficial soil microbes, and may concentrate pathogens, which can negatively affect the gut. Urban rewilding can increase contact with environmental biota and benefit the immune system.

33%

Globally, 33% of soils are degraded

€50bn

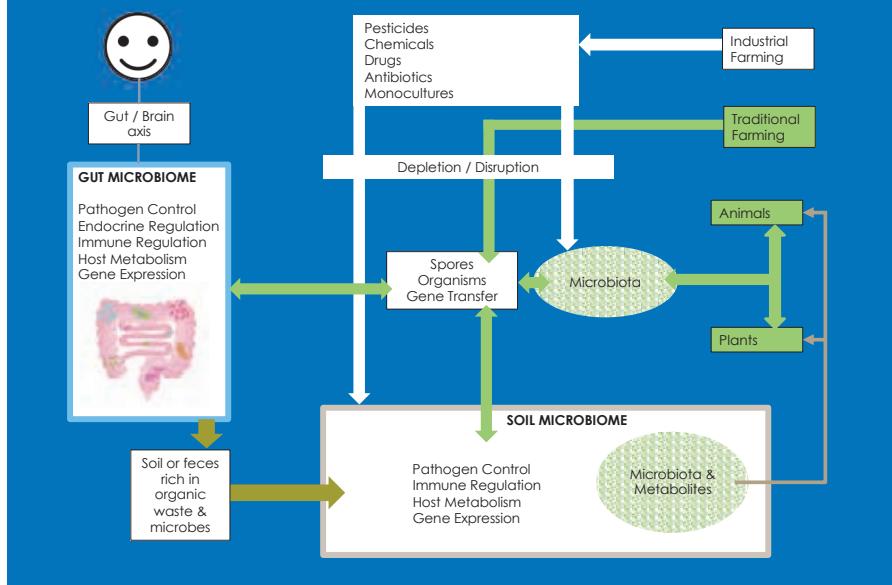
Soil degradation causes Europe €50bn worth of losses each year

100trn

The human microbiome includes around 100trn micro-organisms



Figure 1: Human gut and soil microbiome interaction.



Farming practices

The intensification of agriculture has led to the loss of soil and plant biodiversity, which affects human health as well as biochemical cycles. New evidence suggests that modern farming practices can persistently alter the animal and human gut microbiota.

Gut microbiota are very sensitive to drugs, diet and environmental chemicals. Pesticides cause changes in the gut microbiomes of various animal species, affecting lipid metabolism, inflammation and oxidative stress; for example, veterinary students who worked on intensive pig farms developed a persistent increase in pathogenic gut microbes and antimicrobial resistance genes. Antibiotics from crop and livestock production also end up in the soil, reducing its biodiversity and creating resistance in soil organisms.

Agro-ecological approaches benefit soil and gut microbe diversity: for instance, the manure of unmedicated farm animals from organic agriculture can reintroduce beneficial microbes to the microbial soil ecosystem. Likewise, organic vegetables inhabit a more diverse microbiota than those grown conventionally.

One health

There is a risk that our gut diversity and soil microbiomes deteriorate before we have fully understood their value. This includes the extent to which gut microbiota can mediate the damaging effects of environmental chemicals.

The relationship between soil, gut microbiota and health means we cannot look at environmental and social indicators in isolation. This interconnectedness must influence environmental and social decision-making. Addressing the systemic issues that degrade global soils is crucial.

The Chatham House report *Food systems impacts on biodiversity loss* (bit.ly/Chatham_FoodSystems), the Dasgupta Review (bit.ly/Gov_Dasgupta), and upcoming international summits on food systems and biodiversity recognise the need to transform our food system. Programmes such as the EU's Soil Health and Food Mission and the proposed UK Environmental Land Management scheme set the right intentions, but these initiatives must be followed by action. ↗

DR SIBYLLE FREY is an environmental scientist and editor for the Millennium Alliance for Humanity and the Biosphere.

When did you hear about genetically modified organisms (GMOs)?

In 1996 I met Jim Thomas, a Greenpeace campaigner, who told me Monsanto was genetically engineering soybeans to tolerate its Roundup herbicide – the herbicide would kill the weeds, but it would result in sterilised fields and a chemical-dependent monoculture. He said Monsanto was patenting the plants to assert dominance over the food supply.

Three years later, I helped destroy fields of genetically modified (GM) oilseed rape near Oxford. I also co-organised action at Monsanto's High Wycombe headquarters, where activists occupied its offices and hung anti-GMO banners from windows.

Was the campaign a success?

It stopped the scientific research in its tracks. Monsanto was portrayed as the

world's most evil company. Anti-GM laws were passed across the EU, and remain in force today. In some European countries, scientists can develop GM crops in the lab but there is no possibility of the research being used by farmers.

So, what changed your opinion?

I spent 15 years writing books on climate change, which involved researching the science, reading peer-reviewed papers and communicating it to a global audience. In the process, I spent time tackling the scepticism that people had about climate change, despite widespread agreement in scientific community. However, as I read, I discovered a similar level of scientific consensus on the safety of GMOs. I realised I couldn't defend the science on climate change while being against the science on GM crops and call myself a science communicator.

What happened next?

I announced a change of heart and said I was wrong to oppose GMOs. I was invited onto the BBC's *Hard Talk*. Lots of memes circulated claiming I was a paid agent of Monsanto. There were times when I was detested by former friends on the anti-GMO scene. But when it comes down to the science, it is evident that GM technology has reduced chemical and pesticide use, increased crop yields and benefited farmers, particularly in developing countries. That is the origin of my book, *Seeds of Science*.

Can you give any specific examples of the benefits of GM technology?

We can say more than we could in the 1990s. The developing world's farmers are using GM crops to combat pests without pesticides – reducing the toxic burden on themselves and the environment.

While researching the book, I met Gurjeet Singh Mann, an Indian cotton farmer who uses Bt cotton, a type of GM cotton containing an insect resistance gene. He said: "Prior to Bt we tried every kind of lethal poison that was available on the market. This charged the environment with poisonous fumes, creating havoc for birds, insects and

A change of heart

Marek Bidwell speaks to **Mark Lynas**, author of *Seeds of Science: Why we got it so wrong on GMOs*



frogs, which vanished from our villages." Since they started using Bt cotton, and decreasing spray use as a result, "we have chirping birds near our villages, our national bird the peacock has returned, we see insects, we can see frogs during the rains – so the animal kingdom was also returning to normal," he says.

Indian cotton farmers freely choose Bt cotton because it increases yields, reduces insecticide costs and brings in more money. That should be news to warm any environmentalist's heart.

GM technology is also ubiquitous in medicine. The AstraZeneca, Moderna and Pfizer COVID-19 vaccines all use genetic technology based on the early sequencing of the genome of the SARS-CoV-2 virus. Had we succeeded in banning genetic technologies back in the 1990s, we would have had no way of combating the pandemic.

What about the stories of an epidemic of Indian farmer suicides, because they are trapped in a cycle of debt due to paying Monsanto for GM crops?

This is a myth spread by Vandana Shiva. It is popular with Western audiences because she reflects back Western angst, putting an Indian face on it. This is unfortunate because GM cotton has been a success for farmers, and many are trying to adopt other GM crops that the Indian government still prohibits because of this myth. However, Professor Ian Plewis at the University of Manchester found that suicide rates of Indian farmers actually fell after the introduction of GM crops,



"I couldn't defend climate science while being against GM science"

and are a little lower than rates for non-farmers in India.

What is the cause of this?

Partly a difference in worldview. If you asked a conventional environmentalist, "Do you think farmers in Africa should be able to industrialise and adopt a high productivity/low labour-input industrial farming model?", most would say no. However, most of the farming work in developing countries is done by women, and it's labour intensive, low-wage and precarious, which is why food security is so poor. If you have a poor harvest, your family will go hungry. It's very different in Europe, where farming is subsidy-driven.

If the UK allows the development of GMOs, what might a regulatory framework look like?

I am relaxed about GMOs in crops because crops are artificial: you don't find

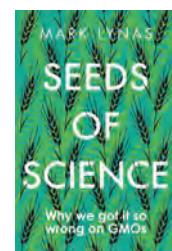
maize or lettuces growing in the wild. They have wild ancestors, but have been heavily genetically modified through centuries of selective breeding and hybridisation – changing a gene is neither here nor there in terms of risk.

I am less comfortable with wild species being genetically engineered. For example, there is the possibility of genetically engineering wild coral species so that they have more thermal tolerance and do not suffer from bleaching. Should we do that and release them at a large scale to try and keep some reefs intact, or would they cease to be the species we've grown up with?

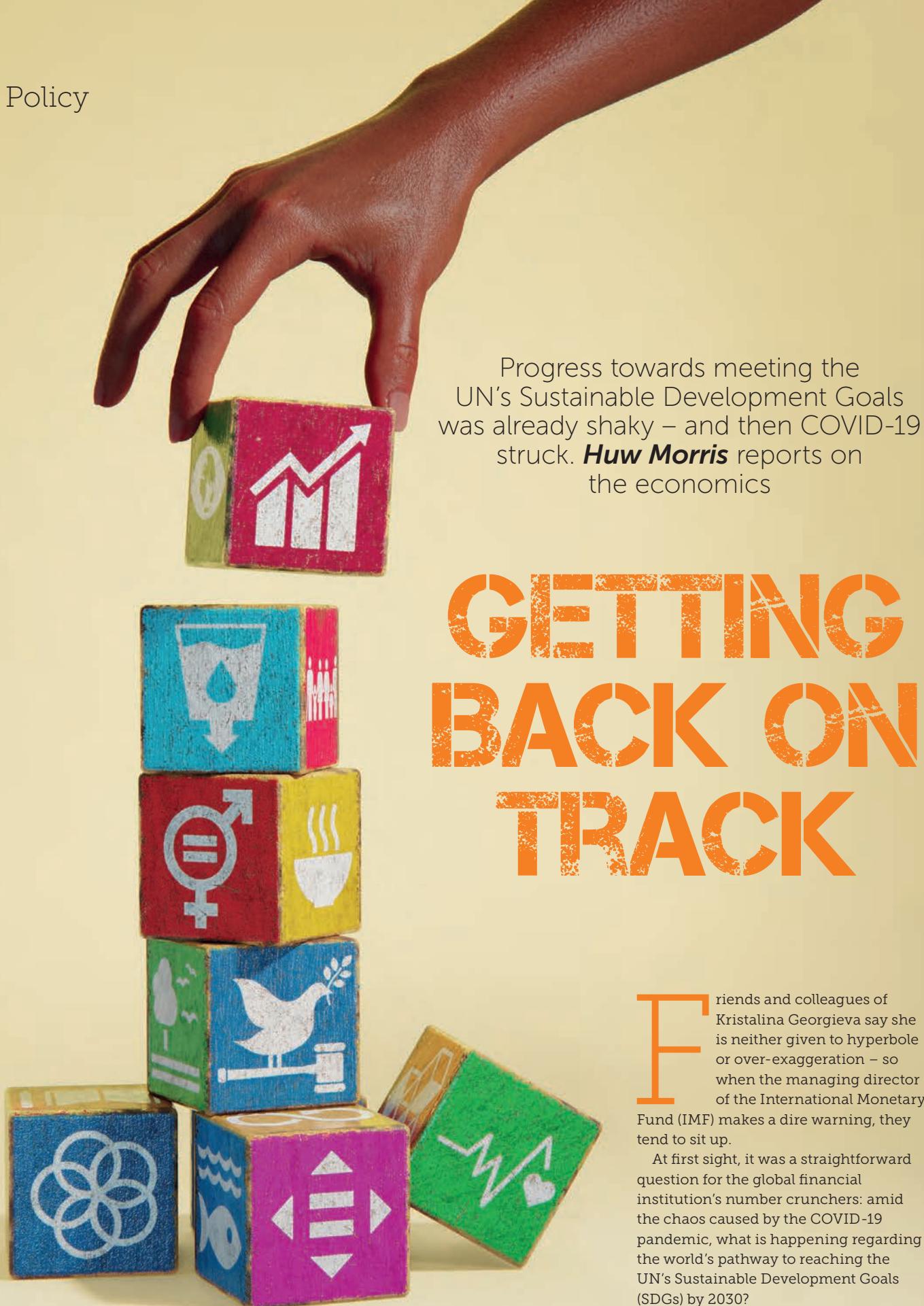
How can we ensure that potentially important technology is more equitable in the future?

All crop varieties are farmer-derived. Farmers in the Fertile Crescent 10,000 years ago originated modern-day wheat varieties. In science, everything builds on previous knowledge. The patent system requires the inventor to prove sufficient novelty and, for crops, they typically expire after 20 years. It stimulates people's inventiveness because they might make a return on it. The argument against patents is that private monopolies can be controlled by corporations and increase inequality. My view is that the public sector and universities should control more innovation, allowing greater public good. Deregulation would lower the cost of developing GM crops and allow more organisations to enter the field. [T](#)

MAREK BIDWELL, FIEMA CEnv,
is director of Bidwell Management Systems.



Watch IEMA's Book Club discussion on *Seeds of Science*, with Mark Lynas as a panellist, at bit.ly/IEMA_SeedsofScience. Reading the book led 53% of delegates to become more open to the use of GMOs, while 47% did not. What do you think?



Progress towards meeting the UN's Sustainable Development Goals was already shaky – and then COVID-19 struck. **Huw Morris** reports on the economics

GETTING BACK ON TRACK

Friends and colleagues of Kristalina Georgieva say she is neither given to hyperbole or over-exaggeration – so when the managing director of the International Monetary Fund (IMF) makes a dire warning, they tend to sit up.

At first sight, it was a straightforward question for the global financial institution's number crunchers: amid the chaos caused by the COVID-19 pandemic, what is happening regarding the world's pathway to reaching the UN's Sustainable Development Goals (SDGs) by 2030?

The answers are "really sobering" and reveal a "dangerous divergence" between the world's richest and poorest nations, which could even threaten global security, Georgieva warns. As a former chief executive of the World Bank, where observers say she gained a reputation as "the commander in chief of a fire station dealing with fires around the world", her words carry significant heft.

Progress undermined

Three factors determined how countries coped with COVID-19, the IMF found. Those with strong fundamentals and sound buffers, and diverse economies that were not dependent on tourism, entered the crisis in better shape. A second factor was the ability to mobilise support of sufficient scale to their economies, through monetary and fiscal stimulus. The third was the ability to access vaccines.

"The fortunes of countries are being determined by these three factors in a way that can dangerously undermine progress in development and affect global security down the road as a result," says Georgieva.

The contrast between rich and poor is stark. Advanced economies have deployed 27% of GDP in monetary and fiscal measures; that figure is 6% in emerging markets, and just 2% in low-income countries that already had small GDPs. "With vaccinations clearly advancing in the countries that can afford to massively scale them up, we see a risk of countries falling behind and becoming even worse," she adds.

Put bluntly, the pandemic has hamstrung development agendas across the world. COVID-19 may have condemned about 100 million people to extreme poverty last year alone, and the UN warns that, in some regions, poverty could rise to levels not seen for 20 years. It has its own dire warnings about the lack of progress in meeting SDGs (see *Meeting SDGs*).

At the same time, the amounts that governments are spending on achieving the SDGs is considerably depleted.

MEETING SDGS

This year's UN progress report on meeting the SDGs makes grim reading. Even before the pandemic, the UN warns, progress was not happening fast enough to achieve them by 2030 – and it had even stalled or moved backwards in some areas. It says that the world's collective response in the next 18 months will determine whether the pandemic turns out to be a "much-needed wake-up call" – especially to the lesson that "by threatening biodiversity, humanity threatens its own survival."

Among a battery of recommendations, UN calls for equitable access to COVID-19 vaccines, and treatments and policies that strengthen the financial position of developing countries and embrace a recovery guided by the 2030 SDG agenda.

It states that the recovery should be used to adopt low-carbon, resilient and inclusive development pathways that will reduce emissions, conserve natural resources, create better jobs, advance gender equality and tackle growing inequities. Governments should also put clean and sustainable energy "at the heart of the COVID-19 response and fight against climate change".

The SDGs in serious trouble include:



GOAL 1 – no poverty

Ending poverty by 2030 is out of reach unless governments put in place substantial policy actions, including social protection systems.



GOAL 2 – zero hunger

The pandemic may have pushed 83-132 million people into chronic hunger in 2020.



GOAL 3 – good health and wellbeing

Essential health services are still disrupted in 90% of countries.



GOAL 4 – quality education

Vulnerable children and those unable to access remote learning are at risk of not returning to school, child marriage or child labour.



GOAL 5 – gender equality

The pandemic has led to intensified trends in violence against women and girls, more child marriages and increased care work at home.



GOAL 10 – reduced inequalities

The UN says SDG progress in the poorest countries is being pushed back 10 years because of the pandemic.



GOAL 17 – partnerships

Foreign direct investment is expected to drop by 40%. This and other factors are shrinking countries' ability to make critical investments in recovery, climate change and SDGs.

Low-income countries are caught between the Scylla of spending urgently to protect lives and livelihoods and the Charybdis of long-term investment in education, health, infrastructure and other essential needs. This could be even more significant if COVID-19 leads to permanent economic scarring, with the IMF fearing that there will be long lasting damage to "human capital" and growth potential.

"We are not talking enough about pent-up protest," says Georgieva. "We know that after a crisis, some 18 months or two years later, if inequality is not addressed it translates into discontent. This can be fertile ground not only for

the unproductive use of talent, but also for violence, for populism, for things that hurt economies."

Acting with urgency

The IMF admits that meeting the SDGs will now require "extraordinary efforts from all stakeholders", and such efforts will have to continue beyond 2030. Some countries will need to spend around 14% of their GDP every year between now and 2030 to meet the SDGs; without such spending, a number of countries will not be able to reach their SDGs even by 2050. The IMF adds: "this dire reality makes it all the more important to pursue

economic recovery policies that are carefully designed to support higher and more inclusive growth and generate more resources for development."

Mindful that the climate crisis "has gone nowhere and, if anything, the urgency to act is absolute", Georgieva says the IMF is focused on combining the exit from the COVID-19 economic crisis with a shift towards green growth. Now is not the time for austerity.

The IMF has considerable clout: it has provided US\$110bn of emergency financing to 86 countries, including 52 low-income nations, since the pandemic started. It has committed US\$280bn overall, and under its Special Drawing Rights – an international reserve asset created by the IMF in 1969 to supplement member countries' official reserves – a further US\$650bn will help poor nations without adding to their debt burdens.

Carbon pricing will be crucial, the IMF says. It notes that only 23% of emissions are covered by some form of carbon price through tax or trade – although that is 5% more than last year – and it will push for more. Yet its most notable campaigning will be for green growth, particularly infrastructure. Georgieva wants to see "massive investment into reducing carbon intensity of buildings", bringing down inefficiency and increasing the amount of construction that reduces energy consumption.

Agriculture, reforestation and land restoration will come into the spotlight, and the IMF will heavily back renewables. "It is unforgivable for countries that have plenty of sunshine but very little solar," she adds. "How could that be? There is

UK INTERNATIONAL DEVELOPMENT SPENDING

Despite a manifesto commitment to spend 0.7% of GDP on international development, the UK government has controversially reduced this spending to 0.5%.

The cut is equivalent to around £4bn, although the government has said it will spend more than £10bn on foreign aid in 2021. However, the UK is the only member of the G7 advanced group of economies to reduce such spending this year, a move that has sparked a major backlash – not least from its own backbench MPs.

A letter to prime minister Boris Johnson signed by more than 1,700 academics, charities and business leaders – including leading non-

governmental organisations such as Action Aid, Oxfam, Save the Children and WWF UK – said making the cut during the pandemic was a "double blow to the world's poorest communities".

The spending cut has already led to the closure of feeding centres and clinics, and has also forced the cancellation of projects including water sanitation and training for healthcare workers.

In 2020, the UK spent £14.5bn on aid, meeting its 0.7% target, according to Foreign Office figures. Almost all the money went to countries in Africa and Asia, with the top five recipients being Pakistan, Ethiopia, Afghanistan, Yemen and Nigeria.



Advanced economies have deployed 27% of GDP in monetary and fiscal measures; emerging markets 6%; low-income countries just 2%



COVID-19 may have condemned about 100 million people to extreme poverty last year



Some countries will need to spend 14% of their GDP every year between now and 2030 to meet the SDGs



The IMF has provided US\$110bn of emergency financing to 86 countries since the pandemic started

"Economists are saying the world needs more debt and government spending in order to get out of this crisis"





Transport

Shifting gears

Public transport has a lot to offer when it comes to delivering Paris Agreement objectives. While many sectors have reached peak emissions, transport emissions continue to rise. The International Energy Agency's *Tracking Transport 2020* report (bit.ly/TrackingTransport2020) finds that global transport emissions are responsible for 24% of direct carbon dioxide emissions from fuel combustion. Road vehicles account for nearly three-quarters of this, and aviation and shipping emissions continue to rise; only rail has reduced its emissions.

The International Transport Forum recently published its *Transport Outlook* (bit.ly/ITFOutlook2021), which estimates a doubling of transport demand by 2050 against a 2015 baseline. It concluded that, as policy stands, we can expect to see transport emissions increase by 16%.

Rapid electric vehicle (EV) innovation and take-up, and political support for the phase-out of the internal combustion engine, give us hope that this trend can be reversed. Public policy and the transport-themed COP26 agenda has focused on EV technology solutions. The Partnership on Sustainable, Low Carbon Transport's review of national policy around the world shows a focus on the 'improve' element of the avoid-shift-improve hierarchy strategy; has enough focus been put on 'avoid' and 'shift'?

COP26 must acknowledge the huge role that public transport can play in meeting climate goals, says **Lucie Anderton**

After COVID-19

Public transport passenger numbers fell through the floor during the pandemic – from -22% in Bulgaria to -74% in Ireland (bit.ly/Eurostat_Rail). Rail freight was more resilient, but is a small part of logistics movement in most regions.

If private road vehicles continue to dominate, we risk not meeting Paris Agreement objectives. Air pollution from brake and tyre dust would endure, as might pressure on land, city congestion and road safety issues. Autonomous vehicles could help, but will not be mainstream during the 2020s. And how inclusive and accessible is EV ownership?

Public transport is the fastest and most cost-efficient way to decarbonise mobility and logistics chains. If we make it the backbone of a connected, multi-modal, sustainable mobility system, we could achieve decarbonisation by 2050. Public transport investment will connect businesses, people and communities to economic and social opportunities, and create millions of decent, sustainable

jobs. By applying the avoid-shift-improve hierarchy with an integrated, intermodal and balanced approach, we will reap the benefits of transport decarbonisation in terms of emissions reduction and equal mobility access. Cities will become better places to live, with less congestion and noise, and more space. If we are to meet Paris Agreement goals, technology alone will not be enough – behavioural change will ensure decarbonisation measures are successful in the long term.

Making the case

Rail and public transport actors are doing their bit, and electrification and alternative propulsion (such as hydrogen and battery power) is advancing. In the lead-up to COP26, the International Association of Public Transport and the International Union of Railways will continue to make the case for public transport to play a part in climate action.

A successful COP26 would include broad agreement on the need for fiscal and spending policy to rapidly encourage modal shift and recognise the need to invest and build confidence in rail and public transport. Both associations agree that public transport must feature within COP26's programme of talks as a vital element in delivering healthier cities. T

LUCIE ANDERTON, FIEMA CEnv, is head of sustainability at the International Union of Railways.

Ambition on the agenda

The COP26 climate summit in November is a unique opportunity to embed sustainability across agriculture, transport and finance. Three figures whose work spans a variety of sectors tell us what they want to see from the talks

Climate risk is well established, with scientific and political consensus and momentum on the need for an urgent step-change. Recent extreme weather events in Canada resonate as 'early warnings', and illuminate past conversations around the language we use – the rationale behind global heating over global warming, for example. We want to see credible and tangible commitments at COP26.

Perhaps these are emerging through the increasing flow of nationally determined contributions, and via wider campaigns – notably the UNFCCC Race to Zero. Glasgow will certainly be a key test for the Paris Agreement approach to aggregate national commitments, and hopefully will ratchet up the ambition.

In addition to this big picture, COP26 also needs to showcase and engage a deeper integration of net zero into mainstream business practice. For non-state actors, businesses, NGOs and many others, COP26 provides a unique opportunity for sharing effective practice on what works and also on the key issues to resolve.

As the talks approach, what are their implications for specific sectors and communities, and the contributions they can potentially make? Leading contributors offer their own perspectives across three important fields: finance and pensions, agriculture and food, and transport and mobility. What do they all want from COP26, and what do they see as the key challenges and dependencies?

NICK BLYTH, IEMA policy and engagement lead



IMAGES: ISTOCK / SHUTTERSTOCK



DIANA GARDUÑO JIMÉNEZ

Food justice project officer at Nourish Scotland (agriculture/food)

Food systems account for a third of greenhouse gases and drive biodiversity loss. We want sustainable food systems to be seen as a key part of addressing the climate emergency. Farmers, processors, traders, retailers, consumers and local governments make change happen. Through our partnership work on the Glasgow Declaration and the Fork to Farm Dialogues, we want these actors centre stage.

Food matters to health, families, schools and hospitals; to local



government, producers, businesses and consumers. It touches on environment, agriculture, health, labour and trade. A focus on food systems through local action can guide choices, generate community engagement and inspire local government intervention. It can also address climate change and biodiversity loss.

COP26 needs to bring local actors to the table, starting conversations between those who rarely speak to each other. Local and national governments need to work hand in hand with those engaged in agriculture, livestock raising, fishing, pastoralism and forestry. Only then can we develop the policies needed to tackle the urgent environmental and nutritional challenges we face.

"We want sustainable food systems to be seen as a key part of addressing the climate emergency"

RICHARD DILKS

Chief executive of Collaborative Mobility UK (CoMoUK) (transport/mobility)

Sustainable transport will play a key role in containing the planet's temperature rise. Transport now emits more than any other economic sector, and its emissions are failing to fall.

CoMoUK is a member of the Sustainable Transport Alliance (STA), which spans walking, cycling, sharing schemes, public transport and community transport. We want to see green and fair transport that works for everyone. While the UK has made welcome declarations on climate change – some of them world-leading – it is short on policy commitments and the tough interim targets needed to deliver on these declarations.



We are looking to the UK to make the most of its COP26 presidency and send a powerful signal to the world by introducing progressively tightening targets for reducing motorised traffic. This should come alongside a clearer and more ambitious statement on the government's commitment to sustainable transport (an area in which the UK has notable success

stories, although it has further to go to hit its greenhouse gas commitments). We cannot rely on technology to get us to net-zero greenhouse gas emissions, as the UK is committed to do by 2050.

STA members include Bus Users UK, the Campaign for Better Transport, CoMoUK, the Community Rail Network, the Community Transport Association, Greener Transport Solutions, Living Streets, the London Cycling Campaign and Sustrans.



"We are looking to the UK to send a signal by introducing motorised traffic targets"

COP26

TONY BURDON

CEO of the Make My Money Matter campaign (finance/pensions)

COP26 is a huge opportunity for the finance sector to tackle the climate emergency. At Make My Money Matter, we want to see our pension sector lead



this global movement for a cleaner, greener finance system. There is £2.6trn circulating in UK schemes, much of it funding industries that harm our planet. If this money was redirected towards companies that tackle climate change, we could reduce global warming and build a world that is worth retiring into.

Before COP26, we want to see all UK pension providers commit to net zero by 2050, and to halve their emissions this decade. This must be underpinned by government legislation that ensures all financial institutions implement net-zero targets. Failure to do so will be bad for the planet and for returns – and goes against the wishes of the UK public.

Since we launched last year, 17 major providers have already taken action on net zero – that's more than £400bn now dedicated to fighting climate change. However, we have a long way to go, and hope that the remaining providers will follow in the footsteps of Nest, BT Pension Scheme, Scottish Widows and more to put climate at the heart of their investment strategies.

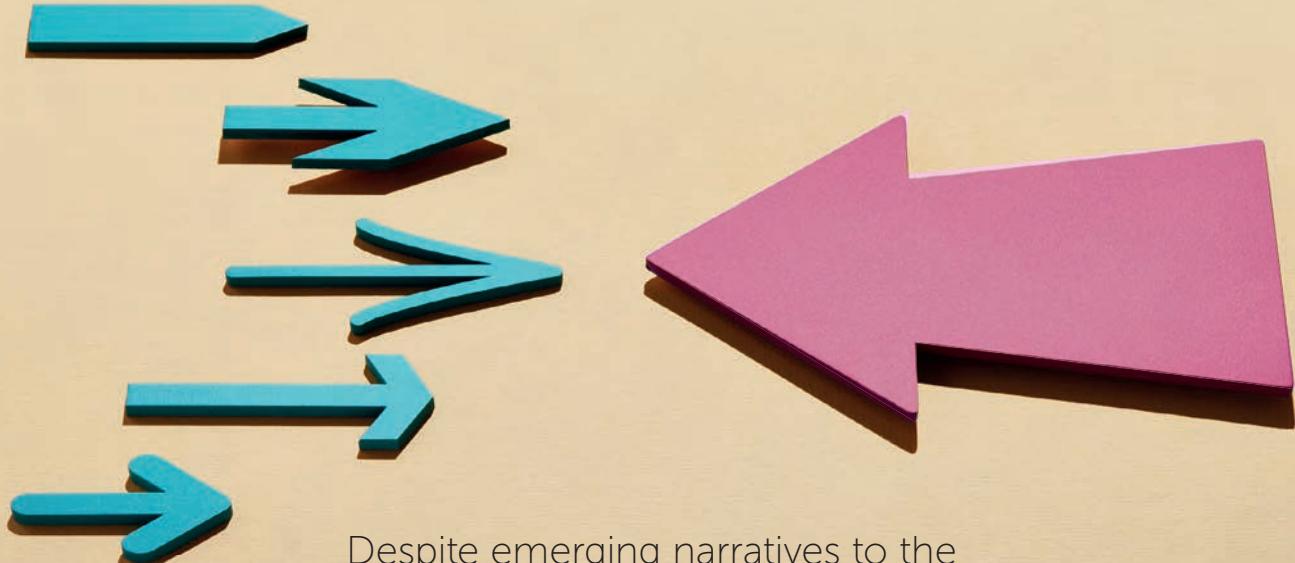
Ahead of COP26, we want to see providers and financial services giants commit to net-zero emissions and outline how they plan to invest in nature, address biodiversity loss and protect communities across the globe. 

"We want to see all UK pension providers commit to net zero before 2050"

GREAT EXPECTATIONS

The IEMA policy and media team has produced a COP26 101, from which this extract was taken. For further details, contact press-office@iema.net

IEMA CLIMATE CHANGE POLICY POSITIONS	OUTCOMES SOUGHT AT COP26
<p>Climate leadership at all levels. IEMA has outlined the importance of leadership and 'professional urgency', which will be imperative to change the direction of our economies.</p> <p>We encourage and acknowledge individuals, businesses, organisations and governments that are showing climate leadership. IEMA will make its own contribution and work with professionals on this critical challenge.</p> <p>COP26 must include the voices of a broader range of stakeholders (including at-risk communities), both within and outside of the negotiation process.</p> <p>There should be significant progress on the Paris commitments for climate finance.</p>	<p>Both in the build-up to and at COP26, we wish to see ambitious and tangible commitments. Parties to the Paris Agreement should all submit credible nationally determined contributions and adopt timelines, with shorter-term interim targets. These will need cumulatively to align to well below 2°C of warming, and preferably to 1.5°C.</p>
<p>Policy frameworks and strategic approaches need to support certainty and give confidence for organisations to invest and transition. Policy confidence is important for practitioners. This is needed at national and international level and across a range of drivers (regulation, fiscal measures, trading schemes, guidance, standards, procurement and supply chains, etc).</p>	<p>Remaining elements of the Paris rulebook need to achieve progress. There has been slow progress on the technical set of rules for Article 6 of the Paris Agreement, which aims to set the governance of international carbon markets and non-market co-operation between countries. There should also be consideration of how to support international carbon pricing and markets in the absence of an Article 6 agreement.</p>
<p>Recognition, integration and embedding of climate change as a mainstream 'business' issue. Approaches are required to embed climate action and energy reduction into mainstream business and across the value chain. There is increased focus on business realities such as: reducing energy costs and carbon, complying with climate legislation, increasing resilience, building reputation, adding value, and meeting contractual and stakeholder expectations.</p>	<p>COP26 needs to showcase the deep integration of net-zero transitions into mainstream business practice. For non-state actors (businesses, NGOs and others), COP26 provides an opportunity to share effective practice on what works.</p> <p>IEMA will work to secure action on these drivers and to build consensus on the business case for transformation.</p> <p>IEMA will contribute to this leading-edge knowledge exchange, collaborating with our members and partners.</p> <p>COP26 should be run as a low-carbon summit, following a hierarchy approach to eliminate, reduce, substitute and compensate greenhouse gas emissions.</p>
<p>Reporting and disclosing climate change performance with increasing transparency. Reporting and disclosure have a unique role to play in building board-level commitment and embedding climate change into mainstream business. Lifecycle thinking is important to ensure the true impact and costs of climate change are reflected across decision-making.</p>	<p>COP26 should be a platform for transparency. Governments' commitments should be presented without ambiguity. Those that extend beyond 'requirements' will be especially welcome, eg addressing indirect emissions and consumption emissions from imports. There should also be increased accessibility to the COP through digital/remote participation.</p>



Despite emerging narratives to the contrary, behaviour change has a significant role to play in reaching net zero, reports **David Burrows**

Our best behaviour?

How hard will it be to reach net-zero? Given that it's a target often pinned to the year 2050, the short answer is that we don't know. However, of late, a narrative has been emerging that it will involve minimal discomfort for the UK public.

Take the opinion in the *Financial Times* recently which noted that the phase-out of chlorofluorocarbons (CFCs) was pretty seamless: we still have fridges, air conditioners and spray cans, after all. "There is no consumer convenience we had to give up to save the ozone layer," the commentator wrote.

The UK government is anxious to avoid piling pressure on the public. "We will, where possible, look for solutions that do not require excessively drastic behavioural change," said Sarah Munby,

permanent secretary at the Department for Business, Energy and Industrial Strategy, when quizzed by the House of Commons Public Accounts Committee on the government's net-zero plan.

To date, much of the success in reducing UK emissions has been invisible to the public – consider, for example, that low-carbon power now provides more than 50% of the country's electricity. However, the reality is that behaviour change is the elephant in the room – and it could be larger than we expected.

High-impact change

"I think what we are seeing from our governments is a reluctance to really grapple with behaviour change," says Joanna Trewern, behaviour change specialist at WWF-UK.

The Committee on Climate Change (CCC) has calculated that 43% of the cuts

on its route to net-zero require a combination of low-carbon technologies and behaviour change – for example driving electric cars, and installing heat pumps rather than gas boilers (*Figure 1, overleaf*). Another 16% will come from "largely societal or behaviour changes" such as healthier diets, fewer flights and choosing products that last longer. This will require "suitable policy leadership".

Professor Lorraine Whitmarsh, an environmental psychologist at the University of Bath, thinks attributing 59% to behaviour change is "relatively conservative" given that the committee only defines 'behaviour change' in terms of 'consumer behaviour change'. "Even if you look at technological change alone, you're still going to have some people making some decisions about those technologies, and that's a professional behaviour change."

Ethics

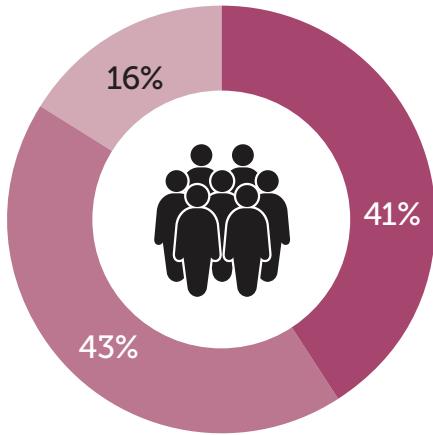


Figure 1: Role of societal and behavioural changes in the path to net zero

- Low-carbon technologies or fuels (not behavioural/societal changes)
- Combination of low-carbon technologies and societal/behavioural change
- Largely societal/ behavioural changes

Source: CCC, 2020.

Whitmarsh says we should expect "pretty fundamental changes to society that go way beyond just buying some green products". She isn't alone. A report for the CCC by Imperial College London in October 2019 (*Behaviour change, public engagement and Net Zero – bit.ly/CCC_BehaviourChange*) suggests "breaking" with previous messaging to households, which focuses on small and easy changes. Instead, "high-impact shifts in consumer behaviours and choices are needed that are consistent with the scale of the climate challenge".

Public perceptions

That won't sit easily with politicians or many businesses – not least because for high-income European countries such as the UK, the largest contributions to household consumption footprints come from cars, planes, heating and animal-based foods such as meat and dairy. Are governments going to ask us to take

fewer flights or hold off on the burgers for this summer's barbecues? Probably not.

In Scotland, a nation that prides itself on stealing a march on Westminster's green ambitions, recent data on emissions for 2019 showing that for agriculture and international aviation and shipping, there was "essentially no change in emissions". Emissions from residential properties fell slightly. The overall 55% reduction target was missed.

The results came in the same month that the Scottish government launched a new campaign, 'Let's do net-zero'. Phase one is focused on educating the public about the climate emergency – a task that might appear relatively easy, given heightened awareness of environmental issues (think Greta Thunberg, Extinction Rebellion and now the 'green recovery'). A recent poll by Ipsos Mori, however, suggests otherwise.

The *Ipsos Perils of Perception: climate change study* (bit.ly/PoP_Climate) published in April assessed how people in 30 markets around the world perceive environmental action. Ipsos MORI asked which actions delivered the most greenhouse gas reductions in richer countries; none of the top three answers given were among the top three most effective actions (Figure 2). 'Recycling as much as possible', which delivers just 0.2 tonnes of emissions savings per person per year, came out on top. Replacing incandescent bulbs is another easy option (especially in countries where they are being phased out), but the savings are a mere 0.1 tonnes per person per year.

Most of the more uncomfortable changes fell further down the list of answers – things such as avoiding one long-distance flight a year, or eating a plant-based diet. Is this because people don't know the right answers, or because they don't want to know? "I think it is a combination of both," says Pendragon Stuart, associate director at insights consultancy Globescan.

The 2020 *Globescan Healthy and Sustainable Living report* – based on online surveying of 27,000 people in 27 countries – showed that 50% of people want to change their lifestyle to help



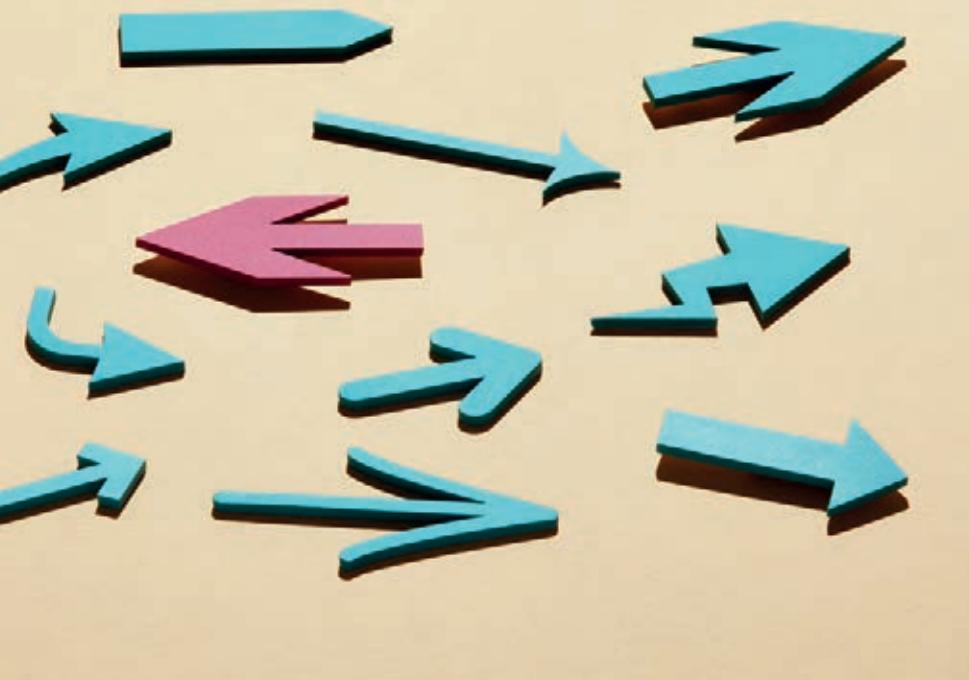
"What we are seeing is a reluctance to really grapple with behaviour change"

protect the planet, but only 25% have done so. There is a clear correlation between 'easy to do' and 'interested in', Stuart explains.

According to Globescan, changes to diets or travel are categorised as 'low interest, high difficulty', while reducing waste and saving energy are 'high interest, low difficulty'. There is an argument, therefore, for targeting quick wins. Buying renewable energy was the second most common answer in the Ipsos MORI poll, for example, and saved a decent 1.5 tonnes of emissions per person per year. "It is an issue that people don't realise the power of switching to renewable energy, and I think we do need more 'literacy' in this area," says Stuart.

Changing tactics

Timing is critical. Researchers such as Whitmarsh are increasingly recognising



the importance not only of how to intervene, but also when. She cites a study in Switzerland, published in *Nature Human Behaviour* (bit.ly/GreenEnergyDefaults), which showed that presenting renewable energy as the standard option to existing customers led to around 80% sticking with the greener default.

The UK government has successfully used this tactic with organ donation, but "we haven't really seen that so much when it comes to the environment", says WWF's Trewern. Where it gets

complicated is trying to work out who should be giving that information and when. The 'when' is often easier than the 'who', she suggests.

Food businesses are, for example, looking at ways to encourage people to buy healthier, more sustainable products (recent calculations published in *Nature Food* show that food is responsible for 34% of anthropogenic greenhouse gas emissions – bit.ly/Food_Emissions). Research by Asda last year showed that 64% of shoppers are "willing to change

Figure 2: Public perceptions of most effective actions to reduce emissions vs CO₂e actually saved

Action	Belief that action is among the top three options that would most reduce emissions (%)	CO ₂ e saved (tonnes/person/year)
Recycling as much as possible	59%	0.2
Buying renewable energy	49%	1.5
Replacing car with hybrid/electric	41%	0.8
Replacing incandescent lightbulbs	36%	0.1
Stop using electric/gas clothes dryer	26%	0.2
Avoiding one long-distance flight	21%	1.6
Not having a car	17%	2.4
Eating a plant-based diet	14%	1.1
Having one less child	11%	58.6

Source: Ipsos MORI, Financial Times, Lund University.

the way I shop to be more environmentally friendly", but just 16% are making observable changes to what they buy, says Susan Thomas, the supermarket's senior director, sustainable commercial activities.

Thomas is currently adopting a pragmatic approach to helping those who are open to change. The focus is on actions that save time and money, such as food waste – "that's rocketed up the list of things our customers want to do something about" – and bringing your own bags. From there, it is possible to move on to refillable packaging (Asda has just extended refill zones to four more stores) and perhaps even climate labels (upon agreement over consistent data and presentation).

There is a need to make things as easy as possible in a bid to quicken the pace without losing people along the way. "We do need to make it cheaper, easier, more attractive, more socially normal, to do the things that we want people to do," says Whitmarsh. "We need the public to be on board with the level of change required."

So, too, politicians. In April, in an interview with the *Financial Times*, France's environment minister Barbara Pompili said relying on new technologies to meet the Paris Agreement was all well and good, but in Europe, countries had an "extra ingredient [...] we're also looking at our ways of life".

Is now, amid a global pandemic, the right time to push people? *Net Zero after Covid* (bit.ly/CCC_CovidZero), a report by CCC behavioural science specialist Professor Nick Chater of the University of Warwick, notes that "we are often (although not always) far more adaptable than we think" – and the past 12 months has certainly proved as much.

The changes required to meet net zero will hopefully be more gradual than what we have experienced this past year, provided we start now. However, to think they will be less radical is folly. Prepare for cutting carbon to get a bit more uncomfortable. †

DAVID BURROWS is a freelance writer and researcher.

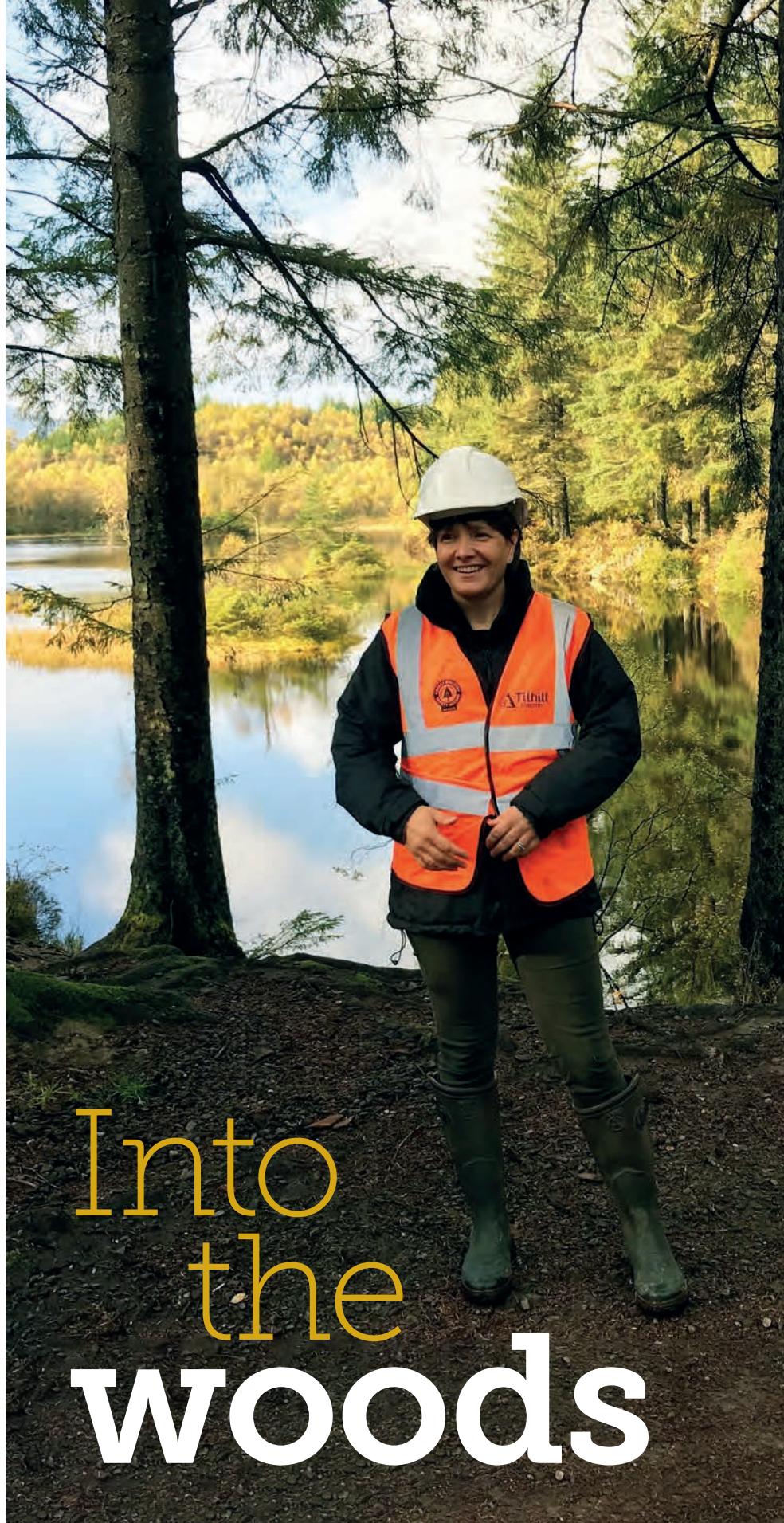
Nicola Abbatt explains how she came to work in forestry, and provides an overview of the industry's current guidance and issues around sustainability

This is a great time to work in forestry, with ambitious targets for tree planting, demand for wood products (whether for construction or as a plastic alternative), and a renewed focus on sustainability and climate change mitigation. Tree planting and woodland creation hasn't been higher on the UK government agenda since the World Wars. However, a lot has changed since then, when it was the norm to plant conifers from streamside to hilltop. Now the focus is on climate change resilience and sustainable wood production, bringing real benefit to the natural environment – alongside the economic value that ensures a woodland's viability.

Into the industry

My first degree was in forestry and applied zoology. After graduating, I worked for 11 years as a forestry and contracts manager before moving into a central role supporting my then employer in environmental protection and safety management. I went on to work in several different industries, and moved back into forestry a few years ago as an environment and assurance manager for a leading forestry management and harvesting company.

Those in the industry have the passion and skills to achieve sustainable forestry's multiple objectives. These days, graduate foresters join the profession with degrees across a range of subjects – from environmental science and ecology to physical geography, as well as the traditional forestry degree.



Into the woods

Finding a balance

The UK Forestry Standard (UKFS) sets out the government's approach to sustainable forestry and provides a standard for regulation. This applies to all woodlands, regardless of who owns or manages them. It sets out clear guidelines on, for example, water and soil management, ensuring that international agreements and conventions on sustainable forestry, climate change, biodiversity and the protection of water resources are applied in the. Compliance is regulated by the Forestry Commission, Scottish Forestry, Natural Resources Wales and Northern Ireland Forest Services.

There is also the UK Woodland Assurance Standard (UKWAS). UKWAS certification verifies sustainable woodland management in the UK and is a requirement for woodland owners who wish to sell wood products under

homegrown wood is for biodiversity beyond the local forest.

Mitigating impacts

While forestry has many environmental credentials, it does have impacts on our natural environment. The industry is proactive in working together to find solutions and share good practice. I sit on the Forest Industry Environment Group, which includes members from private and public companies and organisations; we have recently prepared a set of guidelines, *Guidance on Responsibilities for Environmental Protection in Forestry* (bit.ly/Confor_EnvProtect). These were completed in collaboration with, and complement, the Forest Industry Safety Accord guidelines *Managing Health and Safety in Forestry* (bit.ly/FISA_HealthSafety). The aim of the guide is to support communication of legal

Planting without plastic

The BBC's 2017 series *Blue Planet II* has made everyone aware of plastic waste. Within Tilhill I was already working with an internal waste improvement group that was looking for ways to prevent and reduce plastic use and improve recycling of legacy plastic. In forestry, this tends to be from tree delivery bags and tree protection tubes, which enhance tree growth and prevent animal browsing damage.

To change plastic use, a collaborative industry-wide approach was needed. With a group of like-minded people, I helped start up the Forestry Plastics Group, which has gone from strength to strength and includes members from across the industry. Its key aim is to reduce adverse environmental impacts and find balanced and sustainable solutions for tree protection. Our primary concern is to avoid a knee-jerk

"Modern forestry is about balancing wood production with environmental sustainability and conservation"

Programme for the Endorsement of Forest Certification and Forest Stewardship Council certifications. It sets out requirements for management of the natural, historical and cultural environment, alongside forestry.

Modern forestry is about balancing wood production with sustainability and conservation. Its biodiversity benefits are not just about broadleaved trees; for example, coupes of conifers planted in a sustainably managed forest provide food for a variety of fauna, with pine martens thriving in these areas and raptors finding nesting sites. During her time as policy researcher at the Confederation of Forest Industries, Dr Eleanor Harris wrote a report (bit.ly/Confor_BFW) on how well-managed UK wood production benefits biodiversity in all types of forests and protects global forests, highlighting how timber production can help to improve the condition of native woodlands and how important

responsibilities to landowners and others new to the industry.

Additionally, much of my focus has been on diffuse pollution. Clean water is imperative for the natural environment, and the potential for diffuse pollution from sediment and silt entering watercourses – particularly during harvesting or ground preparation work – is high. Historically, there has been little structured and tested environmental training for forestry contractors. One recent focus in the development of tested online training was on ensuring forestry machine operators, who are at higher risk of contributing to a diffuse pollution event but are also best placed to monitor site conditions, have a good understanding of diffuse pollution, the consequences of an incident and how to prevent one. Last year, my company made this mandatory for all forest machine operators before they start work in our managed properties.

reaction and ensure we don't swap plastic for materials that have greater environmental impacts in their production and disposal. The group will shortly be starting a research project looking at different plastic tree tube alternatives, examining their efficacy, durability and end-of-life impacts.

Raising awareness

The forestry industry excels at working together on environmental and safety improvement projects, but is still quite insular; we tend to talk among ourselves, perhaps not doing enough to communicate, raise awareness and promote sustainable forestry management to the public. It is great to work with others on environmental improvement projects in a collaborative and mutually beneficial way. 

NICOLA ABBATT, MIEMA CEnv is environment and quality manager at Tilhill.

Insuring the transition

Ahead of the COP26 climate summit **Chris Seekings** reports on a recently published paper designed to help insurers play a more meaningful role in the net-zero transition

Exreme weather events are creating a 'protection gap' between insured and uninsured climate-related economic losses. The cost of wildfires, flooding and other natural disasters for last year is estimated at US\$268bn – 8% above average annual losses for this century. Just US\$97bn was covered by insurance, with poorer regions least likely to have sufficient coverage.

Drawing on the expertise of more than 10 insurance giants, industry group ClimateWise has published a report, *Climate product innovation within the insurance sector* (bit.ly/CISL_ClimateInnov), to help insurers close this gap and decarbonise the world's economy.

"The insurance industry has a critical enabling role to play in efforts to mitigate and adapt to climate risks," said Lucy Stanbrough, chair of ClimateWise's managing committee. "This can't be done in isolation, and insurance industry thinking, underpinned by scientific insights, can play a key role in helping enable the transition."

Priorities and barriers

The report highlights the need for collaboration both within and beyond the sector, including active engagement with insurance supply chains and governments. It outlines nine key priority areas:

- Enable low-carbon choices
- Mainstream the encouragement of climate mitigation through efficient and resilient reinstatement
- Implement environmentally sustainable claims servicing
- Enable capital flows towards green solutions through risk transfer solutions
- Create removal-based carbon offsets through natural capital protection
- Scale low-carbon and net-negative technologies and start-ups
- Support sustainable decommissioning of carbon-intensive assets
- Develop risk advisory services to support clients' climate mitigation understanding and approach
- Develop solutions for increasing climate legal liability and environmental litigation.

The report also proposes further recommendations to address barriers to innovation and foster collaboration:

- Engage with government on transition protection needs and private-public

"Data access could make or break the insurance sector's response to climate change"



partnership opportunities to facilitate blended finance approaches to scaling

risk-transfer capital, such as through state-backed reinsurance pools

- Develop and scale technical approaches to underwriting based on deep engineering expertise and relationships with technology developers

- Co-ordinate the industry value chain across brokers, insurers and others to reduce duplication, through an industry framework that recognises the unique role each player should address

- Drive a long-term culture that incentivises innovation and works to reduce barriers that tend to embed static business models

- Enhance structuring of climate data and models by bringing together model vendors, in-house analytics teams and original equipment manufacturers to access data sources and advise on practice
- Innovate product structures that are aligned to client needs, ensuring clients and customers are aware of how products and structures, such as usage-based products or parametrics, can benefit them
- Align climate and commercial priorities so that growth areas such as intellectual property insurance or risk consulting can appropriately integrate climate considerations in ways that enable additional innovation.

Although these barriers will need to be overcome to help insurers deliver net-zero emissions, a recent poll found that data availability presents the greatest challenge for the UK's financial sector over the next five years when addressing climate risk.

"Better access to data could make or break the insurance sector's response to climate change," says Gavin Starks, CEO of data firm Icebreaker One. "It shouldn't take enormous legal fees, hours of negotiations and expensive closed technical systems to share environmental data with insurers."

"The faster we develop an open standard to make data access easier, the faster the insurance industry can develop the products it needs to thrive in a net-zero economy." 

CONNECT

NETWORK AND COMMUNITY NEWS FROM IEEMA

Sustainable swaps?

Plastic reduction is a positive step to tackle pollution, says **Simone Codrington** – but does it lead to compromises in other areas of sustainability?



Carbon vs plastic

More of the general population are making sustainable changes such as carrying a reusable bottle and switching to plastic-free toiletries. The demand for plastic-free alternatives has highlighted a gap in the market, which new companies have started to fill by starting zero-waste stores. These stores offer consumers the ability to refill existing containers and purchase natural, vegan, plastic-free and cruelty-free options. However, if these stores are not easily accessible via sustainable travel methods, does the waste reduction outweigh the carbon emissions and air pollution resulting from driving? Is it solving the waste issue but contributing to the climate crisis?

Waste vs plastic

Many existing businesses have started switching their single-use items from plastic to paper. However, many people are starting to question: how much more sustainable are the paper versions? Used paper is much more difficult to compost or recycle – especially if it is still lined with plastic. This just creates another waste stream, with circular economy barriers. Equally importantly, how much of an impact are these swaps actually having on plastic pollution? In order to really create a circular economy, the change must be considered in a more transparent, whole-lifecycle assessment.

Fish vs plastic

According to the Ellen MacArthur Foundation, there will be more plastic than fish in our oceans by 2050. Fishing nets account for 46% of the 1.6m-square kilometre Great Pacific Garbage Patch. The damage caused by commercial overfishing not only contributes to the plastic problem, but also disrupts our ocean and climate systems, and ultimately exacerbates the climate crisis. We may not yet have the solution to all of these issues but, if we want to see significant impacts, perhaps we should be focusing our attention on reducing our consumption of fish. [T](#)

Read the full article at
bit.ly/Futures_SustSwaps

SIMONE CODRINGTON is co-chair of IEEMA Futures.

Climate Action North on reimagining and restoring outdoor areas

This year marks the beginning of the UN's Decade on Ecosystem Restoration, which is intended to raise awareness of the importance of protecting and reviving ecosystems around the world and moving toward a sustainable future.

Reimagining, recreating and restoring is exactly what Climate Action North has been striving towards through its Pollinator Parks initiative, which focuses on reversing the alarming decline in wild pollinators. It does this by rewilding and transforming outdoor areas on retail and business parks into ecological oases, to help bees, butterflies and birds thrive and flourish.

To date, Pollinator Parks have been established at Dalton Park Outlet Shopping Centre in County Durham and at the Business Innovation Centre in Sunderland; wildflower mini-meadows have been introduced on both sites, showing how small-scale rewilding can support and care for wildlife, as well as repairing broken ecosystems.

An official opening event for the Pollinator Park at Dalton Park Outlet Shopping Centre is set to take place at the end of July. More work is planned for later in the year to restore an area of land at the site for wildlife and pollinators, as well as creating an outdoor classroom for climate action learning, which will benefit the local community.

"Pollinator Parks is our way of contributing to the UN Decade on Ecosystems Restoration and ties in strongly with UN Sustainable Development Goals, which many businesses are now incorporating into their CSR activities," said Climate Action North managing director Sharon Lashley.

"Typically, business parks tend to focus on landscaping areas, which may be tidy and manicured but definitely lack nectar-rich areas for pollinators to land, and this is what inspired us to set up Pollinator Parks," Sharon continued. "We want to work with more businesses to inspire them to restore their business park areas, providing essential areas for pollinators while also learning about taking climate action for ecosystem restoration."

Find out more about the work of Climate Action North, and subscribe to the newsletter, at www.climateactionnortheast.org.uk [T](#)





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media@iema-transform.com

Why did you become an environment/sustainability professional?

From a young age I loved being outdoors and being close to nature: cycling, surfing, walking. When you get close to nature, you get to understand its beauty and power – whether it's a storm while you're up a mountain or a huge wave crashing down on you.

What was your first job in this field?

I first worked for the British Trust for Conservation Volunteers in Brighton.

How did you get your first role?

Luck! I started doing some voluntary work and was then given a paid role, which then led to another and so on. I think that first job was the only time I ever responded to a job advert.

What does your current role involve?

My role is a mix of strategy and operations around Square Gain's focus areas: the built environment, sustainable finance and supply chains. And, of course, there's always admin, which is something I have to make myself do.

How has your role changed/progressed over the past few years?

I've witnessed a few milestones, starting when people came and knocked on my door asking for help, rather than me having to chase them down. In recent years, we've seen a mass awakening – helped by the mainstream media, which has driven public awareness and priority. During the past couple of years, Square Gain has increased our focus on supporting the public sector, and we have seen a huge increase in our carbon action planning and implementation work.

What's the best part of your work?

I love the interaction, and learning from the perspectives of all the interesting people you meet when running training sessions. It's a bit tougher to do that through a screen, but even through lockdowns I've lucky enough to build great new relationships.



CAREER PROFILE

Greg Chant-Hall

FIEMA CEnv

Operations director, Square Gain

What's the hardest part of your job?

There are lots of hard bits, and always peaks and troughs, but the hardest part for me is admin – I hate it, but luckily others are much better at it than me.

What was the last development event you attended?

We've been running a lot of events lately that are linked to what we think will be the world's first net-zero carbon standard, which we are co-authoring with Mott Macdonald for the NHS. I also attended a great session by the Taskforce on Climate-related Financial Disclosures Knowledge Hub.

What did you bring back to your job?

The session linked to how Square Gain is helping local authorities make their projects attractive to environment, social and governance investment, so these positive impacts can be funded, accelerated and scaled.

What is/are the most important skill(s) for your job?

The most important thing is to listen to your clients and partners and understand what they want, so you can see how you can best help.

Where do you see the profession going?

As professionals, we've made a good start at integrating ourselves into the mainstream decision-making of

organisations. I'd love to see everyone having sustainability skills as a core competency, with metrics so that we can truly embed it.

Where would you like to be in five years' time?

Doing more of the same, and working with more great people to make our own little contribution in positive ways.

What advice would you give to someone entering the profession?

Work hard, prove yourself and stay in touch with those who know what you can do.

How do you use the IEMA Skills Map?

It's a great tool – I use it informally with clients to highlight potential gaps and areas we can develop.



If you had to describe yourself in three words, what would they be?

Passionate, enthusiastic, determined.

What motivates you?

Seeing when someone is delighted by something you've done for them.

What would be your personal motto?

Don't take yourself too seriously.

Greatest risk you have ever taken?

Co-founding a company, but I wouldn't change it.

If you could go back in history, who would you like to meet?

One is still alive! It's hard to choose between Sir David Attenborough or **Steve Irwin**, both passionate protagonists for the natural world in very different ways! Both believe that humans want to save things they love. 

THE READING ROOM



Impact Journal Vol 10: Marine and Coastal Impact Assessment (July 2021)

The UK has around 8,000 miles of coastline and over 1,000 islands; nowhere is more than 70 miles from the coast. The consideration of human impacts on the marine environment is an expanding frontier of environmental impact assessment, and has seen an increase in activity – particularly around offshore wind, an area in which the UK leads the world.

Guidance here is less well developed than it is for many terrestrial aspects, and a variety of methodologies are often adopted by different practitioners and in different sectors. This 10th volume of the *Impact Assessment Outlook Journal* includes articles exploring marine and coastal impact assessment and consenting. Download it at bit.ly/IEMA_ImpactJournal10



Cross-sector insights: The role of smart solutions in the transition to sustainability

The IEMA Fellows Working Group on Disruptive Technologies and the Digital Economy has developed a thought piece offering practical recommendations on how professionals across different sectors can carry out the seven key actions set out in the 2019 *Thought Piece on Disruptive Technologies and Sustainability* to ensure these technologies can support sustainable transformation.

It contains recommendations from case studies submitted by members, corporate partners and technology experts, all working with technology to support sustainable outcomes. Read it at bit.ly/Fellows_SmartSol



Principles of Cultural Heritage Impact Assessment in the UK

This is a collaborative project delivered by an expert advisory panel that believes there is a pressing need for guidelines that present a clear,

authoritative view of what constitutes good practice in cultural heritage studies for impact assessment. Keep an eye on the IEMA events page for a launch webinar that will provide an overview of the project and document, followed by a Q&A session with the panel. Find out more at bit.ly/IEMAReadingRoom

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DATES FOR YOUR DIARY

iema.net/events

REGIONAL EVENTS

24 AUGUST 2021

WEBINAR

South West: Hydrogen Economy – Issues and Opportunities

This webinar will give an introduction to the hydrogen economy and shine a light on challenges relating to safety in planning, design and operations, and the need for a clear regulatory framework, with lessons learnt from adjacent industries and technologies.

The event is ideal for practitioners who are interested in new technology deployment and energy transition pathways.

➤ Register at
bit.ly/SWHydroEcon

20 OCTOBER 2021

WEBINAR

Legal update

This IEMA webinar outlines the latest changes to UK environmental law and provides an insight on key issues for the months ahead.

Key issues will include: the latest position in relation to the Environment Bill Planning reform; a review of any significant environmental cases; and an overview of key policy developments.

The webinar will be led by Simon Colvin FIEMA, a partner at Weightmans, where he leads the environmental law team and heads the firm's energy and utilities sector.

➤ Register at
bit.ly/2VOyuMq

NEW WEBINAR ANNOUNCED

28 OCTOBER 2021

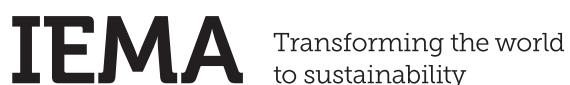
Bridging the gap: from COP15 to COP26

The focus of this event is on connecting the outcomes of the biodiversity COP15 in October to the climate COP26 in November, to understand where integration of the two areas is required to deliver the best possible outcomes. Attendees will gain an understanding of what was agreed at COP15 and how this translates into a set of actions for COP26 in terms of integrating international action on biodiversity and climate change.

➤ Register at bit.ly/COP152COP26

If undelivered please return to:

IEMA
City Office Park
Tritton Road
Lincoln
LN6 7AS



IEMA Connect 2021

Environment & Sustainability Professionals' Conference

Save the Date

Join us on Thursday 9 December for the inaugural members-only digital conference: IEMA Connect 2021.

Free and accessible to IEMA members only, we will bring together an inspirational set of expert speakers from across the globe to foster learning and provoke conversations on the key issues of the year.

Look out for registration opening in early September.

